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HUNT'S  
MERCHANTS' MAGAZINE

AND

COMMERCIAL REVIEW.

NOVEMBER, 1859.

Art. I.—REVIEW, HISTORICAL AND CRITICAL, OF THE DIFFERENT SYSTEMS  
OF SOCIAL PHILOSOPHY:\*

OR, INTRODUCTION TO A MORE COMPREHENSIVE SYSTEM.

PART II.

THE CLASSIFICATIONS OF ZENO, ARISTOTLE, BACON, AND COMTE COMPARED WITH THE ONE PROPOSED  
—PROPOSAL OF A NEW SCIENCE FOR THE INVESTIGATION OF SOCIAL PHENOMENA—ITS PROVINCE  
DEFINED—THE SUBORDINATE SCIENCES EMBRACED BY IT — THE THREE DIFFERENT SYSTEMS OF  
SOCIAL PHILOSOPHY STATED AND DEFINED.

As the classification of the sciences proposed in our last number differs materially from any heretofore suggested, with which we are acquainted, it may be advantageous to notice, briefly, some of the more notable of those which have been before adopted.

One of the simplest and most obvious classifications of the sciences, though not by any means the most philosophical, is that which has been adopted by the Chinese philosophers. They divide all sciences, as Sir John Davis informs us, into those which relate to Heaven, Earth, and Man respectively, under the first classing astronomy, and under the last and most important division, all those sciences, whether physical or otherwise, which relate immediately to the interests of mankind.† It is not a little remarkable, that Lord Bacon, who was, in not a few things, somewhat of a Chinese bungler in his elaborate bungling and unphilosophical classification of knowledge, has adopted almost precisely the same division in his primary division of that part of learning which he styles philosophy, which he treats as relating to God, Nature, and Man respectively, as if, forsooth, man were not a part, and a most important and inseparable part, of nature.

\* Entered according to an act of Congress, in the year 1859, by GEO. W. & JNO. A. WOOD, in the Clerk's Office of the District Court of the United States, for the southern district of New York.

† See Davis's History of China, chapter xviii.

The Stoical philosophers of Greece, or some of them at least, adopted a classification equally as simple as that of the Chinese, and though less obvious, yet more philosophical, because at once more comprehensive and more definite. They classed all the sciences under the three grand divisions of Physical, Ethical, and Logical, embracing metaphysics under the logical division, politics under the ethical, and all natural sciences under the physical. This is, perhaps, one of the best, as it is one of the simplest and earliest, classifications of the sciences.

Next to the Stoics in point of merit, though prior in point of time, Aristotle, the Peripathetic, has adopted, perhaps, one of the least exceptionable classifications of knowledge. He divided all sciences into three grand divisions—the Theoretical, Efficient, and Practical. In the first division he placed physics, metaphysics, and mathematics, making theology an attachment to metaphysics; in the second, logic, rhetoric, and poetry; in the third, ethics, politics, and economics, meaning, by the last mentioned science, that which treats of the *domestic* relations of men, as contradistinguished from his public or political relations.\*

Next to Aristotle, Lord Bacon stands most prominent, if not most meritorious, among those who have attempted to make a complete and all-embracing classification of human knowledge. Distinguished, however, as have been the services of this illustrious sage to the cause of science, it must be admitted that his classification of knowledge (or Learning as he termed it) was exceedingly defective, and in many respects unphilosophical, much more so indeed than that of his illustrious predecessor Aristotle, whom he so often took exception to in his reasonings, and not unfrequently misrepresented, and, probably, to some extent, misapprehended.

Bacon divided all human learning into that which relates to the memory, imagination, and reason respectively. To the first of these primary divisions he referred history, both civil and natural; to the second, poetry; to the third, all those branches of knowledge which he honored with the name of Philosophy; as if, forsooth, history and poetry were not, in any sense, philosophy, and do not address themselves to *reason*.

That part of learning which he designated as Philosophy, he subdivided into three main divisions—that which relates to God, Nature, and Man respectively. That part of his Philosophy which relates to God (or Divine Philosophy as he termed it) he considered as embracing Natural Theology merely. In that part of Theology which related to Christianity, or “revealed religion,” as it is commonly termed among Christian people, he said should be set apart as fit only to be treated by itself as “the fruit and Sabbath of all man’s knowledge;” thus most absurdly and viciously *divorcing* revealed Theology from its rightful *spouse*, natural Theology, and treating religion as a thing to be thrust aside into a corner for Sunday’s meditations, instead of an ever-present principle, shining forth like the effulgent sun-light upon all the actions of man, and lighting up his character in all times and places.

The *natural* sciences he divided into the speculative and practical. The speculative he subdivided into physics and metaphysics, treating mathematics as an appendix to physics. The practical he subdivided into mechanics and magic.

The *human* sciences, or those relating to man, he divided into the hu-

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\* See Aristotle’s works, *passim*; and Ency. Britannica, title Aristotle.

man properly, and civil; under the former division treating of man, individually, as a physical and psychological being, respectively; and under the latter, as a member of society, and subject to all the various relations incident to that state.\*

It is not proposed, in this place, to criticise, with any minuteness, this very faulty and badly-conceived classification adopted by Bacon. But in addition to the objections already hinted at, we would note more especially the grand error of treating the noble science of mathematics as a *mere appendix* to the physical sciences; and the equally grand and vital error of treating metaphysics, or *the science which treats of the origin of our ideas and the foundations of our knowledge* as a science, appertaining to the division of external nature, rather than to that of man, internally and psychologically considered. This latter error of Bacon has been much lauded by some of his late English commentators. But it is a grand error nevertheless, and a virtual recognition of the Sensationalism of Locke, and the superficial Anglo-Saxon School of Metaphysics, which refers all our ideas to *sensation*, rather than of the Idealistic metaphysics, which refers a large part, and, intrinsically, the more important part, of our ideas to certain *innate principles*, whether those principles appertain to an *immaterial essence*, capable of existing independently of matter, or be merely inherent in a certain highly refined *organism* of animated nature. This Idealistic metaphysics may be regarded, the *fossiliferous* worshippers of Locke notwithstanding, as now permanently established, having been repeatedly asserted and vindicated by the greatest philosophers of different ages and countries, and having numbered among its illustrious exponents, Pythagoras and Plato, in Greece; Descartes and Malebranche, in France; and Leibnitz and Kant, in Germany.

Since the time of Bacon, the most notable effort, not excepting that of D'Alembert, at a grand and comprehensive classification of the sciences, is the recent one of Mr. Auguste Comte, of France, the bold and able author of the system of Positive Philosophy. This profound, but altogether too *sensational* and unideal, uninspired thinker, makes six grand primary divisions of the sciences, Mathematics, Astronomy, Physics, Chemistry, Physiology, (or Biology,) and Social Physics, (or Sociology.) Physics he subdivides into barology, thermology, acoustics, optics, and electrology; and Chemistry, after the usual method, into inorganic and organic. Biology he subdivides into anatomy proper, comparative anatomy of vegetables and animals, (which he styled Biotaxic philosophy,) vegetative life, animal life, and cerebral functions under which he treats moral and intellectual phenomena; and Sociology, (or Social Physics as he more particularly styles it) he divides into *social statics*, or theory of the spontaneous order of human society, and *social dynamics*, or theory of the natural progress of human society.†

So far as this classification extends, *except as to mathematics*, it is truly admirable, and as nearly faultless, perhaps, as any can be. It is conceived upon the admirable idea of *successive evolution*, each class of sciences being evolved from the preceding one in the natural order of progressive development, thus passing from the most general and simple laws, to the most minute and complex. This idea Comte carries out as far as by his sys-

\* See Advancement of Learning, enlarged edition. Books ii., iii., iv., v., and vi.

† See Comte's Pos. Phi. *passim*.

tem he can. But he meets with an insuperable difficulty at the very threshold, with his fundamental science, Mathematics, resulting from his superlatively false fundamental design of *ignoring all spirituality, and all intellectuality, psychologically considered*. For what is the whole science of Mathematics, pure mathematics, *but an evolution of certain innate ideas of the human mind, as to the magnitudes of distance and space?* Leibnitz, a greater mathematician than Comte, has said it is all resolvable into the innate idea of *identity* that equals an equal— $a=a$ . Feeling this difficulty, Comte has tried to reconcile it by stating that “Geometrical and Mechanical *phenomena* are the most general, simple, and abstract of all,\* and are, therefore, an indispensable preliminary to all others. But Mathematics does not *consist in phenomena*, either geometrical or mechanical, but merely *investigates and estimates* phenomena of that kind. It is, in short, altogether and entirely what Comte is compelled to admit, that it is, in part, *the grand instrument* that the human mind employs in the investigation of natural phenomena.†

This preliminary difficulty being disposed of, the plan on which he attempts to classify the sciences (or all the sciences that he recognizes as such) is carried out in almost perfect harmony, illustrating and conforming to the wonderful harmony of nature, as observable in the *gradations* of the universe, beginning with the general and simple laws of planetary motion, and ending with the minute and complex ones of human society, which he justly considers, with a reach of profundity never exhibited by any other inquirer, are dependent on all the antecedent laws of biological, chemical, physical, and even astronomical motion.

Comte's classification is, upon the whole, as far as it goes, by far the grandest and most philosophical ever before attempted. It is, indeed, the chief, if not the only real, merit of his work, so sadly misdirected, as we think, in its leading aim. For this merit alone, the scientific world has cause to regard Mr. Comte as a great benefactor; and his truly great work deserves to mark an epoch in the human mind. If Mr. Comte would allow us to prefix to his six primary divisions of science only two more, Theology, or inquiry into the nature of God, (or great first cause;) and Metaphysics, or inquiry into the origin of our ideas and foundations of our knowledge, (or the mystic link which connects mind with matter,) we should consider his classification as leaving nothing to be desired, to one regarding the sciences from the stand-point from which he, in common with most philosophers, has regarded them. But these two sciences, it is, unhappily, the very object or *leading aim* of his work to eject from the Hierarchy of the Sciences. Mr. Comte recognizes no spirituality in creation. In dissecting the cerebral organs of man, he discovers no soul; and in dissecting the universe, he discovers no God. This profound, but lamentably unsentimental, uninspired philosopher is like the man, who, in hearing the ravishing strains of some grand orchestra, or rather combination of orchestras, can discover no *music*, no *harmonious melody*, but only certain *wavy motions* of the air, which, striking on the tympanum of the ears, produce the sensation which we call *sound*, with agreeable alternations.

It is of little avail that Mr. Comte repeatedly pronounces the name of

\* See Comte's Pos. Phi., chapter ii. of Introduction, p. 33.

† See Int., chapter ii., p. 32, of Pos. Phi.

God. So far as man is concerned, under his system of philosophy, God, if there be any, is as no God, and the universe is Godless. He denies the sublime declaration that "the Heavens declare the glory of God," and gravely asserts that "they declare only the glory of Hipparchus, Kepler, and Newton."\*

All these classifications (Zeno's, Aristotle's, Bacon's, and Comte's) differ from the one now suggested, mainly in this, *that they are taken from a different stand-point*. They all regard the sciences, (more or less,) as they are related to one another, or appear to us to be so related; this, as they are related to mankind. Their classifications regard the sciences as it respects their *essential nature*, or what we suppose to be their essential nature; ours, as it respects *the end*, with a controlling view to which they are, or ought to be, prosecuted—*human good*. Undoubtedly theirs is taken from a loftier stand-point. But ours, if taken from an humble elevation, is certainly more practical or better adapted to human uses, and, perhaps, in reality, more philosophical. For if the celebrated aphorism of Protagoras of Thrace, so severely criticised by Plato and others, that *Man is the measure of all things*, is not true, it is not very far from the truth. For *man is assuredly the measure of all that man can ever know or achieve*; and the great apostle of German Transcendentalism, Kant, was not very far wrong when he asserted that *all our knowledge, even of the external world, is not so much a representation of its real nature, as a reflection of the forms of our understanding*.

If, indeed, man is thus the *measure* of all that he can ever know or do, surely it would seem more proper to classify his knowledge from the stand-point of his own individuality. Comte, like his illustrious predecessors, Bacon, Aristotle, and Zeno, and more especially than any of them, has contemplated the sciences from the exalted *eminence* from which we may suppose they are contemplated by the Gods; we, from the *level* of humanity. Accordingly, Comte places first (after the fundamental or *instrumental* science of Mathematics) in his encyclopedical classification, the science of Astronomy, with which not one in a thousand of the human family are immediately interested, and the very last Sociology, or the science of human society, in which every human being is immediately interested, and which lies nearest to us all, of all the sciences. In exact reverse to this, after the order which we have adopted, we place first the Social sciences, and very last the Contemplative sciences, to which we refer astronomy and all other sciences which have but a *remote* bearing on the interests of mankind.

From this cursory view of the various departments of human knowledge, and according to our mode of examination, it would appear that the grand and curious temple of universal science, resting, as it does, upon a *labyrinth* which no man has been able to thread, has, in the great main body of it, two grand divisions, which may be respectively named the MATERIAL and SPIRITUAL; and that from each of these divisions rise, as it were, into three great domes, or sky-lights, three main orders, or classes of sciences; from the Material division, the *social, medical, and technical* sciences, with three appropriate spires and pinnacles; and from the Spir-

\* The author has not been able to find this passage in the work of Comte, as translated by Miss Martineau. Perhaps in her *free and condensed* translation, as she characterizes it, she judiciously omitted this passage. The author is indebted for it to the work of Mr. G. H. Lewes, designed to popularize Comte's philosophy with the Anglo-Saxon public. See Comte's Philosophy of the Sciences, by G. H. Lewes, p. 88.

itual division, the *intellectual, moral, and contemplative* sciences, with their appropriate spires and pinnacles. It appears, also, that there is but one *entrance* into this grand temple which leads immediately into the MATERIAL division, and that all the various domes of the five other departments of this comprehensive edifice, are only to be gained by the great common staircase which leads directly to the dome of the social department.

It is evident, therefore, that this social department of universal science is more extensively useful than any other, since it is not only of great importance in itself, but controls the way to all the others. It is with this department of general science, or rather with the various sciences that appertain to it, that it is the design of this work to deal, not so much, however, with the view of making any particular additions to any one of them, as of considering and setting forth those general principles which are, for the most part, applicable to them all; and, in short, of inaugurating a new and more comprehensive science for the investigation of social phenomena, which shall embrace, within the scope of its contemplations, the primary and fundamental principles which underlie all the social sciences—a science, which it has been concluded, may be most appropriately entitled SOCIOLOGY.\*

This undertaking is the more important, inasmuch as it has never been attempted before, and as it serves to lay the foundation for a more enlarged and comprehensive system of Social Philosophy. Those who have treated the social sciences heretofore, have done their work in too partial a manner, and with altogether too little comprehensiveness of design, without having clearly perceived the relations of the separate social sciences to each other, or to the great temple of universal knowledge.

It will be the province of this newly proposed science of SOCIOLOGY, to take cognizance of all the phenomena of the social state, to analyze and reduce, to its constituent elements, the composite structure of human society, to ascertain and define the nature of the elementary principles of which it is composed, and to determine what results the various combinations of those elementary principles will be likely to exhibit, and what influence the various expedients, which may be suggested by particular social sciences, will be likely to exert in controlling or modifying those results. The science of Sociology thus defined, bears the same relation to the particular social sciences, that the comprehensive and generic sciences of Medicine and Geology bear to their respective particular and subordinate sciences. As the science of Medicine embraces anatomy, physiology, materia medica, therapeutics, and hygiene; and as the science of Geology embraces mineralogy, paleontology, geography, and perhaps

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\* It is possibly worthy of remark that the author took the sole responsibility of *coining* this word, without being aware that it had ever before been used. So recently as in September, 1855, he consulted with a friend as to the necessity of coining a new word, to express the comprehensive ideas involved in his mode of considering the phenomena of society, and suggested *Socialistics, Socialistics, and Sociology*. His friend adjudged that neither of these words was allowable—that such liberties with language were admissible in the German, but not in the Anglo-Saxon vernacular. The author, notwithstanding, concluded to adopt Sociology, at whatever consequences. He shortly after learned that the word had been employed even as the title of a recent book, by Mr. George Fitzhugh, of Port Royal, Virginia, entitled "Sociology for the South." Shortly thereafter he found that it had been freely used in the last edition (8th) of the Encyclopedia Britannica, under the title of "Communism," and still more recently, that it had been abundantly employed by Comte in his *Positive Philosophy*. Mr. Fitzhugh, however, used the word in a very contracted sense, as if he supposed it meant some particular form of society, as *communism*, or the like. Comte and the Encyclopedia Britannica use it, evidently, in the enlarged and proper sense, in which it is used by the author. This statement will show how different minds, without any concert, sometimes hit upon the same discoveries or ideas.

also cosmogony, (though Sir Charles Lyell says not,) so the science of Sociology embraces natural economy, ethnology, social biology, political economy, politics, and jurisprudence.

It is the province of Natural Economy to treat of the action of those laws or forces of nature which are concerned in the supply of subsistence for man. This, which is by far the most fundamental and important of all the influences that act upon the social condition of man, has been almost wholly unnoticed by those who have attempted to solve the abstruse problems of the social state. Some of the political economists, it is true, have alluded casually to this influence, in explaining the processes of the production of wealth. But they have noticed it only in its ordinary operation, and in so far as it relates to the uniform *productive agency* of the forces of nature,\* and have not noticed it in its extraordinary and far more important operation as a grand agent in determining the social condition of individuals and nations. So true it is, that in the progress of discovery, men do almost invariably make the most important discoveries last, being long deceived before-hand by the glare and prominence of superficialities.

It is the province of Ethnology to treat of national peculiarities, or the distinctive traits of different nations and races of men, and the concurrent influence of those traits or peculiarities with other causes in determining the social condition of nations and individuals. This science might not, inaptly, be termed the *phrenology*, or, perhaps, more properly, the *physiognomy* of social philosophy. This science, too, has been almost entirely unnoticed by those who have heretofore speculated on the phenomena of the social state.

It is the province of Social Biology (or the science of Population) to treat of the laws which regulate the production, distribution, and destruction of human life. This is the science which has been so much discussed by writers on population, and which is often referred to as the science of Vital Statistics.

It is the province of Political Economy to treat of the laws which regulate the production, distribution, and consumption of human subsistence or wealth. This science may not inappropriately be styled the *physiology* of Social Philosophy, and its vast importance, as a subdivision of Sociology, may be appreciated by considering what the science of Medicine would be without the aid of its subordinate and affiliated science of physiology.

It is the province of Politics to treat of the *regulations* which are to be prescribed by the aggregate power of society, (or government,) respecting the tenure of accumulated wealth, (or property,) the modes of operating to produce and distribute wealth, in so far as it may be deemed expedient for government to interfere with those operations, the quantity of political power to be confided to government for the purposes of common defence, or any other, and the distribution of that power among different functionaries, with the proper checks and balances necessary to guard individual rights against the injurious encroachments of political authority.

\* Mr. Say, the French Economist, refers to this influence, and calls it the *productive agency of natural agents*. See Say's Pol. Eco., book 1, chapter 4. He refers to the agency of the soil, air, rain, and the sun, and also to the forces of gravitation and magnetism. But he considers these agencies merely as a political economist, and not in respect to those far more important bearings which appertain to the province of the Sociologist. These bearings will be hereafter considered by the present inquirer. See part iv. of the work to which this review is introductory.

This science, in its largest sense, may be regarded as the *Therapeutics*, and, also, to a larger extent, as the *Hygiene* of Sociology. But in the contracted sense, in which it is often regarded, as with respect to the mere distribution of political power, or the form of government, as it is called, it is little more than the *Tailor Science*, or, at best, if we may adopt the eccentric phraseology of Mr. Thomas Carlyle, in that wonderful production of his ponderous intellect, "Sartor Resartus"—the mere "Clothes Philosophy" of Sociology.

It is the province of Jurisprudence to expound and apply to particular cases the regulations prescribed by political authority, and to adjudicate, either in conformity with those regulations, or with the general principles of reason, the innumerable questions of *meum* and *tuum*, that are continually arising out of the complicated transactions of human society. This science, (which is properly but an appurtenance of Politics, in its most comprehensive import, being merely the judicial department of political authority,) in so far as it may deserve to be separately considered by the Sociologist, is but the *Pharmaceutics* of Sociology, so that the jurist, so wise in his own conceit, and so much idolized in the temple of justice, is but little more than the Apothecary of Social Philosophy.

Nor should it appear incredible, that a science which has ever held so high a place in the estimation of mankind as jurisprudence, and which has been illustrated by the life-long labors of a Pothier, a Mansfield, and a Marshall, deserves to be regarded as, intrinsically, of no greater utility, as an agent in the social destiny of man, than *pharmacy* as a medical agent. The dignity of a science is not to be estimated solely by the utility of its results or outward manifestations—for astronomy would thus be awarded an humble rank—but also by the range of observation which it embraces, and its inward influence on its devotee. Estimated by this standard, jurisprudence must ever hold an eminent position in the Hierarchy of the sciences.

There is no science, indeed, so single in its character, that will serve better than jurisprudence to illustrate the truth of our fundamental observation, that *the study of all sciences is necessary to the complete mastery of one*. To be a learned and thorough jurist, a man must not only be acquainted with the *pharmaceutics* of Sociology, or the *judicial prescriptions* of society, (so to speak,) but he must be intimately acquainted with the *anatomy* of human society, and to a large extent with its *physiology* also, and he must of necessity have become conversant, if by observation only, with *social therapeutics*. And beyond all this the mind of the jurist must be capable of taking a wide range through the realms of pure reason, the region of the intellectual sciences, so far, at least, as the domain of human rights is concerned, and the *logic* by which those rights are to be unfolded and applied.

But after all this wide range of thought and observation, the real work of the jurist, so far as it concerns society, we must repeat, is little more than that of the mere pharmacist. What stronger proof, indeed, do we need of the little that jurisprudence can accomplish for mankind, than the fact that the jurisprudence of Rome, under her emperors, was one of the most admirable ever devised, so admirable that it has become the study and model of nearly all modern nations, while her social condition was one of the most corrupt and wretched ever known among civilized nations.

The two last mentioned sciences (jurisprudence and politics) relate, however, to the operations of man, and lie open to the view, while the other social sciences relate to the secret and unseen, though far more important, operations of nature. As might be expected, therefore, these two sciences have been greatly more noticed as agents in determining the social condition. It is in *the shoal water of politics*, that mankind have been almost constantly diving hitherto in their vain and shallow endeavors to fathom the mysteries of the social state. It has been only of late that more profound explorers have tried the deep waters of political economy and social biology. Nor have they gone deep enough, as will hereafter be clearly demonstrated,\* for they have not yet sounded the depths of Ethnology and Natural Economy.

While the scope of the comprehensive science of sociology embraces those of all its subordinate and kindred sciences, its controlling design is to attain one grand end, to which it is its office to direct the energies of all those sciences, and that is the end of supplying mankind with the necessary bodily comforts, of endowing every member of the great human family with adequate provision for his material wants, such provision, in short, as will not only abundantly satisfy those wants, but lay the foundation for the healthful development of his spiritual nature. *Can this end be attained? and if so, by what means is it attainable?* This is the grand problem to be solved by the social philosopher. With the solution of this problem, comes the solution of every other social problem that is of any great importance. As the grand end of the science of medicine, drawing its resources from half the realm of universal science, is the promotion of human health, so the grand end of the Science of Sociology, drawing its resources from the whole realm of universal science, is the promotion of human wealth.

If it were possible to attain this end, not in the narrow, and for the most part unprofitable, sense in which it is aimed at, by the political economists, of promoting merely the *aggregate* wealth of society, but in the far more important one, of promoting the *separate* wealth of each individual, of bringing the blessings of adequate subsistence, of moderate wealth, to the home of every man, so that there should be no *pauperism*, no *destitution*, in human society, it would be a great result—"a consummation most devoutly to be wished," and long striven for in vain. The benefits resulting to the human race from such a consummation would be incalculably great. Apart from the blessings which such a condition would confer, in satisfying the wants of the suffering poor of humanity, the extensive benefits resulting therefrom, to the affluent, and all the higher orders of mankind, would be equally as great, if not still more so. For with the comfort of the lower orders of mankind would come contentment with their lot. And with contentment of the lower orders would come security to the higher, stability to the social order, and a harmonious state of society that would be proof alike against despots and demagogues, those baneful pests of humanity, and disturbers of their peace.

The effect, on many of the most important interests of a state or society, of the destitution of the poorer orders, is far greater than is commonly supposed. The poverty of the poor and the affluence of the rich, are both among the most important sources of the corruptions which breed

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\* See parts iv. and vi. of the work to which this review is introductory.

those moral pestilences that often prove so disastrous to nations. Of these two hurtful extremes of the social state, the former is without doubt far greater in magnitude. The demoralizing effect of the luxury of the rich is undoubtedly very great, but it is scarcely comparable to that resulting from the degradation of the poor. From this latter source, as their most prolific fountain, flow vagrancy, prostitution, theft, burglary, robbery, murder, riot, dissatisfaction of the lower orders with their condition, and great popular commotions which breed standing armies that are so often destructive to the liberties of States.

It is of no small consequence, then, to many of the highest interests of mankind to solve this seemingly simple social problem—*How can every member of society be provided with an adequate supply of the common comforts of life, be well fed, well clothed, well housed, and well warmed in the winter season, without being too much overworked to receive such mental culture as is consistent with the dignity of a rational being?* Many of those who have undertaken to theorize on human society, have aimed at such grand results, that they have scarcely deigned to notice this homely question. Invested with magnificent hallucinations, speculating grandly in vague generalities, they have discoursed at large about the vast iniquities perpetrated by governments on the rights of humanity, the glorious perfectibilities of that semi-celestial creature of their deluded imaginations, whom they have scarcely deigned to invest with the substantial attributes of a man, and have indicated the ease with which, if their sagacious plans were acted on awhile, this creature of their imagination would become a kind of immortal *demigod* on earth, and be endowed with a sort of heavenly bliss. It is a pity that these magnificent romancers have not condescended to consider how they were to get food for the bellies of their demigods, and shirts for their backs. Had they done so, we humbler aspirers in this field of humanity might possibly have known better how to procure them for our needy brethren of the human kind.

Despicable as this question may appear to the romantic and visionary class of theorists, and lightly regarded as it may be by others, it has hitherto been found to present insurmountable obstacles to the schemes of philanthropy, and to baffle the skill and learning of philosophy. The best governments that have ever been devised have not been found capable of *eradicating pauperism*, or of rendering the condition of all their subjects as comfortable as is requisite to the nature of man, and the preservation of his spiritual, or even his bodily, health. In the best organized societies, it has been ascertained that a considerable number of persons are the victims, either permanent or temporary, of a distressing poverty, and are destitute of the proper comforts, if not the absolute necessities, of life. With all the recent improvements in art, the wonderful attainments in science, and the extraordinary progress of society, so much vaunted in these days, it has not yet been found possible to prevent nearly one-half of the human family from continuing in a degrading vassalage to severe and inadequately rewarded toil, while a fearful number are, in many parts of the world, unable to procure the poor privilege of toiling for those inadequate rewards that are commonly yielded to labor. In the most highly civilized states of society it is still found that, while one portion of the community are reveling in the superabundant luxuries of civilization, another portion, equally as numerous, are living in the abject wretchedness of barbarism, or at least of *semi-barbarism*. Notwithstand-

ing the extraordinary increase of the aggregate wealth of nations, which often takes place, it is found that it is only the rich that become richer, while the poor remain stationary, or actually retrograde in their condition.\* It has not yet been found practicable by any devices to prevent this vast inequality of individual fortunes in the social state. It has not been found possible to effect such a distribution of the aggregate wealth or revenue of society as to prevent one portion of the population from suffering the stricture of absolute want, while another portion are living in wasteful profusion.

This great inequality in the social condition of mankind, and the social distress attending it, though observable in every society, is not found to be very great, or to present any very serious aspects, in what are called *new countries*, which, like the United States of America, happen to be occupied by a highly civilized and enterprising people, who are rapidly developing their industrial resources, and who have a *broad margin* yet to traverse, before reaching that "upland or outfield territory," as it is styled by Dr. Chalmers, "which will forever bid defiance to agriculture."† Nor will such countries feel very seriously this tendency to social degradation, so long as they have an abundance of fertile land lying waste, upon which their redundant populations may expand themselves. And the inhabitants of such countries may need the admonition that it will not always be thus well with them. Accordingly, it has been well said by the late Professor Dew, himself an American writer, in alluding to the present fortunate condition of that country, with respect to the grievances of the social state, "But when the great *safety-valve* of the West shall be closed upon us, then will come the great and fearful pressure upon the engine."‡ With such countries, therefore, the evil day is only postponed. But with old countries, as they are called, or those long settled, it is already come. In such countries, where the population is dense, where they have trenched far upon the utmost capacities of the country to support population, where mankind are already pressed hard upon the "slowly receding barriers of subsistence," and where every augmentation of the stores of subsistence is obtained only by a severe strain upon the energies of the population, and the productive capacities of the country, this social phenomenon assumes a portentous aspect, appalling the heart of the philanthropist, and threatening at times the stability and order of society.

A social phenomenon so remarkable, and so unpropitious to human happiness and the well being of society, has naturally engaged, to a large extent, the attention of philanthropists and statesmen. It must be admitted, however, that but little progress has been made as yet in the work of countervailing its injurious influences. And if correct views as to its true nature, and the proper modes of attempting to countervail it, have been entertained by any, they have not been very prevalent, nor have they materially influenced the views of statesmen or the policy of governments.

\* There are some qualifications to be made to this remark, for which reference is made to part ii. of the work to which this review is introductory. The over-smart critic, who may find some objections to the remark, is solicited to forbear his thunder for a season.

† See Chalmers's Political Economy, chapter I., paragraph 16.

‡ See Lecture of Prof. Thomas R. Dew, of William and Mary College, before the Virginia Historical and Philosophical Society, in *Southern Literary Messenger*, for the year 1836 or 1837; the author does not remember which, and from want of the periodical he cannot make an accurate reference.

It must readily be admitted that a knowledge of the real nature and causes of this social phenomenon is in a high degree desirable. An accurate acquaintance with the nature and causes of a disease may be regarded as an indispensable prerequisite to the discovery of the proper mode of treatment. Such an acquaintance may either suggest a course of treatment that will prove efficacious, or it may convince us that the disease is beyond the reach of remedial appliances. In either case it is desirable that we should be conversant with its real character. If a patient is indeed laboring under an incurable chronic disease, it is better that he should be so informed, than that he should be induced, by deceitful hopes of recovery, to be continually subjecting his system to medicinal experiments, that may do harm, but are surely destined to fail of their object.

It not unfrequently happens, indeed, that a physician, from a misapprehension of the true nature of the disease, reduces his patient to a worse condition than he was in at the commencement of his attendance. Bodies politic are unhappily liable to like maltreatment. The mistakes of mankind as to the true nature and causes of their social sufferings, have often urged them into courses of conduct that have not only failed to benefit them at all, but have served to aggravate, rather than to allay, the severity of their distresses. And of the political doctors who have attempted to ameliorate the condition of human society, it may be safely asserted that the greater number have proved to be scourges, rather than benefactors, of the human race. It is largely owing to the prescriptions of such doctors that, within a comparatively recent period, in the language of Macaulay, "Europe has been threatened with subjugation by barbarians, compared with whom the barbarians who marched under Attila and Alboin were enlightened and humane."\* It was under the treatment of such doctors of society as Rousseau, Diderot, and Condorcet, that the French nation were driven into such frantic excesses, near the end of the last century, that, in the language of the same writer, "The truest friends of the people have with sorrow owned that interests more precious than any political privileges were in jeopardy, and that it might be necessary to sacrifice even liberty in order to save civilization."†

The plan proposed in the present inquiry, for endeavoring to ascertain the true nature of this tendency to social degradation, which has hitherto baffled the skill of social philosophy, and the proper modes of attempting to countervail which constitutes the main problem to be solved by the social philosopher, is a thorough examination of the whole structure of human society, and of the vital forces by which it is propelled, not only in relation to the inherent motions of those forces, but to the disturbing or modifying influences of external forces. Among medical men, it has been long ago conceded that the only effectual mode of learning how to treat any human disease, and more especially how to preserve human health against all diseases, is to study thoroughly the whole science of medicine, in all its wide range of affiliated sciences. Nor should it be any less manifest that the only effectual mode of learning how to treat

\* See Macaulay's History of England, chapter x., page 616, of vol. ii.

† *Idem—Id.* Macaulay does not expressly apply these remarks to the French people, in the passages here referred to; but it is presumable he so intended. He has a large share of the fault which he attributes to Gibbon in his article on History—"the trick of narrating by innuendo"—a *trick* that better befits the poet than historian.

any disease of the social system, is to investigate thoroughly the whole science of sociology, in all its wide range of subordinate and kindred sciences.

The cultivators of medicine have accordingly built up for the world a noble science, or rather confederation of sciences, all working together with unity of design, and tending to the noble end of curing or alleviating the bodily diseases of mankind, and promoting their bodily health. But there has been hitherto no such science, or confederation of sciences, having for its object to cure or to mitigate the social diseases of mankind, and to promote their social health. Those who have labored in this department of general science hitherto, have worked without any sufficient combination of efforts, comprehensiveness of plan, or unity of purpose, working hap-hazard, as it were, and without seeing clearly the various and multiplex bearings of the work on which they were engaged. To remedy this deficiency in social philosophy, by inaugurating a more comprehensive science for the investigation of social phenomena, is one of the leading aims of the present undertaking.

Nor is the illustration thus drawn from medical science any more apposite to the matter in hand, than may be drawn from astronomical. The social system, indeed, occupies an intermediate position, in the great plan of creation, between the corporeal system of man and the sidereal system of the universe. The same grand *original types of creation* are doubtless observable in them all, and the analogy between the respective fundamental laws of each of these three systems (the corporeal, social, and sidereal) is, beyond all reasonable doubt, perfect, so far as it extends.

It occurred to the mind of Newton that the same laws of motion which determine the fall of bodies to the earth's surface, determine also the motions of the moon, the earth itself, all the planets, and the whole sidereal system, and that the most effectual and complete plan for ascertaining what are the laws which regulate the fall of a stone or an apple, is to inquire into the laws which regulate the motions of the distant planets and the whole system of the cosmical universe. It has occurred to the present inquirer, that the same laws which determine the social condition of the pauper determine also that of the prince, and that the only effectual and complete plan for ascertaining to what causes the pauper, the slave, and the over-worked, poorly-paid laborer are indebted for their position in the social state, is to ascertain what are the causes which determine not only their several conditions, but those of the millionaire, the master, and the prince, which determine, in short, the social condition of every individual in society, and of every society or nation in the great system or family of nations.

What those causes are, may be regarded as the *main theme* of the present inquiry. And the inquirer has been greatly deceived, or the exposition which it is proposed to give of those causes will go far to settle permanently, if not to put forever at rest, the long-vexed questions, which have so often convulsed human society, between master and slave, capitalist and laborer, prince and people.

If that exposition shall give some dissatisfaction to all of the parties concerned, it will be, perhaps, because it recognizes a certain degree of right on the side of each, and adjudges that each is right in his proper place, that each appertains to human society, in some of its manifold manifestations, as legitimately as suns, planets, satellites, and comets be-

long to the cosmoical system, and that it would be as well to strive to change a comet into a planet, or to make a great central sun out of the paltry satellite of some second-rate planet, as to give to any man, or nation of men, a position in the social system different from that which is prescribed for each by the immutable and infrangible laws of Sociology.

Before proceeding to develop the plan proposed, and to expose the system of Social Philosophy which it is now contemplated to submit to the judgment of mankind, it will be advantageous, as well as consistent with precedents, to take a *review, historical and critical*, of the different systems that have hitherto most prominently engaged attention. Lord Bacon has said that "it is not St. Augustine's nor St. Ambrose's works that will make so wise a divine as ecclesiastical history thoroughly read and observed; and the same reason is of learning."\* Although this remark may not hold so good in sociology as in theology, there can be no doubt that a historical review of the different sociological systems or theories, accurately taken, even if it should be but a brief and much condensed summary, will prove highly suggestive, as well as instructive, and prepare the way better for the reception and appreciation of the more comprehensive and all-embracing system now in contemplation.

The multitudinous schemes for the improvement of human society which have been hitherto advocated, together with their corresponding theories respecting the causes which obstruct the social prosperity of mankind, may be reduced to three classes or systems, to one or other of which they may all be referred—those which attribute the social sufferings of mankind to *some defect or error in the political or social organization*; those which attribute it to *some inadequacy in the development of wealth, or the means of subsistence*; and those which attribute it to an *undue development of population, or the numbers of mankind*. The remedy proposed by each of these classes of theorists, as the mere statement of their theories plainly indicates, is, for the first, *some reorganization of society, either political, or yet more fundamental*; for the second, *an increase of national wealth*; for the third, *a reduction of population*. To the first of these classes or systems (if they merit the name of system) belongs the idea of those political doctors, and pests of society, who are forever discovering (as they imagine) some grievous wrong to mankind, resulting from the form of their governments, or the general structure of society; to the second belongs the idea of the political economists with their petty schemes for increasing the national wealth; to the third belongs the idea of the Malthusians, so named from the writer who first gave prominence to the idea, that the instinctive tendency of mankind to propagate their species is among the most potent causes which tend to their social degradation, an idea which is good enough as far as it goes.

These various ideas are here stated not only in the order which would seem to be that of their logical and natural development, but also in the order of their actual and historical development in the great discussions to which their promulgation has given rise. In referring hereafter to these various ideas, or rather the systems by which they are severally embodied, they will be designated, for the sake of brevity and distinctness, as the Political system, the Politico-Economical, and Malthusian.

It is proper, however, to remark, that the political economists, for the

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\* Advancement of Learning, book i., page 17; original work, London edition, 1824.

most part, have not directed their inquiries immediately or avowedly to the object of relieving the social sufferings of mankind. They do not, indeed, seem to have adequately appreciated the importance of this object. And in so far as they have recognized its importance, they seem to have rather taken it for granted that this end would be accomplished or promoted, as far as is by any means practicable, *by the mere force and effect of an increase of the aggregate national wealth.* Though not avowed or distinctly proclaimed, therefore, their *theory* as to the proper plan for relieving the social sufferings of mankind is the increase of national wealth. If this is not their theory, why have they dwelt so much and so earnestly upon the means for increasing national wealth? why have they wrangled, quibbled, and refined with so much exactness and scholastic subtlety upon the cheapest modes of production, or the most productive modes of employing labor and capital?

Properly considered, indeed, it is not the legitimate province of political economy, to concern itself about the increase of wealth as *an end*, or even about the distribution of it with reference to *the end* of improving the condition of the individual members of society. That rather belongs to the province of the politician, but pre-eminently to that of the sociologist, whose province embraces that of every department of social philosophy. The true province of political economy is to determine *what are the processes by which wealth is produced, distributed, and consumed*, or, as already intimated,\* to ascertain the vital functions of the body politic, in all its parts and ramifications, as the *physiologist* does with respect to the body natural. Wandering off from this, their legitimate province, and trenching upon that of the sociologist, they have, to a great extent, treated of the increase of wealth as the *end* of their particular science. It is in relation to this *phase* of political economy, and the *phase* in which it has hitherto most prominently manifested itself, that the remarks hereinbefore or hereinafter made, concerning the "politico-economical system" of social philosophy, are to be understood.

It is also proper to remark, in this connection, that some of the later economists (or of those who have written during the last quarter of a century) have recognized the error of the earlier ones, in supposing that the mere increase of the aggregate national wealth tended by its own force to relieve social distress, and to increase the general average of individual comfort. Some of these later writers have, indeed, distinctly admitted the countervailing force of the Malthusian idea, that *the increase of national wealth can avail little or nothing, which is followed immediately, or in a short time, by an increase of national numbers.*† The masterly work of Dr. Thomas Chalmers, entitled "Political Economy," is in reality little else than a powerful vindication of the truth of Malthusianism, and a triumphant and overwhelming demonstration of the futility of all schemes for the mere increase of national wealth. The still later work of Mr. John Stuart Mill on Political Economy, also a masterly production, distinctly recognizes and ably vindicates the Malthusian idea, and the indispensable necessity of estimating its force in all schemes for the amelioration of the condition of the

\* See *ante* page 537, where the various subordinate sciences that appertain to sociology are defined.

† This remark does not apply, however, to all the late economists. Such respectable authorities as McCulloch, Sismondi, and even Mr. Say, still adhere to the original ideas of their school, and give but a passing, partial, and inadequate recognition of the Malthusian ideas.

lower orders of mankind. Such writers as these evidently embrace in their sociological systems both the Malthusian and politico-economical ideas; and to that extent they are both clearly right, and only faulty or deficient in that they do not embrace a great deal more.

Of these three systems or schools of social philosophy, there have been three prominent exponents, or one of each school respectively, who, either by reason of the superior merit of their works, or by the force of adventitious circumstances, have acquired a pre-eminent notoriety. Of the *political* system, the most prominent or pre-eminent notorious exponent has been a certain Mr. William Godwin, author of a most extravagant and absurd book entitled "Political Justice;" of the *politico-economical* system, the most prominent and illustrious exponent has been Dr. Adam Smith, author of the justly renowned book known as the "Wealth of Nations;" of the *Malthusian* system, the most prominent and notable exponent has been Mr. Thomas Malthus, author of the celebrated "Essay on Population," and founder of the system of social philosophy which has taken its name from him.

The prominence of Mr. Godwin was owing to the monstrous absurdity of the extent to which he carried an idea that is intrinsically insignificant, at the best, and the extraordinary excitements of the time at which his book appeared, the *epidemic of revolution* having just then run a large part of mankind stark mad, and the book sorting well with the madness of the times. The prominence of Adam Smith was owing to the eminent merit of his book, and the distinguished services it has rendered in the cause of political and social science. The prominence of Mr. Malthus was owing to the novelty of his idea—its appositeness to the times, its intrinsic importance, and its *peculiar adaptation* for exciting the opposition of those who have not the sense to understand it.

It is worthy of remark, that all these authors were of the Anglican or Anglo-Saxon race, and that their several works, which have played so notable a part in the movements of the human mind in this interesting field of science, were published within the same quarter of a century, and that the last quarter of the eighteenth century.

But here the logic of history fails to assort with the logic of science. That it should do so, it behooved that the work of Godwin should have preceded that of Adam Smith, as the *political* system had hitherto preceded the politico-economical, in its historical development, as it does in the order of its natural and logical development. But the reverse was the case.

Adam Smith's great work, entitled "An Inquiry into the Nature and Causes of the Wealth of Nations," was first published in 1776, the year rendered memorable in the annals of the human race, by a still more notable and probably more important publication, "The Declaration of American Independence;" Godwin's "Political Justice" was first published in 1793, and the "Essay on Population" of Malthus in 1798.

Before pronouncing any systematic criticism upon these three systems of social philosophy, it will be advisable to trace their historic development, so far as that may be practicable. In other words, before taking a *critical review* of these systems, it will be advisable to take a *historical review*. This will, perhaps, be done to more advantage by considering each of them separately, although their history is, of course, to a great extent, blended and interwoven, more especially of late. They are not too much blended, however, to admit readily of a separate consideration. Indeed, the two last

developed systems have only sprung up since the commencement of the Baconian epoch, and one of them, the Malthusian, as already seen, since a very recent date.

The first of these systems, that which we have named the political system, has been maintained, in some form or other, from a very remote period; and all the sociological ideas, with a few partial exceptions, which have been promulgated before the Baconian epoch may be referred to this system, so that the history of this system before the commencement of that epoch will not be found blended with either of the two later ones, except to a very limited extent.

In sketching the history of this political system, imperfectly as we must necessarily perform the task, we shall find it advisable, indeed, to consider it under two divisions, according to the *boundary* afforded by the commencement of this Baconian epoch, the one relating exclusively to the opinions promulgated before this epoch, and the other more particularly to those promulgated since. The consideration of the former division will, however, consist rather in a *review of the literature of the different races and nations of mankind*, that have flourished before this epoch, with a view to ascertaining what sociological ideas of any value are to be gleaned therefrom, or, to speak more properly, for the purpose of showing how little of real value is to be so gleaned. And this will be the theme of the *third part* of this review.

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## Art. II.—OUR CANALS AND OUR RAILWAYS.

THEIR FUTURE—THE SAVING OF TIME, WITH CERTAINTY AND CELERITY, GRADUALLY CHANGING THE BUSINESS OF THE FORMER TO THE LATTER—VIEWS, 1841, ON THIS SUBJECT.

THE situation of the Erie and other canals of the State of New York, with only four to five feet of water on the "*long level*," during the last summer, with the petition of canal forwarders to the Canal Board, in August, to fix the maximum loading of boats not to exceed four-and-a-half feet of water; and this, too, after twenty-four years of time, and the expenditure, under various pretences and false estimates, of upwards of fifty millions of dollars, by reckless politicians and profligate employees, the present State indebtedness, with the necessity for direct and continued taxation to sustain the credit of the State, is truly "food for reflection."

Is it not time, under the difficulty of getting and maintaining even six feet of water on the level between Utica and Syracuse, to pause? and to use the language of M. B. Brockway, in the *Merchants' Magazine* for August, where he says:—"It is certainly high time that the State paused in its career of borrowing and expenditure. Let us take soundings, and see what can be done with six feet of water. Should the tonnage and revenues of the State canals not be greater in 1859 than they were in 1858," [to 1st September, 1859, as compared with the same period, 1858, they had fallen off \$302,000,] "it may be regarded as quite certain that they never will be larger than at present; and if there is to be no increase, can there be any good reason offered for expending more money on them?"

We will add, particularly when we find the extra spring and summer

rains this season have given us only five feet of water, (by order of the Canal Board,) that with this draught a boat has passed from Rochester to tide with 213 tons, and the Strabo canal boat from Oswego to the Hudson with 119,600 feet of green pine lumber, equal to 209 tons. This fact, with the doubts now expressed by many—and we fear with truth—that there are not sufficient feeders, on the “*long level*,” to supply and *maintain* seven feet of water, under the bad plan to get this depth of water, to wit, by putting in a lift lock at Utica of three feet, to thus raise the banks to obtain seven feet of water with extra pressure, leakage, and evaporation, should make us pause in our expenditures until we have the responsibility of a professional report on this subject from the Canal Board.

The present increased rate of tonnage carried by the improved lake boat with five feet of water has, during the last summer, caused the laying up of a large portion of the boats on the canal for want of employment. At Buffalo and Oswego may have been seen acres of boats tied up and unemployed, with the capacity of quadrupling the business on the Erie and other canals—and this, too, with five feet, and even less, of water, a part of the time. With six feet, it is contended by many, and among them the most intelligent forwarders, that we shall have better and more manageable boats, less liable to injure themselves by bunking each other and the locks, than with a seven feet canal, if there is any prospect from past experience of the present generation getting that depth of water under any expenditure and taxation, so long as “the more speedy enlargement and the saving of the canals” is to be the hobby on which politicians are to ride into power, and State indebtedness is wanted to extend our banking capital, the whole to be paid at a future day by direct taxation, unless the people, like the example we have had in other States, are forced to the bitter pill of repudiation of their bonds.

We make these plain remarks, as it is now more than twenty-four years (1835) since the law was passed to enlarge the Erie Canal to any size *that could be paid for by its earnings*; when half the Canal Board, the sane part, were for making it six feet by sixty feet, and the insane part (no doubt acting on the resolutions passed at Rochester at the time, “*to make it the wider and the deeper the better*”) reported in favor of eight feet by eighty feet. They then, like referees and jurors, “split the difference,” and then continued to expend money, without any scientific experiments to ascertain what a boat drawing five feet, five feet six inches, and five feet nine inches would carry, or the sized boat that would be preferred by the practical forwarder, and that was required by the wants of commerce and agriculture in this State and the States to the west of us, particularly with the improvements yearly taking place in constructing our railways and their motive power.

The fact appears to be lost sight of (at all events by our canal politicians and our forwarders—the latter, it is estimated, have fifteen millions of dollars invested in boats, horses, and warehouses, and *they* cannot see) “*that time is money*.” That in this State, as well as those to the south of us, and in the Canadas, all the valuable merchandise and tonnage is steadily leaving the canals to seek the railways, without regard to the cost, or charge for transportation, which falls mainly on the consumer.

It is now “the nimble sixpence instead of the slow shilling.” The sagacious dealer in the interior, particularly those with small capitals, to

supply the *daily* wants of his customers, resort to the railway and the capital of his correspondent in New York, instead of taking up money from the banks to lay in four to six months' supply as formerly, losing interest. The active trader has goods fresh and fashionable, and at prices that will pay a profit on immediate sales. His neighbor must follow suit, and employ the railway instead of the canal and long credits; and thus is the change that is gradually taking place in the United States and in Europe as to the mode of doing business. We admit canals may be useful for lumber and bulky articles, requiring slow transit.

The writer, as early as the 23d April, 1841, communicated to the Senate of New York, at the request of the President, Lieutenant-Governor Bradish, "*facts relative to railways judiciously constructed between desirable points,*" and by him they were laid before that body and referred to Mr. Furman, of Brooklyn, Chairman of the Standing Committee on Railways. This Senator adopted the "facts" collected in his report, "as containing valuable information relative to railways and canals," when, in common courtesy, his report should have been printed. Mr. W. Moseley, of Buffalo, the Chairman of the Standing Committee on Canals, offered the same, whereupon the writer withdrew it from the Senate. He had no interest, and never has had, in either railroads or canals, more than every citizen of the State. He tried then, as he has ever since, "*to do the State some service,*" by imparting such information as he could collect from official documents at home and from abroad—to use them, as early as 1837, to persuade New Yorkers that they wanted at least a railway from their commercial to their political capital, to be extended to both lakes Erie and Ontario. This visionary project at that period was ridiculed, where now New Yorkers, in their folly, have *three* railroads on the east side of, and parallel to, the North River, contending for the same business, and I may add a fourth, extending from Jersey City to Dunkirk on Lake Erie, with a branch to Buffalo—a good local project, but premature, and a rival to the Central line. In this competition, and to the disgrace of the railway system, we have or will expend near forty millions of dollars on a line over mountains 1,780 feet high and 65 feet grade, to contend with a like investment on the New York Central line from Albany and Troy to Buffalo; and then, forsooth, the State engineers and the bears of Wall-street hold up our railroads to ridicule, and as not being productive, and they, with the press, give us long homilies of advice—in substance, how directors should manage their roads to play into the hands of the great State monopoly, the Erie Canal, as if the people, as a body, were not as much interested in *their* railways as in *their* canals.

It is some gratification to find that Mr. Brockway, and even the present State Auditor, Mr. Benton, have come to the conclusion "that canals cannot compete with railways by their side, [for the people will pay for time,] unless the latter be subjected to canal tolls;" that is to say, that the latter should be taxed to sustain the *minor* improvement. The citizens of New York should not forget that the Victoria Iron Bridge over the St. Lawrence at Montreal, to connect Quebec, Portland, and Boston by the Grand Trunk and Great Western Railroads, with our and their wheat lands and fertile prairies, is to be finished the ensuing month of November. Further, New York must not lose sight of the fact that the Hoosic Tunnel is to shorten the distance and to reduce the grades and *cost of transportation* from Boston to our Central Railroad, and to our canals, some 50

per cent as compared with the present Boston and Albany Railroad. It has enlisted the aid of the State of Massachusetts to complete this work in two to three years. This effected, and the Hudson and Harlem Railroads leased to, or consolidated with, the Central and Oswego and Syracuse Railroads, and a railway freight bridge completed at Albany, as it should be, it will be seen what the nimble sixpence will do, as compared with the slow shilling on the canals. Then the following "facts," with others, covering 125 pages, which Messrs. Bradish and Furman endeavored to bring before the Senate, April, 1841, will not be considered visionary and heterodox, to wit, that time is money, and the people will pay for it, when we said, page 55:—

"The old standards are destroyed, and the advantages of every pursuit or undertaking, whether moral or physical, are now measured by *economy of time*, which is the greatest necessity of the age, and that for which there is the most strife." \* \* \* \* \*

"That it may be understood what we mean by being cheaper, in the saving of time, we make the following contrast, and which can be appealed to as true in fact."

By steam power on the ocean, it is cheaper on merchandise and fine goods, embracing nearly all that pay best for carrying, at £7 sterling per ton, than £2 10s. by vessels.

By steam power on river and railroad, it is cheaper on light merchandise at \$17 per ton per 100 miles, than \$5 by vessels, as between New York and Philadelphia, business by the high rate being checked.

By steam power on railways, it is cheaper on merchandise at \$25 per 470 miles, than \$21 by river and canal, as between New York and Buffalo.

By steam power on railways, it is cheaper on heavy merchandise at \$2½ per ton per 100 miles, than \$2 by canal.

By steam power on railways, for passengers at \$4 per 100 miles, than \$1 by stage coach.

By steam power on railways, for a passenger at 75 cents per 40 miles, than 12½ cents by steamboat, as between New York and New Brunswick.

By steam power on railways, for a passenger at \$1 50 per 150 miles, than *nothing* by steamboat, as between New York and Albany, for *business travel*.

By steam power on railways, to carry the mails at \$500 per mile per annum, than at nothing by stages on all main routes.

"This shows an inversion of the usual order of things, in the higher being the cheaper rate, and is a practical illustration of the *immense* but imperceptible saving of time. Thus the comparison—the stage coach, sailing vessel, and canal boat on the *positive*; the steam ship, the *comparative*, and the railway, the *superlative* of cheapness, as a general rule. Some would except coal from this rule, but they are mistaken, the canal closing at the moment of greatest need. A railway, which, besides obviating these difficulties, brings other advantages, must get the ascendancy."

"How many, unmindful of the fact, that the inventive character and spirit of the age is ever treading on the heels of the last improvement, and superseding on the morrow that which yesterday was thought perfect, still hold to their first impressions, and are unwilling to believe that they can have become so soon obsolete! Error, propagated *under authority*, (the *Canal Board*), is the more to be lamented, as it becomes so hard afterwards to eradicate. This has often occurred in the controversies between canals and railways.

"Thus we go back only five years when locomotives and railroads were yet in their cradles, and we find the following information reported to the Legislature of New York, by the State Engineers in 1835—Assembly document, number 296, and which will contrast oddly with the facts of the present day. They say, 'that experience has so far settled the cost of transportation on a level railroad at 3½ cents per ton per mile, and an engine of 6½ tons could only draw on a level a gross load of 75.25 tons; on a 10 foot grade, or ascent, per mile, 49.53 tons; on a 20 foot grade, or ascent, per mile, 37.35 tons; on a 30 foot grade, or ascent, per mile, 27.24 tons.'

"It is evident that these engineers rather inclined to the canal interest, for it is proved that at the time their report was being made, engines even then had drawn treble the amount allowed by them; and since, we know that they have drawn on a level near 500 tons gross, and 250 tons over a 40 foot grade.\*

"It was on such information as the above that the enlargement of the Erie and the construction of the Genesee Valley and Black River Canals were undertaken. And now that the first project is beginning to be thought ill-advised, its champions would seek to justify it by stating that the present canal is only equal to 25,000 lockages, when it is clearly proved that it is equal to at least 55,000 lockages, while it is becoming annually relieved of the more bulky tonnage—the destruction of the forest is not supplied by the tonnage on its clearing up of the same derived from agriculture." (Now mark for 1840.) "Very few people are aware that a railway could be constructed from Buffalo to Albany, with a descending grade all the way, which would enable it to carry, at a cost of only one-half a cent per ton per mile, with ample business, and thereby, with profit, admit of a reduction of 25 per cent on the down freight, and 50 per cent on the upward freight per Erie Canal, taking the rates of 1840 as a standard, which average \$9 per ton for the downward, and \$25 for the upward freight on merchandise for the year. If only, therefore, about one-third of the sum proposed to be *wasted* in the enlargement of the Erie Canal were applied to the completing such a railway, it would be in consonance with the lights of the age, and of true economy, and a most judicious investment. The railroads, now parallel with the Erie Canal, are gradually forming a continuous line from Albany to Buffalo, and to Oswego, and will, ere long, insist on being *unshakled* as to the carriage of freight; and the New York and Erie Railroad, in the course of construction, will also have become a participator of the *more lucrative* freight of the lakes, at a point more convenient than Buffalo." (Buffalo has since made a branch to the Erie Railroad.)

"And surely, the day will come, when Pennsylvania will have an avenue (she now, 1859, has it in her Central Railroad, to whom the State was glad to sell her ill and politically managed line of canals) to her metropolis, from Cleveland and Pittsburg, preferable points to them all. Nothing of this, however, seems to serve as a warning to the enlargement advocates; but politics, together with stock and *contract* jobbing, which have already ruined Pennsylvania, seems to have more sway over them than the true interests of the State of New York." \* \* \* \*

Again, page 79:—"The construction of the New York and Albany Railroad, fifteen to twenty miles from the Hudson River, and running parallel with it, is about to be undertaken in earnest. That railways should

pretend to contend with canals for freight, although that were considered presumptuous enough, was not so much wondered at; but that they should offer to compete, in any way, with the mighty Hudson, is generally considered in New York as truly chimerical. Greater wonders than this, however, have been realized. \* \* \* \* \*

"It is shown in note xi., page 48, that in the south, rivers using steam are being deserted for the railway. In one sense, for the freight from and to New York and Albany, during the season of navigation, it is not pretended that the railway would attempt to compete with the river *in rates of transportation*; but in other senses, sufficient to warrant the work, it can do so effectually, and its advocates (the writer, as one, and for near seven years, never calculated on three roads being built at an expense of above twenty-five millions of dollars, when one-third of this sum would have built the New York and Albany Railroad, with but little cost for the *right of way*, instead of paying, as the Hudson River Railroad Company has done, one-and-a-half millions of dollars for this right and damages, having located their road by charter, 'on the margin of the river,' instead of taking the charter now owned by the Harlem Railroad Company, which gave the privilege of either the river or interior route, with any number of branches east) are fully justified in urging both its importance and profitability upon the community."

"The following is a summary of ten reasons urged by its advocates in its favor"—(See report of the Common Council of the city of New York for 1840 on this subject, document 10 :)—

1st. Authentic statistics show that apart from the river, on the line of this road, through the interior of Putnam and Dutchess counties, the tonnage now got to market, at a great expense, is above 100,000 tons. It will be quadrupled.

2d. That the summer travel, and for eight months in 1839, was 3,500 per day, exclusive of sloops and market boats, or equal to through passengers, each way, 1,000 per day between Albany and New York. \* \* \*

10th. *As the main stem* to the northern railroads, the saving and commerce of the winter travel would be immense; and who, in looking ahead three years, in which time the New York and Albany Railroad could be put in operation, would say it could then want for profitable occupation?

"Looking upon the New York and Albany Railroad, and its extension to Buffalo, and the New York and Erie Railroad to Dunkirk, as works adding to the useful and beneficial links in the great chain of the Union, a mixed physical and moral bond to it, they have our hearty advocacy; and in framing these notes, in respect to them, we have endeavored to make them unanswerable commentaries on the superior cheapness and more general utility of the railroad system itself, to which, in due time, the most skeptical will yield. The subject, indeed, is worthy the special investigation of the Legislature, by a committee, as we have before alluded to. And as the country generally is now making its observations for a fresh departure, it would be well not to start unprovided with correct views on the important item of internal improvements, which will be found almost indispensable among the other means necessary to preserve it in a true and steady course for the future." \* \* \* \*

Page 92 :—"It comes to this, then, that the railway, in most cases, can carry merchandise at or under the cost of freight on a canal, and is as cheap on all open river and bay navigation using steam—time con-

sidered ; and that, therefore, any charge for toll by canal would be only an additional bounty in favor of the trade seeking the railway, which, besides, never suspends its operations, and has a greater dispatch and certainty of arrival than either of the others." (The canal advocates refused to hear and print this doctrine, April, 1841, when it was published in the New York Railroad Office, by giving the copyright.)

We have extended these remarks beyond what we first intended. We wished to show, from facts and from experience in Europe and in this country, that the march of railways "is upward and onward," the motto in the coat of arms of New York. Not so, we regret to say, with her canals, and the several canals in the different States in this Union, as we may take another opportunity to show in them decadence, and in their history show the utter folly of any statesman to depend on canals to regulate and draw to the city of New York the great interior commerce of the West, either by steam or horse power, even if employed on a seven foot canal, or, if you please, on a river from the lakes to the Hudson, in latitude 42° ; that is, obstructed by ice nearly half the year, and when, too, the people have determined to do their business—that is to say, the most valuable and paying part of it—*every day in the year*. This they will continue to do, all to the contrary that political canal conventions and mousing politicians may say, to buy votes, by fat and corrupt jobs on the "more speedy enlargement," with the practical result, that last summer they only had 4 to 4½ feet of water for a long period, and the forwarders now ask, in utter despair, the Canal Board to give them a uniform depth of 4½ feet and they will be content. The State or politicians are not competent to manage canals. This is the experience of Pennsylvania, Ohio, and other States.

J. E. B.

Art. III.—UNITED STATES AND BRAZIL.

THE northern and southern continents of America possess each an immense and growing empire, vast resources, and an imposing future. Each of them has developed a vast trade with European countries, without, in a proportionate degree, drawing nearer to each other. Both have been new countries, fruitful of raw products and materials of manufacture, the exchange of which with Europe for manufactured goods has formed hitherto the chief commerce of the two empires. The United States have, however, now so far advanced in the mechanic and manufacturing arts, as to become of right the chief source whence not only the Brazils, but all the nations of the southern continent, should draw their supplies. The extent of the Brazilian Empire is 2,973,000 square miles, having a present population of 7,121,000, or about the same that the United States contained in 1810. The population of the United States has increased since over 20,000,000, and the foreign commerce has risen from 100 to 600 millions. The intercourse of the United States with the Brazils has risen in the aggregate as follows:—

|                       | 1821.     | 1843.       | 1850.       | 1857.        | 1858.        |
|-----------------------|-----------|-------------|-------------|--------------|--------------|
| Imports from Rio..... | \$605,126 | \$5,948,814 | \$9,324,429 | \$21,460,733 | \$16,952,386 |
| Exports .....         | 1,388,760 | 2,601,502   | 3,197,114   | 5,545,207    | 4,954,706    |

The principal article of import into the United States from Brazil is coffee, and the result shows a large apparent balance in favor of the Brazils. The English trade with the Brazils has developed itself in the following proportion since 1843, when the English duties on coffee began to be modified, and since 1850, when the English steam connection with the Brazils was established:—

## EXPORTS FROM GREAT BRITAIN TO BRAZIL.

|           |            |            |            |
|-----------|------------|------------|------------|
| 1843..... | £2,140,133 | 1851 ..... | £3,518,684 |
| 1846..... | 2,749,338  | 1857 ..... | 5,447,566  |
| 1850..... | 2,544,837  | 1858 ..... | 3,981,264  |

The United States exports to Brazil increased from \$3,197,114, in 1850, to \$5,545,207, or \$2,348,000, in the same period in which the English exports to the Brazils, by force of steam, rose \$15,000,000. The increasing intercourse which shows itself between the United States and Cuba has not been manifest with the Brazils.

There have been few examples in the world of a commerce on so large a scale, and of so considerable value, having such a development between two civilized nations with so little personal relations between them, and so small an acquaintance of each other. Very few Brazilians have come to the United States, either on account of business or for recreation, and during late years the small number of citizens of the United States who have visited Brazil, went first over to Europe, in order to be sure of a passage in a steamer, in preference to a voyage in a sailing ship. The expense for such a circuitous passage in a steamer is considerably greater than in a sailing ship; but the general taste is for steamers, without even any economy of time. For a first-class passage ticket between New York and Rio, via England, the cost is at least \$600, while the direct passage on board a sailing ship would not be over \$200 to \$250. As regards time, the steamers are twelve days in going from New York to England, and twenty-eight days from England to Rio—in the whole, forty days. This calculation, taking into account all contingencies, is, as an average calculation, rather too low than too high. As to sailing ships, the average time of their passage from New York to Rio is about forty days, while from Rio to New York it does not exceed thirty-five days. Thus, in general, there is, in the preference given to steamers, no advantage as to time; and, nevertheless, no one can deny that everybody is in favor of traveling on board steamers. The evident reason of this fact lies in the regularity and certainty of a steamer line, which enable merchants and passengers to make reliable calculations, that, under most circumstances, may be of great importance to their affairs. Besides, there are people who would not be persuaded to leave land, if, instead of steamers, they had to traverse the ocean on board a sailing ship. Thus the regular service of oceanic steamers invites travel exactly in the same manner as the opening of a railroad, wherever it be, rapidly increases the number of travelers between the places it connects.

At the beginning of 1855, three steam lines were established between the Brazils and Europe; two were English enterprises, and one Portuguese. The Liverpool line was soon dropped, but that with Portugal continued to prosper. The commercial men of the United States are aware that the monthly steamship line between England and Brazil is a successful and lucrative business, and that from the time of its being es-

tablished the commerce between the two nations has increased with such a rapidity that this fact cannot be attributed to any other influence than to the impulse given to it by steam navigation. But not only have the commerce and personal relations between Brazil and England, and between Brazil and Europe, considerably increased, but they are still daily increasing. The movement of passengers is so great that the cabins of the steamers are taken a long time in advance, in spite of the comparatively high prices for passage, which probably will be maintained as long as that line has no competition to encounter.

In 1857, the great increase in the German population caused the enactment of a postal treaty, by which the mail was carried by a Hamburg-Brazilian steamboat company. Meanwhile, the great interior river trade was stimulated by steam. The Amazon and its tributaries are navigated by steamers; a line ascends the Parana and Paraguay; a coast line connects the capital with Para; and railway lines contribute to the general activity of trade, which must receive a new impulse by steam connection with the United States.

The empire of Brazil, having not very long ago been under the rule of a European government, it is natural that its inhabitants should have a special inclination for that country whence they drew their habits, manners, customs, fashions, luxuries, and literature, to such a degree that even the greatest part of their manufactures are imported from thence. Generally speaking, their only relations with foreigners have been, and continue to be, with Europe. Since the establishment of the constitution, Brazil has gradually advanced in population, wealth, and civilization, and its commerce has gone on constantly increasing with almost all the civilized maritime nations. Great Britain was for many years its principal purveyor, but the United States is its principal customer. The commerce between Brazil and the United States, which to-day is so considerable, is entirely based upon the exchange of several agricultural productions, the principal of which are coffee and sugar on the part of Brazil, flour and lumber on that of the United States.

For eleven years, from 1847 to 1857, inclusive, the United States exported to Brazil, (Rio de Janeiro,) 2,590,676 barrels of flour; in the last three years, 1855-6-7, they exported 884,963 barrels. During the same eleven years they received from Brazil 9,556,325 bags of coffee, and in the last three years, 1855-6-7, 3,294,340 bags. By estimating the barrel of flour in Brazil at \$10 per barrel, and the bag of coffee in the United States at \$15 per bag, the result is as follows:—

|   |               |
|---|---------------|
| Value of imported coffee to the United States during eleven years.. | \$143,344,825 |
| Exported flour.....   | 25,906,168    |
| Difference.....   | \$117,438,665 |

And during the three years, 1855-6-7, it was as follows:—

|                               |              |
|-------------------------------|--------------|
| Value of imported coffee..... | \$48,144,460 |
| Exported flour.....           | 8,849,630    |
| Difference.....               | \$39,294,830 |

For the last year, 1857, there were exported from the United States to Brazil 355,858 barrels of flour, and received 901,374 bags of coffee, which, estimated as above, will give the following result:—

|                               |              |
|-------------------------------|--------------|
| Value of imported coffee..... | \$13,520,610 |
| Value of exported flour.....  | 3,558,580    |
| Difference.....               | \$9,962,030  |

If now for a moment we consider the ratio of increase of the exchange of those staple articles which constitute the principal commerce between the two countries, we find that in 1847 there were shipped from the United States to Brazil, (Rio de Janeiro,) 180,848 barrels of flour, and in 1857, 355,858 barrels, which gives an increase of almost 100 per cent. In 1847, the United States received from Brazil 729,742 bags of coffee, and in 1857, 901,374 bags—the latter year being an exceptional one compared with former years. The real increase for eleven years was only 10 per cent.

While Brazil, during the above-mentioned years, received from the United States 2,509,676 barrels of flour, it received from Europe and all other countries 273,110 barrels—scarcely a ninth part of the whole amount. In 1857, Brazil imported from the United States 355,858 barrels, and from Europe, &c., only 15,846—a twenty-third part.

We have stated already that during the three years, 1855-6-7, Brazil exported to the United States 3,209,640 bags coffee, and during the same period to Europe and other parts 3,279,909 bags, the quantity shipped for the United States being almost equal to that exported to Europe and all other parts. And whilst in 1857 there were exported to the United States 901,374 bags of coffee, England received only 445,996 bags, or less than the half. It is, therefore, beyond any doubt that the United States are eminently the great customer of Brazil. The money transactions resulting from this considerable commercial exchange between Brazil and the United States are transacted almost entirely by way of England. The coffee trade of Brazil is steadily increasing, and has admirably done so, if we take into account the difficulties against which it had to struggle for many years.

Thus, in 1820, the total export from Brazil was 97,500 bags, while in 1857 it amounted to 2,065,718. In thirty-seven years it has increased twenty-two times. Had the population and wealth of the United States during this same period not increased in such an enormous proportion, the coffee trade of Brazil would not have given the same result, as, also, should the United States discontinue to be the customer of Brazil, that commerce would almost entirely cease to exist.

During the financial year of 1853 there entered the ports of Brazil, proceeding from foreign ports, 2,222 vessels, with a tonnage of 708,807; 602 vessels, with 281,669 tons, came from Great Britain and her possessions; 343, with 121,871 tons, came from the United States.

The greater part of these 602 British vessels were freighted with merchandise, whilst of the 343 vessels from the United States the greater part were freighted with flour and lumber:—

|   |              |
|---|--------------|
| In 1856, Brazil imported from Great Britain to the amount of..... | \$24,548,000 |
| From the United States.....                                       | 3,726,540    |
| Difference.....   | \$20,816,460 |

And whilst Liverpool sent us \$7,500,000, New York sent us scarcely \$450,000. It is useless to enter here into more minute details on this point. Facts and figures show conclusively that England is the great

purveyor and manufacturer in regard to Brazil, and that the United States, up to this date, have contented themselves with being its consumer.

If England had not established a steamship line between Southampton and Rio de Janeiro, touching at Pernambuco and Bahia, the United States, although laboring under the great disadvantage of carrying on all their money transactions by way of England, might have been able to gradually gain ground and to secure to themselves a share in the general commerce. But commerce with England since the opening of direct steam communication with Brazil, received such an impulse, and is to-day so well directed, that without a competition supported by steamers on the part of the United States, all efforts whatever for the purpose of obtaining a share in the general commerce will be without hope of success. But let us suppose a steamship line between New York and Rio de Janeiro, touching at Pernambuco and Bahia, and entering into communication with the Brazilian company, being in active exercise, the result of it would probably surpass the most enthusiastic calculations.

The statistical details and the reasons alleged at the close of the last session of Congress, already too far advanced to allow any discussion of them, are unquestionably in favor of the urgent necessity of establishing steam communication between the two countries. And if such a steam communication by itself is now very desirable, how long will it be before it becomes a necessity?

If, with a population of thirty millions in one country and of eight millions in the other, it seems to be practicable, how much more will it be so when in the United States there will be fifty millions, and in Brazil twenty millions of people. The two greatest nations in the western hemisphere cannot for a long time remain without the greatest commercial facilities furnished by modern improvements. The United States have initiated a vast system of internal ameliorations, by means of railroads, which tend to foster and increase not only its interior commerce, but also that with foreign nations. Brazil, also, has made a beginning with its system of railroads in the interior, which must successively extend and become a great instrument for improving its agriculture, manufactures, and commerce. The domestic industry of Brazil will be stimulated by these internal improvements, and thousands of colonists proceeding from the most densely peopled countries of Europe, will find an allurement for fixing their residence in this great southern empire.

It is not to be expected that the emigration from the United States to Brazil, or *vice versa*, will ever be as easy as that just mentioned, both countries being similar in their prominent aspects; but if the social, commercial, and mechanical relations of the two peoples shall have been rendered more active by the establishment of a regular steam communication, no human power will be able to stop their progress. At the same time, both of them must adopt sensible measures to aid the prosperity of either of them.

The domestic industry of the one will not be prejudiced by that of her neighbor, but, on the contrary, for this very reason, will be advanced. It is in the direct interest of the United States that Brazil should rapidly increase, not only in its population, but also in industry and wealth. Wherever a great quantity of goods is produced or manufactured there will always be a facility of disposing of a portion of them in favor of other nations, and thus of increasing reciprocal commerce. The industry of the countries from whence the importation is taking place, will thus be stimu-

lated by the sale of commodities given in exchange. It would be weakness to look on this matter from a less liberal point of view. Whatever greater commercial facility may be given to Brazil must necessarily strengthen it and increase its transactions in general; and no country can be more interested in a similar cause than the United States, if we look to the future. Independently of the commercial advantages which evidently must result to either country, there are other considerations of more importance, which cannot fail to strike those who have seriously studied the matter. Politically speaking, it is as much the interest of Brazil as of the United States to support the other, and to gradually cultivate the most amicable relations.

Brazil is comparatively a new country or nation, possessing a territory of vast extent, greater than that of the United States, a large portion of which is of extreme fertility and abundant in precious woods and mineral wealth, with an extensive coast, provided with fine and safe harbors, and with a climate equal, if not superior, to any other portion of the earth. Already, with a population twice greater than that of the United States in the year 1790, with its system of internal improvements vigorously pursued, and with the rapid development of its resources, which to-day are buried in complete lethargy, its future greatness will be on a far larger scale.

For several years more coffee will continue to form its principal product and first staple article for export commerce; but in proportion as the current of its population pours over its immense interior, other articles will, in their turn, play a more prominent part, and the whole commerce of the country will keep pace with the increase of the population. The natural augmentation of a population of eight to nine millions—its actual state—will be very considerable, to which Europe will add by immigration a great percentage.

By means of a system of land grants properly organized, the government is able to offer great allurements to foreigners to establish themselves and to cultivate the interior. At the same time, Brazil may hope from the United States, in proportion as the relation between the two countries will have been multiplied, many advantages by the introduction of its improved agricultural instruments and various other articles which, thus far, have not formed any important item in its commerce. England and the United States are great manufacturing nations, and it must be the interest of Brazil to encourage competition between them. England has greatly improved her position with reference to Brazil since 1850, by the decisive advantages resulting from her steam communication.

The general trade has also much increased between her and Brazil, while between the latter and the United States that commerce has scarcely begun, and without some new incentive, may remain in its infancy, leaving, in the meantime, Brazil exposed to the evil influence of monopoly. The proportion in the increase of coffee export to the United States will, in future, probably be greater than it has been till now, on account of the great impulse communicated to it by the culture of waste lands and the generally improved condition of the planters, in consequence of the introduction of railroads.

The consumption of Brazilian coffee during the last seven years was 964,700 bags yearly, whilst during the seven preceding years it was on an average yearly only 661,670 bags, showing for that short period an increase of forty-six per cent. This answers exactly the period of seven

years during which railroads were regularly opened in the interior of the United States; and the greatly increased shipping of coffee to New Orleans and New York, the two principal points which provide the interior, shows the wholesome influence exercised by the establishment of railroads. The demand for an article like coffee will increase in the United States in a greater proportion than that of its increased population, because the railroad, although a mere machine, is, at the same time, a great civilizer, and soon transforms what at first was luxury, into common wants, and afterwards into necessities.

And for the same reason, if Brazil continues its policy of internal improvements, the demand for those articles which the United States is able to furnish in exchange, at moderate prices, will also increase. It is not possible to fix any limits to the amount of this exchange traffic between the two nations. However, the true policy of Brazil cannot be to put any obstacle in the way of the progress of this traffic; on the contrary, it is its interest to accord to it all possible facility, in order to improve and complete it. Certainly there is every probability that between Brazil and the United States the most amicable relations will continue, if there is taken into consideration the reciprocity of their interests and position with regard to other nations.

These two countries, governed by liberal constitutions, are destined to be natural allies in the progress of the world; and in truth it is the interest of all nations to be friends to Brazil, not only in consideration of its progressive importance in the rank of nations, but on account of its position on the ocean. Brazil, and in particular its commercial capital, Rio de Janeiro, is placed as if to serve as a central station to the commercial relations of all maritime nations. From Europe to the East Indies, and to the western coast of South and North America, and from the United States to those points, Rio de Janeiro is the great provisioning port. Ships in danger or having suffered damage, merchant craft proceeding from all parts of the globe, may touch at Rio de Janeiro, are sure to find there a safe and commodious harbor, with the best opportunity of procuring assistance, of providing themselves with provisions, water, &c. Rio de Janeiro thus occupies a peculiar and imposing position, to which no other port in the world can ever become a rival.

Let us hope that the shores of Brazil will never be visited by any vindictive invader, and it can never be the interest of the United States to play such a part. The United States are to-day the second, and will soon be the first commercial nation of the world. They behold in Brazil another great and young nation, rising in the same hemisphere and pursuing the same general policy, viz., that of conferring the greatest quantity of well-being on the greatest number possible. And if the United States, which have not yet ceased to be a young nation, are already the greatest customer of Brazil, what may be expected within twenty years, when their net of railways, whose length already exceeds 26,000 miles, will be still more extended, especially if Brazil should persevere in the same manner in its domestic improvements, and adopt a liberal policy with regard to foreigners. Here are two young nations, near each other, whose yearly exchanges amount to nearly twenty millions of dollars. In a few years these figures will have doubled; and shall such a considerable commerce, and the money transactions resulting from it, forever continue in their present embarrassing position, because these two countries are forced in their mutual communication to have recourse to an immense circuit?

One of the principal reasons of that state of things being continued is that the two nations know very little of each other. Generally the people of the United States entertain a very erroneous and false opinion of the actual state of Brazil. They are not aware of the great improvements which have taken place here during these last ten years; they know little of the progress of its political and social life; and without having more frequent relations they will be unable to duly appreciate the Brazilians. The simplest way of doing away with this inconvenience is to establish a steamship line directly from the United States to Brazil. If the Congress of the United States should extend its protection to a company for the formation of such a line, would it not be also the interest of Brazil and the Brazilians to encourage it as much as possible?

There are many important points which concern the relations of both countries. The character of their institutions, in spite of the few relations existing between them, bears a great resemblance. This may partly be attributed to the fact that the people of both countries enjoy the liberty to procure their well-being in the way they like. The one have a President, the other an Emperor; but the provisions of their respective constitutions are equally enlightened and humane for almost all practical purposes; they accord personal liberty and protection to everybody. There exist small differences; but in Brazil, in its most enlightened districts, life and property are as fully guaranteed as in the United States. Thus, being free, the natural intelligence of the people impels them to cultivate the arts and other branches of knowledge, and with the aid of well-directed science, the progress of agriculture, industry, and commerce may be confidently looked for.

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#### Art. IV.—HAVRE: ITS ACTUAL AND FUTURE PROSPERITY.

HAVRE, if not the most populous, is now the most important commercial port of France. Situated in 49° 29' N. latitude, and in 2° 13' W. longitude from Paris, or 0° 7' 15" east from Greenwich, at the mouth of a great river, the Seine, it is not only the port of Paris and of all the rich valley of the Seine, but it is the commercial port of almost all the northern part of France, and also of a great part of Germany and Switzerland. It could become, after a short period of peace and of better commercial regulations, an immense magazine of all the productions of the world for supplying the wants of the greater part of Europe.

There is, in the birth and progress of Havre, something of the rapidity with which the commercial cities of the United States have grown and have been developed.

In the ancient times, some three hundred years ago, Havre de Grace was already, if not a town, at least a military port, for the possession of which France and England maintained a long struggle.

Under the king, Louis XII., who died in the year 1515, the port underwent some extension, and the town was surrounded with fortifications; but François the First, who reigned from the year 1515 to the year 1547, was really the founder of the port and city of Havre. He caused to be constructed two large towers, one of which is yet existing and bearing his name. Between these towers was the entry of the port. In those

times the ships of Havre sailed chiefly for Newfoundland, the west coast of Africa, Pernambuco, and Maragnon in South America, and in North America, Florida and Virginia.

Great was, at this early period, the venturesome commercial spirit of the French merchants.

In the year 1533, by order of François the First, was constructed in Havre a great ship of 1,200 tons burden, named *La Grande Française*. There was in this ship a tennis-court, a forge, a wind-mill, and a chapel; but owing to its great draught of water it could never sail from the port. It sunk in a gale, and many houses were built with its remains. Another great ship, the man-of-war *Philippe*, of 1,200 tons and 100 guns, was also constructed in Havre, but it was burned in the road, during a feast, just when it was on its departure to join the squadron in an attack on the English fleet.

The wharves of the city were raised and improved by Henry II. In 1563, Charles IX., having retaken Havre from the English, who had possessed it, improved and embellished it.

The great Cardinal Richelieu, the illustrious minister of Louis XIII., when Governor of Havre, introduced many important improvements. The King's dock was by him enlarged, and continued to be the only harbor of Havre until 1820. Havre also experienced the benefits of the excellent administration of the great Colbert, under whose direction Havre employed annually one hundred ships in the cod fishery, and its principal commercial relations were with the Baltic, Spain, the Mediterranean, the coast of Guinea, and Canada. In 1786, Louis XVI., on a visit to Havre, being witness of the insufficiency of the accommodation of Havre, caused to be commenced the basin of commerce. In this interval, however, the revolution, the emancipation in St. Domingo, and the wars of the empire, paralyzed commerce, and the trade of Havre languished until the peace. In 1814, commerce once more took a start, and since that epoch it has not ceased to augment year by year. The two docks of commerce and of the Barre were each an area of 160,000 square feet. But those which were more than three times the capacity of the old King's dock, had become quite insufficient, and in 1839, the Vauban dock, with an area of 230,000 square feet, and the Florida dock, of 75,000 square feet, were commenced. These were, in a very few years, again too circumscribed, and in 1846, a new dock, called L'Éure, of an area of 700,000 square feet, was begun and finished in 1856. Its wharves are not yet completed. But in the present year another dock, of 150,000 square feet, has been completed. These, however, only supply present wants. New docks will be required to meet the increasing wants of commerce in the next few years.

There is also in process of construction a dry dock of a length of 600 feet long, 120 feet in width, and 100 feet entrance. This affords capacity for the largest vessels, and it will be completed in the present year, when it will, at once, obviate the necessity which now exists to send all large steamers that have need of repairs to Southampton.

Havre, originally a port for war purposes, was surrounded by fortifications which underwent considerable augmentation during the wars of the Empire. These circumscribed the city, and the new docks were built outside of the *enceinte* which divided them, and two cities were formed outside of the fortifications to accommodate the population who could no longer lodge in the city proper, and Ingenville and Graville became as populous as Havre itself. The removal or modification of these fortifica-

tions was, during many years, earnestly demanded by the Havre people. The king, Louis Philippe, received with favor the application of the Havre people, and recognized the necessity, if not of suppressing them altogether, at least of removing large portions of them. The war ministry and the administration of engineers were opposed to any change, and the Bureaux in France were more powerful than a king who reigned but did not govern. In spite of the clamors of the Havre people, of the sufferings of commerce, the desire of the king, and the dictates of common sense, the war ministry not only resisted the removal of fortifications, but added to them new mountains of earth, as useless for defence as inconvenient to the city. The Ministerial Bureaux in France are a power of which little idea can be formed in other countries. It is neither an intelligent nor a physical power, as is that of public opinion, or the force of an army. It is an inert resistance—an apathy, or like the multitude of little threads by which the Lilliputians restrained the movements of Gulliver, or, perhaps, more accurately, it is an engulfing power. The most interesting and important questions find a living tomb under piles of paste-board, papers, pens, ink, and cigar stumps of the *Bureaucrates*. This resistance can be overcome only by the powerful will of an absolute prince; and this happened in the case of the Havre fortifications. In 1854, Napoleon III., having examined into the case of Havre, decided the matter, at a glance, and condemned the fortifications with a word. It was in vain that an old and illustrious routine warrior swore that he would sooner be brayed in a mortar than that the fortifications of Havre should be touched. The Emperor allowed the bad humor of the old soldier to exhale itself in violent terms, not quite parliamentary; and then, with that perfect calm and imperturbable *sang froid* which characterizes him, ordered the suppression of the fortifications, the annexation of Ingenville and Gravelle to Havre, and the construction of forts on the heights, which command both the city and the sea; a vast *enceinte* that will enclose a population of 600,000 souls has been traced, and the old fortifications razed to the ground.

Two forts have been erected on heights which dominate the city, but these are more redoubtable to the city than to an invader. The true defence of the city is in the roadstead, on the bars of which bastions are raised connected by a dyke. From this shelter the most affective defence against an invading fleet can be maintained. These are projected, and may be completed with the rapidity that marked the removal of the fortifications. These will doubtless encounter the usual resistance of the Bureaux, and the vigor of the master hand will be required to counsel their harmonious movement towards the desired end. The railroads which connect with the city are also a powerful defence, since at the signal of the telegraph they can pour into the city the legions of France for its support.

The port of Havre presents a singular phenomena enjoyed by no other port of the world, and it has been the cause of the preference which that port has enjoyed over all others of the channel. It is almost universally the case that when the tide has ceased to flow the ebb commences. It results, however, from the peculiar position of Havre in its relation to the course of the Seine, that the tide, having attained its maximum, remains full three hours. This exception to the general law of tides in favor of the port of Havre, is a great advantage to vessels entering and leaving, giving them full time to execute all necessary operations.

The city, now well supplied with docks, and no longer circumscribed by its fortifications, commences anew the developments of its commerce. If we now compare the extent of this with what it was 100 years since, an immense progress will be recognized. In 1753, 75 vessels from 250 to 600 tons, sufficed for the commerce with Martinique, the Antilles, Canada, and St. Domingo; and at that epoch a number of vessels were still engaged in the slave trade. About fifty lighters, called *fleur*, of 80 to 130 tons, made voyages from Rouen, Holland, Hamburg, La Rochelle, and Bordeaux; about 30 to 40 cargoes of coal came annually from Newcastle to Havre; about thirty boats arrived annually with tobacco from London.

At the present time 516 French ships are employed in the commerce of Havre, without counting fishers, coasters, lighters, tow-boats, and steamships making passages from Rouen and Paris. There exist, also, four regular lines of sail packets to New York and New Orleans. In 1858, Havre received from England 595 cargoes of coal. One hundred years since 600 vessels entered there; in 1857, 7,000 entered. At the former period, 50,000 hides were received per annum; at present, 800,000. The number of hogsheads and boxes of sugar entered has risen from 18,000 to 91,000, and 142,000 bags.

This large increase is not to be compared, certainly, with the immense progress of some United States cities, even during a much shorter period. But it is necessary to take into the account the different conditions of France and the United States. In the United States all was to create—an active and energetic population arrived in numerous and eager crowds to occupy a country until then desert. In France, a population dense since centuries, could improve only by insensible degrees. Commerce could not find numerous and capricious openings ready to second it. Thus the development of Havre in the first fifty years of the present century, if it does not show the astonishing progress of Buffalo or Chicago, for example, is not the less worthy of remark. The progress which Havre has made in the last twenty years is worthy of more particular remark, and we will bring out the most prominent points. The following table shows the customs receipts, the number and tonnage of the vessels arrived, the number of bales of cotton, and cargoes of coal during twenty years:—

| Years.    | Customs at Havre, francs. | Number of vessels. | Tonnage.  | Bales of cotton. | Cargoes of coal. |
|-----------|---------------------------|--------------------|-----------|------------------|------------------|
| 1838..... | 18,602,000                | 4,559              | 613,000   | 294,000          | 180              |
| 1839..... | 15,826,000                | 4,933              | 630,000   | 265,000          | 168              |
| 1840..... | 22,432,000                | 5,123              | 680,000   | 376,000          | 198              |
| 1841..... | 23,310,000                | 5,173              | 682,000   | 357,000          | 194              |
| 1842..... | 24,931,000                | 5,863              | 744,000   | 370,000          | 210              |
| 1843..... | 25,409,000                | 5,570              | 709,000   | 326,000          | 192              |
| 1844..... | 26,736,000                | 5,363              | 665,000   | 280,000          | 234              |
| 1845..... | 27,644,000                | 6,270              | 742,000   | 331,000          | 348              |
| 1846..... | 28,242,000                | 7,077              | 788,000   | 326,000          | 290              |
| 1847..... | 25,975,000                | 7,169              | 821,000   | 268,000          | 467              |
| 1848..... | 20,082,000                | 4,322              | 498,000   | 233,000          | 193              |
| 1849..... | 29,244,000                | 4,163              | 546,000   | 369,000          | 262              |
| 1850..... | 25,909,000                | 4,506              | 572,000   | 312,000          | 270              |
| 1851..... | 26,000,000                | 4,726              | 622,000   | 301,000          | 297              |
| 1852..... | 34,600,000                | 4,835              | 665,000   | 388,000          | 281              |
| 1853..... | 34,900,000                | 5,557              | 770,000   | 394,000          | 377              |
| 1854..... | 36,000,000                | 5,783              | 838,000   | 387,000          | 373              |
| 1855..... | 48,600,000                | 6,119              | 900,000   | 418,000          | 496              |
| 1856..... | 44,000,000                | 6,623              | 1,052,000 | 446,000          | 563              |
| 1857..... | 43,700,000                | 6,983              | 1,056,000 | 431,000          | 547              |
| 1858..... | 41,600,000                | 6,672              | 1,050,000 | 521,000          | 595              |

Of the 750 to 850 ships coming from long voyages, were from ports as follows:—

|                                       |           |
|---------------------------------------|-----------|
| Came from the United States.....      | 250 a 850 |
| “ Brazil .....                        | 60 a 70   |
| “ Hayti .....                         | 70 a 75   |
| Foreign West Indies.....              | 60 a 70   |
| Rio Plata.....                        | 30 a 35   |
| From Peru, Chili, &c .....            | 75 a 80   |
| “ Mexico.....                         | 40 a 45   |
| “ China and East Indies.....          | 60 a 70   |
| “ Senegal and Africa .....            | 40 a 45   |
| “ French East Indies and Reunion..... | 80 a 90   |
| “ Whale fishery.....                  | 6 a 8     |

The principal importations from the United States are cotton, tobacco, rice, potatoes, quercitron, whalebone, copper, rosin, &c. From Brazil are received coffee, sugar, hides, ebony, cocoa, tapioca, &c. From Hayti, coffee, mahogany, a little cotton, and some cocoa. The West Indies generally send sugar, cigars, coffee, and dye-wood. La Plata and Rio Grande supply salt and dry hides, wool, wax, horns, &c. The South Seas give guano, nitrate of soda, coffee, hides, &c. From Mexico are derived dye-woods, vanilla, hides, &c. The East Indies and China yield rice, saltpeter, hides, cotton, India rubber, indigo, sugar, coffee, pepper, tea, canille oil, grains, &c. Senegal and the Coast of Africa supply palm oil, ebony, dye-woods, ivory, gold dust, hides, &c. From her West Indies and Reunion, France gets sugar, coffee, and other tropical fruits.

The transit of foreign merchandise through Havre was, in 1850, only 3,652,702 kilos., or 3,653 tons; in 1857, 7,846,906 kilos., or 7,847 tons.

The united value of the imports and exports at the port of Havre reached, in 1857, the sum of 1,270,000,000 francs, or \$238,125,000. The imports and exports of New York for the same year were \$247,536,110, being the largest on record, and thus exceeding Havre by \$9,441,000. This includes, however, \$40,000,000 of specie exported. The other leading French ports for the same year were as follows:—Marseilles, 1,133,000,000 francs; Bordeaux, 283,000,000 francs; Nantes, 119,000,000 francs. The value of the principal exports from Havre has been as follows:—

|                                    |        |             |
|------------------------------------|--------|-------------|
| Silk goods, ribbons, &c .....      | francs | 254,000,000 |
| Woolens, cloths, merinoes, &c..... |        | 90,000,000  |
| Cotton goods.....                  |        | 43,000,000  |
| Linen and hemp goods.....          |        | 6,000,000   |
| Clothing, confectionery, &c.....   |        | 50,000,000  |
| Silversmith goods and jewelry..... |        | 28,000,000  |
| Leather goods .....                |        | 26,000,000  |
| Haberdashery, fine and common..... |        | 23,000,000  |
| Prepared skins .....               |        | 22,000,000  |
| Wines.....                         |        | 19,000,000  |
| Machinery and metal goods.....     |        | 12,000,000  |
| Paper, engravings, and books.....  |        | 9,000,000   |
| Watches, &c.....                   |        | 9,000,000   |
| Glass crystals, pottery, &c.....   |        | 9,000,000   |

In addition to her considerable commerce, of which we have shown the leading features, the manufacturing industry of France has begun to develop itself. The number of the manufacturing establishments is not large, but it presents a gradual increase, and it will not be long before

Havre will take range as a manufacturing city, as she now does as a commercial city, among the first in the world. She has one cotton factory, in which two steam-engines of 40 horse power drive 14,500 spindles and 370 looms, occupying 550 hands. There are at Havre 10 a 12 factories for the manufacture of machinery. The most considerable is that of Maseline & Co. The works occupy an area of four hectares or ten acres, and employ, habitually, 1,200 hands. The steam-engines manufactured by this firm enjoy a high reputation, and are gradually introduced by the government into the navy. The Messrs. Maseline have introduced many improvements in the construction of the engines, such as the first application of the screw to ships of war; the invention and application of horizontal air pumps, with elastic valves; the invention and application of the system of crank connection by which the movement is sustained with greatly diminished steam.

The factory of M. Millus is also very extensive; it can undertake the construction of marine engines of 1,200 horse power, of which it has furnished several to the government. It occupies an area of  $3\frac{1}{2}$  acres.

The forges of Le Trange, David & Co., of Paris, directed by Mr. Guillemain, smelt copper and roll red and yellow copper. Their machine has 60 horse power and they employ forty-two hands. The factory of Ch. Mercie was founded in 1853 for rolling red and yellow copper, zinc, and lead. They have a forty-horse engine and employ sixty hands.

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#### Art. V.—INCREASE OF TONNAGE IN THE UNITED STATES.

THE events of the last few years seem to have produced a great change in the supply of, and employment for, shipping among commercial nations. The most important modifications have taken place since 1815 in the laws which regulate international intercourse, as well as in the condition of trade, which have made changes in the models and qualities of sailing vessels necessary, but more particularly through the introduction of steam as applied to ocean navigation. This last element takes date only since 1839, or in the last twenty years.

The navigation laws of Great Britain, which, originating in the middle of the seventeenth century, continued in force down to the peace of 1815, have now since ten years been abolished in respect to the foreign trade. It was generally contended, and by many believed, that the commercial greatness of England was due, to a considerable extent, to the operation of those laws, rather than to the enterprising and commercial character of her people. The singular position of their island home, which made navigation the only means of communication with their neighbors, and eminently favored its development, inasmuch as that no wind can blow from any quarter of the compass but that it is fair for the arrival and departure of some of England's mercantile marine; her possession of oaks, iron, and mechanical genius, enabled her to build, without competition, those vessels which her enterprise and necessities sent into all seas. With these advantages it was inevitable that England should become the mistress of the seas, and to ascribe the results of those combined circum-

stances to the operation of law was more worthy of a dark age than of the enlightened present. Soon after the government of Cromwell invented those laws, Colbert, in 1664, constructed the first general tariff for France, and the principles of that tariff were more strictly enforced by succeeding ministers, especially in relation to navigation, down to the present day. As long as all the countries out of Europe were dependencies of European governments, and exposed to the operation of their laws, but little progress was made in that healthful rivalry which operates to the benefit of general industry. The separation of the United States from Great Britain freed them from the operation of her laws, and compelled their relaxation in respect to a country now become foreign, and consequently, under the "favored nation" clause, to all other commercial nations. Even statesmen were not too stupid to see the necessity of modifying a state of things which compelled a British vessel to make a voyage across the Atlantic in ballast, one passage, passing a United States vessel loaded, thus charging two freights upon every cargo carried without benefiting the vessel; consequently, the laws were for the first time modified, and United States and British vessels placed upon an equal footing. In 1818, the United States passed a law virtually abolishing navigation laws in favor of any nation which should adopt a similar policy.

The inevitable progress of commerce, deepening its own channels, at length compelled England, in time of famine, to suspend her navigation laws, in order that vessels of all nations might bring her food. Holland and Belgium were compelled by the same necessity to do likewise, and that experiment led to the final abrogation of the English navigation laws in 1849, consequently bringing into force the United States law of 1818. France alone remains in her former position.

The progress of the tonnage owned in each country, distinguishing the steam from the sailing, has been as follows:—

| Years.    | Great Britain. |           |        |         | United States. |         |
|-----------|----------------|-----------|--------|---------|----------------|---------|
|           | Sail.          |           | Steam. |         | Sail,          | Steam,  |
|           | No.            | Tons.     | No.    | Tons.   | tons.          | tons.   |
| 1788..... | 11,427         | 1,278,051 |        | none.   | 201,262        | .....   |
| 1814..... | 22,089         | 2,504,297 | 1      | 69      | 1,368,127      | .....   |
| 1832..... | 19,450         | 2,224,350 | 343    | 35,228  | 1,439,450      | 90,632  |
| 1848..... | 24,162         | 3,166,913 | 1,033  | 231,008 | 3,154,041      | 427,890 |
| 1858..... | 18,419         | 3,830,119 | 899    | 381,363 | 4,312,060      | 729,390 |

In explanation of the apparent decline in the figures for 1832, it may be stated that in 1827 the English tonnage returns underwent a thorough revision, and all lost and condemned vessels were marked off. In the United States the same thing took place in 1829. Since then the reductions have been made regularly. The steam tonnage of England does not in the measurement include the room occupied by the engines, hence, as compared with the United States tonnage, the amount appears smaller than the fact. The result of the returns indicates that since the removal of the navigation act in 1849, the tonnage of England has increased in a ratio more rapid than before, but has nevertheless been behind that of the United States. The start acquired by the American vessels in the early part of the century, as well in respect to the build as to the sailing qualities of the vessels, gave them a reputation that insured the preference for them above the English vessels in the same trade. The English merchants, under the old law, frequently found themselves compelled to ship certain articles in a British vessel, when every interest required that it should have been done in an American

bottom. The law, however, intervened, and forbade it. Since the removal of restrictions a new start has been given to British ship-building, and the enterprise now takes the direction of steam tonnage for long voyages. It is to be admitted that, great as was American success in sailing vessels, the ocean steamers of the United States have not maintained an equal reputation, comparatively, to those of England. It may be doubted whether a portion of the present depression in the shipping interest is not to some extent due to the expansion of steam tonnage; of which, although the figures are less than of sailing vessels, the work done is much more effective. Thus a sailing vessel of 1,000 tons would make a voyage out and home in 90 days; a steamer will make two voyages in the same time. Thus half the steam tonnage performs the same work.

The results of the liberal policy of the United States and Great Britain are seen in the following table, which shows the tonnage which entered each country in 1821, 1849, and 1851, distinguishing the foreign from the national:—

TONNAGE, DISTINGUISHING THE NATIONAL FLAGS, ENTERED THE UNITED STATES AND GREAT BRITAIN AT THREE PERIODS.

| Years.    | Great Britain. |           | United States. |           |
|-----------|----------------|-----------|----------------|-----------|
|           | British.       | Foreign.  | American.      | Foreign.  |
| 1821..... | 2,270,400      | 408,401   | 804,947        | 83,073    |
| 1849..... | 4,884,375      | 2,035,894 | 2,658,321      | 1,710,525 |
| 1858..... | 6,853,705      | 4,621,494 | 4,395,642      | 2,209,403 |

The modification of the navigation laws was earnestly opposed by many who supposed that each nation would be seriously injured by the competition of the other. As between the United States and England, both possessed of maritime aptness, it was fiercely contended that the superior capital and general resources of the latter would enable her, on a footing of equality, to drive the United States vessels out of at least the international trade. Experience has shown that these fears were unfounded.

It was supposed that in what was called the triangular voyage between the United States, British West Indies, and England, the vessels of the latter would have such advantages as would ruin American tonnage. We may now, from official documents, compile a table of the British and American tonnage which entered the United States from each British dependency and from the rest of the world at three periods. In this table, it will be seen that the operation has been altogether in favor of the United States, the tonnage of the latter showing an increase from almost every country:—

BRITISH AND UNITED STATES TONNAGE ENTERED UNITED STATES.

| From                | 1849.     |           | 1851.     |           | 1858.     |           |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                     | British.  | American. | British.  | American. | British.  | American. |
| Great Britain ....  | 551,162   | 600,769   | 501,894   | 643,299   | 381,922   | 852,082   |
| Canada .....        | 537,697   | 906,813   | 514,383   | 1,013,275 | 922,920   | 1,344,717 |
| N. A. colonies....  | 314,805   | 120,867   | 361,564   | 62,418    | 389,396   | 171,024   |
| British W. Indies.. | 46,686    | 63,523    | 39,894    | 58,353    | 48,784    | 123,915   |
| British E. Indies.. | ....      | 20,529    | 2,508     | 29,907    | 2,502     | 93,233    |
| Australia .....     | ....      | ....      | ....      | ....      | 3,069     | 5,402     |
| Brit. dependencies. | 1,450,350 | 1,712,505 | 1,419,847 | 1,807,292 | 1,748,593 | 2,588,373 |
| All other countries | 32,357    | 945,820   | 140,022   | 1,247,057 | 93,329    | 1,807,269 |
| Total.....          | 1,482,707 | 2,658,321 | 1,559,869 | 3,054,349 | 1,841,912 | 4,395,642 |

Thus we observe that the entries of the United States tonnage from Great Britain increased 42,530 tons in 1851, and over 200,000 to 1858;

but British tonnage decreased 49,268 tons to 1851, in direct trade, and again 120,000 to 1858.

The direct international trade seems to have fallen to the United States vessels. Under the reciprocity treaty, the interchange of tonnage with Canada has been very large. With the North American colonies, the trade seems to be in favor of the British vessels; but with the British East Indies and Australia, the American vessels enjoy the bulk of the business. The latter has, no doubt, been influenced by the new construction of "clipper" vessels.

In the year 1847, the increase of foreign tonnage entered Great Britain was large, in consequence of the great importation of corn; and these have, since the last famine, continued at an enormous figure, favoring the employment of the tonnage of the corn countries. In the above period of fifteen years, however, the entries of American tonnage in the United States have trippled, while British tonnage in England has little more than doubled. The ratio of foreign tonnage entering England has increased faster than foreign tonnage in the United States, because American vessels are included in the former.

The tonnage of the United States, in its several employments, has progressed as follows;—

| UNITED STATES TONNAGE.              |           |           |           |
|-------------------------------------|-----------|-----------|-----------|
| Employed in                         | 1840.     | 1850.     | 1858.     |
| Foreign trade, sail .....           | 752,838   | 1,386,754 | 2,223,121 |
| Foreign trade, steam .....          | .....     | 44,942    | 78,027    |
| Foreign whale .....                 | 136,926   | 146,016   | 198,593   |
| Coasting vessels.....               | 936,480   | 1,273,994 | 1,710,232 |
| Coasting, under twenty tons.....    | 32,030    | 42,027    | 39,624    |
| Coasting, steam .....               | 198,184   | 481,804   | 651,363   |
| Cod fishing .....                   | 67,926    | 85,646    | 110,846   |
| Cod fishing, under twenty tons..... | 8,109     | 8,160     | 8,354     |
| Mackerel fishing.....               | 28,269    | 58,112    | 29,594    |
| Total tons.....                     | 2,170,762 | 3,527,455 | 5,041,450 |

The tonnage employed in the foreign trade nearly doubled up to 1850, and in 1858, it was more than three times the quantity so employed in 1840. The ocean steam tonnage has not increased, in any degree, in the same ratio as sailing vessels. The British steam tonnage, on the other hand, has largely increased—the amount employed in the foreign trade in 1857, having been 899 vessels, of a tonnage of 381,363. The coasting tonnage has also undergone a great development. The registered tonnage employed in the foreign trade, however, and the interest of which is at this time so depressed, is that which has undergone the greatest increase. During the decade that ended in 1854, the Mexican war and the Irish famine caused a great demand for tonnage, and a rise in freights gave a new impulse to construction. In the ten years that ended in 1842, there had been very little variation in the amount of shipping annually built, and general trade was steady.

The modification of the British customs duties in 1843, with the removal of previous prohibitions upon food imported, gave an impulse in the following year, which, under the successive influence of the Mexican war in 1846, when a demand for transports arose, and the failure of harvests abroad, carrying freights to inordinate rates, gave ship-building a great development. At that time the migration of Europe to America received also a new impulse. Instead of 60 a 70 thousand per annum,

which had been the average of the previous ten years, the number began to swell to from 100 to 300 and even 460 thousand. Prior to the development of this movement, the United States trade with Europe suffered some inconveniences, since the raw products of this country going abroad gave bulky freights to a large tonnage, which had no adequate return freights, and, as a consequence, the produce was charged two freights to make the voyage pay. The increasing numbers of passengers offered the returns sought. The elegant and taper models of the American ships, which had excited such admiration during the war, were changed to more burdensome shapes, that stowed more cotton going out, and left room for better passenger accommodation on the return. This change of models to meet the wants of a new trade, marks the facile character of American enterprise; and it was renewed on the occasion of the discovery of the gold countries, which called for the fleet qualities of the "clipper ships," when models were again changed. Under these influences the annual tonnage built in the United States was as follows:—

|            | Tons.      |            | Tons.      |            | Tons.      |
|------------|------------|------------|------------|------------|------------|
| 1843 ..... | 43,617 77  | 1845 ..... | 146,018 02 | 1847 ..... | 243,732 67 |
| 1844 ..... | 103,589 29 | 1846 ..... | 188,203 93 | 1848 ..... | 318,075 54 |

The subsidence of the Mexican war demand, and the return of good crops abroad, brought on reaction in the year 1849, and a decline in building took place in that year. The discovery of gold at that juncture, however, caused a revolution in ship-building. The "clipper" style came actively into request for the California trade, and the development was as follows:—

|            | Tons.      |            | Tons.      |            | Tons.      |
|------------|------------|------------|------------|------------|------------|
| 1849 ..... | 256,577 47 | 1852 ..... | 351,493 41 | 1854 ..... | 535,616 01 |
| 1850 ..... | 272,218 54 | 1853 ..... | 425,572 49 | 1855 ..... | 583,450 04 |
| 1851 ..... | 298,203 60 |            |            |            |            |

This rapid annual increase culminated in 1855, since when an over-supply of shipping has manifested itself in freights, too low for expenses. The California trade pays hardly \$3,000,000 freight per annum, instead of \$12,000,000, as in 1854. Breadstuffs are not shipped to any extent, and employment is scarce at any price, although the tonnage built has declined as follows:—

|            | Tons.      |            | Tons.      |            | Tons.      |
|------------|------------|------------|------------|------------|------------|
| 1856 ..... | 469,393 73 | 1857 ..... | 378,804 70 | 1858 ..... | 242,286 69 |

If we take from the aggregate the registered vessels, or those built for the foreign trade, for a number of years, we have the disposition of them as follows:—

REGISTERED TONS BUILT AND DISPOSED OF.

|          | Built.  | Sold to foreigners. | Condemned. | Lost.  | Increase. | Existing.    |
|----------|---------|---------------------|------------|--------|-----------|--------------|
| 1846.... | 58,274  | 10,931              | 4,242      | 22,118 | 20,981    | 1,180,286 00 |
| 1847.... | 78,849  | 13,907              | 5,096      | 22,078 | 37,766    | 1,244,312 00 |
| 1848.... | 135,885 | 11,079              | 3,602      | 26,872 | 94,332    | 1,360,886 85 |
| 1849.... | 99,130  | 12,506              | 7,109      | 23,606 | 55,908    | 1,438,941 53 |
| 1850.... | 157,612 | 13,468              | 4,666      | 23,724 | 115,753   | 1,535,711 22 |
| 1851.... | 165,849 | 15,246              | 3,806      | 23,149 | 123,647   | 1,726,307 23 |
| 1852.... | 193,021 | 17,612              | 2,060      | 28,002 | 145,265   | 1,899,448 20 |
| 1853.... | 209,898 | 10,035              | 6,399      | 23,850 | 159,613   | 2,103,674 20 |
| 1854.... | 320,012 | 59,244              | 7,448      | 53,494 | 199,826   | 2,333,319 16 |
| 1855.... | 336,098 | 65,887              | 6,696      | 46,149 | 218,366   | 2,535,136 15 |
| 1856.... | 266,276 | 41,855              | 6,693      | 58,580 | 153,248   | 2,491,402 62 |
| 1857.... | 195,962 | 51,791              | 2,371      | 63,232 | 71,568    | 2,463,967 56 |
| 1858.... | 96,459  | 25,926              | 13,699     | 46,198 | 10,631    | 2,499,741 79 |

It frequently happens, also, that a considerable portion of tonnage sold, lost, and condemned is not reported in the same year, but is subsequently deducted in a lump, making the reduction from these causes greater than appears for the figures. Thus the year 1857 shows an increase of 71,567 tons on the year's transactions, but there were charged off in that year 99,002 tons, which had been lost, sold, and condemned in previous years, and not before reported, leaving an actual decrease of tonnage at the end of the year. The existing amount of tonnage in 1858 was nearly 36,000 tons less than in 1855.

These figures show that the quantity of tonnage "in operation" has not increased much in the last few years. The losses and sales have absorbed an amount nearly equal to the construction of sea-going vessels. The sales of vessels to foreigners indicate how important a part of business that has become of late years. Some of these sales have been steamships to Russia, &c., clippers for the African trade, and various destinations. The amount of the sales equals, however, the whole construction of a few years since.

The increase in the effective tonnage was very large in the ten years to 1855, having doubled in that time. The high freights of 1847 stimulated a great activity in the ship-yards, which subsided in the following year, to be renewed with greater vigor in the following years. The coasting tonnage has shown the same features, notwithstanding the continued increase of competition from the railroads—a competition which, in England, has seriously reduced the coasting tonnage. If the coasting trade of England had been thrown open, like the foreign trade, the diminution in its movement would have been ascribed to that; but it had only the rivalry of railroads, and these have been effective. In the United States, great as has been the activity of the railroad traffic, it has not, up to this time, encroached upon coasting tonnage.

That the large increase in the foreign tonnage, which is so manifest up to the year 1855, should have produced a depreciation in the value of that property, seems to have become inevitable—the more so, that the panic which took place in 1857, while it checked the interchange of goods, was accompanied by a return to good crops that has greatly reduced the amount of produce to be transported. The California and Australia excitement, which called for so large an amount of tonnage, has greatly declined, and steam seems now about to invade the last-mentioned trade with greater vigor. The possible success of the Great Eastern at such a juncture, may have a great influence on the future course of naval construction—the more so, that the merits of the "screw" over the "paddle" seem to be gradually establishing themselves. Nevertheless, notwithstanding the depression which the over-construction of previous years, and the stagnation of general business in the last two years, has brought upon the shipping interest, there seems to be some renewed life in the ship yards of the East, and necessarily, since the tide of commerce must soon again flow after so long an ebb.

## Art. VI.—NEW ZEALAND AND ITS COMMERCE, 1856-57.

THE numerous ports of entry in this very healthy and thriving British colony are, viz. :—Auckland, Bay of Islands, Hokianga, Knapen, Taranaki, and Wellington on the North Island, and Nelson, Canterbury, and Otago on the Middle Island. The Southern or Stewart's Island at present is not settled, and no port established. They are in from latitude 34° to 37° south. The small group of islands, called the Chathams, adjacent, are claimed by the colonial government, and under the jurisdiction of the province of Auckland. They are distant about 500 miles from Stewart's Island, and are frequented by American whale ships for vegetables and water.

The commerce of this colony, owing to restrictive policy and illiberal land regulations, combined with a want of enterprise among the settlers, is very limited, and much below its capacity. The leading article of export from either of the islands is wool; the more northern ports produce in addition, Kauri spars, Totari timber, and Kauri gum. Flax is indigenous to the whole colony, growing wild in large quantities, but little has, however, yet been prepared for export, and several provisional companies have been gotten up for the purpose of manufacturing it, which have invariably failed for want of capital. A large inter-colonial trade also exists between the different ports, in grain, lumber, and potatoes; of the latter, which are unsurpassed in quality and size, 20,000 tons are annually shipped to Australia.

AUCKLAND, the most northern port, in latitude 37° south, is the seat of government, owing to which, it is generally supposed to be the most flourishing settlement. It is materially assisted by the home government in encouraging emigrants to settle, and free grants of land are offered them as an inducement, which course is also pursued with the other ports—more assistance, however, is extended to this settlement. The actual exports of the Auckland Province do not compare in extent with those of the more southern ports, from which many cargoes of wool, the most important staple, are shipped direct to Europe, and but small shipments have been made from the actual production of Auckland. The aborigines or Maori's, who are, without doubt, the finest of the race of South Sea Islanders or Kanakas, come greatly in competition with the emigrants in their agricultural productions; they exist in larger numbers at this end of the New Zealand group, and seem to have migrated owing to the mildness of the climate; they are also susceptible of quickly generating into European habits of industry, and do not fall into vicious habits so readily, differing in this respect from most other Pacific aborigines. The climate is genial and very dry, and this province is a great resort for invalids from India—persons inclined to consumption are greatly benefited by a residence here. The trade of this port may be said to be local with the neighboring provinces, the only exception is a small trade with the Feejee Islands and New Caledonia, and the inter-colonial trade in grain, lumber, and potatoes with the Australian ports. A few cargoes of Kauri spars, reshipments from Hokianga, and an occasional transfer of oil from whaleships, are the total of large shipments to Europe. Latterly four saw mills have been erected, and the result is a clearance of a few small cargoes of Kauri and Totari lumber to Shanghai. No steam

machinery with this exception exists. Auckland is the head quarters of the military of the colony, and also the seat of government, which does not seem to have created any additional spirit of enterprise. The country is well timbered, and but few sheep stations exist here, which to the other settlements, are a great source of wealth. The land is allotted out into farms, being different in this respect to the other provinces, and a ready sale for their surplus produce is not always to be had. As a harbor of refreshment for whaleships, its importance is becoming known. Regularity of the mails from Europe and America, and facilities for obtaining supplies of every kind, render it far preferable to the Bay of Islands for recruiting, which has of late years been the rendezvous for the New Zealand whaling ground. The advantages of, and good sailing directions for, this port, have been distributed of late among the whaling fleet, and at the whaling ports of the United States. Crews are readily obtained in the event of desertions, which, however, seldom occur. At the Bay of Islands stores supplied to the ships are brought from Australia, and vegetables, &c., sent from Auckland; whereas, at the latter port, whaling stores are arriving weekly direct from home, and vegetables, which are an important item to them, very abundant and cheap. It is a cause of complaint among American shipmasters, that no American Consul is established at this place—a Scotch mercantile firm represents American interests, by virtue of authority from the consul at Tongataboo, one of the Navigator group. In 1856 the writer visited five American whaleships that were in this harbor at one period, and, as can be expected, no further interest in them was taken by the representative of their flag than the sale of ship-chandlery would suggest. By the last consular law, none but American citizens were supposed to be appointed vice-consuls or consular agents.

HOKIANGA AND KIAPARA, on the west coast, are the principal lumber shipping ports; both are bar harbors, and vessels can only be insured for them at high premiums. Several cargoes of government contract spars and masts are annually shipped from these ports to the English navy yard, the spars frequently of 100 feet in length, and several million feet of sawn lumber to the Australian ports. About 2,000 tons of gum Kowrie are collected by the Maori aboriginals, and sold by them to traders at from £4 to £6 sterling per ton. This gum is used in Europe and America in lieu of gum shellac; it is excavated from the beds of the forest where formerly stood immense pine trees.

The shippers of lumber from these ports and Auckland find difficulty in competing with the Puget Sound lumbermen in the Australian markets. Sawn lumber from Oregon is shipped at a lower rate than are paying to the New Zealand sawyer—(in 1850 large shipments were made from Hokianga to San Francisco.) In wheat and all grain, California also successfully competes with New Zealand, in the same markets, both in quality and quantity, and will leave a greater margin often if sold at lower rates, which, considering the relative time the two countries have been settled, and the greater distance of California, is not creditable to New Zealand enterprise.

TARANAKI OR NEW PLYMOUTH is an open roadstead, and lies under Mount Egmount, at the western entrance of Cook's Straits—the anchorage is oftentimes dangerous, being exposed to the swell of the Pacific, and frequent gales from the northwest; a heavy surf is always rolling

in. The natives are here very troublesome to the Europeans; they own the larger portion of the land, and are continually quarreling among themselves; are very haughty in their demeanor towards the emigrants, and will not sell their land to the government, which does not permit settlers to buy it direct from them. Most of the imports from Europe to this port are taken on to Auckland, and there reshipped by small craft; large vessels can only remain at the anchorage long enough to land their passengers—many fear coming at all. Taranaki was settled by the New Plymouth Company, formed in England in 1840—is a small town. It was abandoned soon after its formation by that company to the government, owing to its want of harbor facilities—about 1,000 bales of wool per annum, wheat, and potatoes are the exports, which are invariably sent either to Nelson or Auckland for reshipment. The entire country from the North Cape to this port is well timbered, and flax in large quantities is procurable. An excellent bark for tanners' use, "equal to the mimosa" at the Cape of Good Hope, is procurable in paying quantities.

NELSON.—At the western end of Cook's Straits, and on the Middle Island, is naturally formed a huge dock, by a bank of bowlder stones, and which are just covered at high-water; the entrance is somewhat obstructed by the Forfarshire rock, but experienced pilots are to be had, and by whom only ships ought to be taken in. The climate of Nelson is one of the most healthy and bracing in the world, and cannot be surpassed. This settlement is truly the garden of New Zealand. Wool of long staple, and well washed, is shipped from this port to some extent; the plains of the Wairaw, in the rear of this settlement, are very fertile and extensive; this is an unsurpassed sheep country; this province produces wool that has realized 2s. 10d. sterling per pound; the fleece is very heavy and fine. Wheat raised here invariably weighs 65 pounds to the bushel. There is but little timber on this island; the land is all appropriated to stock raising and sheep stations, many of the latter 20 miles in extent, and for which purpose the country is well adapted. A range of mountains run through the island, called the Kiakorua, on which snow is always visible. The country is well watered, owing to which the fertile plains are never parched, and wool from this country always commands a higher value in the English market than that of the dried-up plains of Australia.

In Nelson and the other New Zealand colonies, American manufactures are in demand, and are brought down from Sydney and Melbourne; on almost every farm an American horse-power thrashing or smut machine is to be seen, many other agricultural implements, and Collins' axes are universally used both here and in Australia. In the neighborhood of Nelson, at Massacre Bay, coal and gold have been found; the former is easily obtained, and it is expected this port will be the coaling station for the new mail steamers, under the Sydney and Panama contract; the usual excitement upon the discovery of gold took place on a small scale—it is not obtained in any large amounts, and the excitement of the diggings has ceased for a time. A copper mine on the Dun Mountain, overlooking the city of Nelson, will, there is no doubt, eventually prove important to the colony, should a company be found in the place of the one now existing, with funds sufficient to properly work it. This mine bids fair to become as valuable as the famous Burra-Burra mine of Adelaide, South Australia.

The most influential men on this island are the squatters, who occupy

land gratis (with the exception of a trifling tax) for sheep stations, and in large sections, subject to its being purchased at any period of the colonial government at the upset price of £1 sterling per acre; but a small proportion of it is as yet purchased, and the entire island is now occupied by them. The squatting business, if commenced with ordinary advantages, is in a few years a most independent and lucrative occupation—its success is much facilitated by the prolific nature of sheep here; oftentimes, however, it is a very arduous occupation; from their isolated situation, and dangers of an unbroken country, they frequently endure great privations—some of the more wealthy squatters of South Australia are taking up the land at the upset price, but in all cases the occupiers have the first refusal of purchasing. All the ports situated on Cook's Straits are subject more or less to volcanic eruptions; in 1855, Nelson was visited by an earthquake of a serious nature; slight shocks are very frequent; all the buildings have consequently to be constructed of wood.

WELLINGTON exports more wool than any other port in the colony. The Valley of the Hut, near this city, is of great agricultural importance. This port is at the eastern end of Cook's Straits, on the North Island, very easy of access, but has a great drawback in its liability to earthquakes, which at times have been very destructive, and have more than once altered the formation of the harbor; during the last one, in 1855, the bay receded from the bank some feet, where it remained; in the straits, and upon this part of the coast, very bad weather is often experienced, more especially at the full and change of the moon. A new lighthouse on the outer heads has lately been erected, which is of great importance, and was much required. The marine surveys of the entire coast have scarcely been altered from Captain Cook's original chart. The exports of Wellington are the same as at the other ports; more attention is paid to grazing and the production of butter. A great rivalry exists between New Zealand and Australia in the horses and stock; the former, however, excel.

CANTERBURY OR PORT COOPER is situated on a promontory, on the east coast, and on which Akaroa, formerly a French colony, also is situated. Port Cooper was some years since an extensive whaling station, but is now not frequented by any whalers, colonization having brought about an extensive demand for provisions. Pilotage and port-charges are now also charged, and the government are not so liberally inclined as even at Australian ports, where all whalers are privileged.

The Chatham Islands, before mentioned, southeast of this port, are now frequented by these ships. The harbor of Canterbury is called Port Lytleton, and situated at the base of a mountain, in the rear of which are Christ Church Plains, 150 miles in extent, very level and fertile. Wool, cheese, and grain of all kinds are exported—the climate very excellent, and much frequented also by invalids from India. Emigration, now carried on to some extent from Europe, will render Canterbury of great importance, and that very shortly.

Trading vessels from the United States, bound to the Feejee Islands, where they go for the purpose of collecting "beche le mer," occasionally visit most of these New Zealand ports with cargoes of notions. The northern ports are mostly frequented by them, but the writer, from experience, found the Southern ports more advantageous on these expeditions. A large business is open to American enterprise with these ports, as American goods invariably meet with a ready sale, at a good advance on

invoice. Most of the imports of notions are made from Australia. Failures among the mercantile community are of very rare occurrence, and the greatest stability exists.

OTAGO AND BLUFF HARBOR are the two southernmost ports, and much exposed to South Pacific gales; nevertheless, they are very healthy, and produce an excellent quality of wool. They are both new settlements, the settlers being mostly Scotch. The land is taken up by squatters. A remarkable coincidence in connection with this group of islands is the entire absence of vermin, reptiles, &c. The only living things found on them are wild hogs, which were introduced by Captain Cook, and one or two solitary birds, which are indigenous. The bays and rivers abound in fish, among which the most plentiful are the barraconta. T. D.

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## JOURNAL OF MERCANTILE LAW.

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### LAW OF PATENTS.

In the United States Circuit Court, September 16. Before Judge NELSON and Judge INGERSOLL. Frederick Bartholomew *vs.* Nathaniel Sawyer, *et al.*

C. A. INGERSOLL, J.—It appeared in evidence on the trial to the jury, that the thing patented was discovered and invented by the plaintiff as early as the month of June, 1850; that having subsequently tested and perfected the same, he applied for a patent in the month of February, 1853, and that the patent was granted to him on the 20th of June, 1854. Previous to his discovery the thing patented was not known in the United States. It was claimed by the defendants that it was known and in public use in England and Scotland before such discovery and invention of the plaintiff. It was not claimed, however, and no evidence was offered to prove, that the plaintiff, at the time of his application to the Patent-office, knew of such use, or believed at that time that he was not the first discoverer and inventor. It was not made to appear that the same, or any substantial part thereof, had at any time before the application for a patent, been patented in any country. No evidence was offered by the defendants to prove that the same, or any substantial part thereof, had at any time before the application for a patent, been patented in any country. No evidence was offered by the defendants to prove that the same, or any substantial part thereof, before the plaintiff's discovery in June, 1850, had been described in any printed publication, although it was claimed by them, and evidence was offered to prove, that subsequent to the discovery of the plaintiff, and before his application for a patent, there was an engraving of the patented device, and printed description of the same (without date) accompanying such engraving, publicly exhibited at the Crystal Palace exhibition in London, in the year 1851, and soon thereafter, and in the same year, brought to this country. As on the trial there was no proof that the patentee, at the time of his application for a patent, did not believe himself to be the first inventor or discoverer of the thing patented; and as at the time of the application he made oath that he did believe that he was such first inventor and discoverer, it must be held that at the time of such application it satisfactorily appears that he believed himself to be the original and first inventor and discoverer of the thing patented. The device patented was known and in use in this country to a limited extent as early as the year 1852, the same having been imported from England.

During the progress of the trial it was ruled by the court that the patent of the plaintiff could not be avoided by the mere fact that the invention or discovery patented had been known and used in a foreign country before the discovery of the plaintiff. The court also ruled that no description in any printed publication

of the thing patented could avoid the patent, unless such description in such printed publication was prior in point of time to the invention of the plaintiff, and so charged the jury. The defendants claim that the court erred in so ruling and charging the jury; that the court should have ruled and charged the jury that if the thing patented had been described in a printed publication, before the application of the plaintiff for a patent, that that would void the patent, though it might have been after the invention of the plaintiff.

The sixth section of the patent act of the year 1836, provides "that any person or persons having discovered or invented a new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements on any art, machine, manufacture, or composition of matter not known or used by others before his or their discovery or invention thereof, and not at the time of his application for a patent in public use or sale, with his consent or allowance, as the inventor or discoverer," may, on application to the Commissioner of Patents, obtain a patent for the thing invented or discovered; if the thing discovered or invented by the applicant was known or used before his discovery or invention within the meaning of these terms, as used by the patent law, then no legal patent can be granted, and if granted the same will void the patent.

It appears clearly by the latter part of the 15th section of the same act, that by the terms "not known or used by others before his or their discovery thereof," above recited, was not meant to be included a use in a foreign country, but that such use by itself would not void the patent. For by the latter section it is expressly provided, "that whenever it shall satisfactorily appear that the patentee, at the time of making his application for a patent, believed himself to be the first inventor or discoverer of the thing patented, the same shall not be void on account of the invention or discovery, or any part thereof, having been before known or used in any foreign country." And, as already shown, it appeared on the trial that the patentee did, at the time of making his application for a patent, believe himself to be the first inventor or discoverer of the thing patented. The patent of the plaintiff, therefore, could not be voided by the mere fact that the invention or discovery patented, had been known or in use in a foreign country before the discovery of the plaintiff. It also appears by the 7th section of the same act, that the use meant by these terms was intended to be confined to a use, discovery, or invention in this country, and made prior to the discovery or invention of the applicant; the proof of which prior use must be so limited, provided the patentee, at the time of his application, believed himself to be the first inventor and discoverer.

By the seventh section of the same act it is made the duty of the Commissioner, upon the application of any one for a patent, to make an examination of the alleged new discovery or invention. "And if on any such examination it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described in any printed publication in this or any foreign country, or had been in public use or sale, with the applicant's consent or allowance prior to the application, if the Commissioner shall deem it to be sufficiently useful and competent, it shall be his duty to issue a patent therefor;" the terms in this section "prior to the application" for a patent, refer only to the "public use or sale (of the invention) with the applicant's consent or allowance." They do not refer to anything else. And the terms "prior to the alleged invention of the applicant" refer to an invention or discovery of some one other than the applicant in this country; and also to a patent, or description in some printed publication in this or some foreign country. The true meaning of this section taken by itself is, that a patent shall issue to the applicant and be valid if he is the originator and author of a new invention or discovery, unless the thing invented by him has, prior to the alleged invention or discovery of the applicant, been invented or discovered, or used by some one else in this country; or unless the invention of the applicant has been patented or described in some printed publication in this or some foreign country prior to the alleged invention or discovery of the applicant; or unless said invention of

the applicant had been in public use, or on sale with the applicant's consent or allowance, prior to his application to the Commissioner for a patent. This latter restriction was subsequently modified by the act of 1839, so that the public sale or use, with the consent and allowance of the applicant, must be more than two years before his application to forfeit the right.

Other portions of the same act confirm the view thus taken of the subject. In the 15th section it is provided that upon the general issue, with motion, certain matters may be given in evidence to void the patent. Among those matters are, that the thing patented had been described in some public work anterior to the supposed discovery thereof by the patentee, (not anterior to the application for a patent,) or that it had been in public use or on sale with the consent and allowance of the patentee before his application for a patent. The publication, to void the patent, must be anterior to the discovery of the patentee. It is not sufficient that it should be anterior to the application to the Commissioner for a patent.

It has been urged that the proviso of the 15th section gives a different rule on this subject. That proviso is as follows:—"That whenever it shall satisfactorily appear that the patentee, at the time of making the application for the patent, believed himself to be the first inventor or discoverer of the thing patented, the same shall not be void on account of the invention or discovery, or any part thereof, having been before known or used in any foreign country; it not appearing that the same, or any substantial part thereof, had before been patented or described in any printed publication." It is claimed that the time referred to by the terms "having been before known or used in any foreign country," is the time when the application for the patent was made; and that the terms "had before been patented or described in any printed publication," refer also to when such application was made, and not to the time when the original invention or discovery was made.

If there were any doubt as to the construction which the proviso should renew, if considered by itself, the true construction of it would be free of doubt when considered in connection with other sections and with the whole scope of the act; viewed in such connection, it must be held that the time referred to by the terms above recited, is the time when the original invention or discovery of the patentee was made, and not the time when he presented his application to the Commissioner. Any other or different construction of this proviso would be in conflict with the whole scope of the act, with the plain and clear enactments of certain parts of it, and would make several of the sections irreconcilable with each other.

With this view of the case, the motion for a new trial must be denied.

#### RULE OF NAVIGATION.

In the District Court of the United States, Eastern District of Pennsylvania, February 14, 1859. Before Judge KANE. *Red Bank Company vs. the John W. Gandy. Townsend vs. the Eagle.*

1. The rule of navigation is emphatically settled that a vessel with the wind free must give way to one close-hauled; and a steamboat having the control of her own movements by means of her motive power, is always treated as a vessel with the wind free.
2. The maneuver of fore-reaching, even in a harbor, is not objectionable, unless there be some reason to apprehend a collision by reason of making it.

The opinion of the court was delivered by—

KANE, J.—These cases have their origin in a collision, which took place on the 20th of June last, between the *John W. Gandy*, a coasting schooner, and the *Eagle*, a small steamer that plies between Red Bank, on the New Jersey side of the Delaware, and Arch-street wharf, stopping at South-street wharf on the way.

The schooner was working down the river opposite the city, heavily laden with coal—the tide in her favor, and the wind from the south or southwest. She had stretched across towards the foot of Chestnut-street, close behind another

schooner, and this vessel having just gone about, the Gandy was in the act of doing the same, when she encountered the steamer. The Eagle had left South-street wharf for Arch-street, and was keeping in as close to the town as she could, to escape the force of the tide, when perceiving the schooner approaching, and at a very short distance from her, she headed in still farther to avoid her, and reversing her engine for one or two revolutions so as to arrest her course; but she did not back until the collision had taken place.

The judge then recapitulated the questions raised upon the argument, and the allegations and proofs of the parties, respectively, and proceeded thus:—

The nautical gentlemen who did me the kindness to hear the evidence with me, are of opinion that the conduct of the schooner was not at variance with the usages of navigation, and that the steamer ought to have prevented the collision. I think they agree with me upon all the points which were made between the parties:—

1. The wind was light; according to some of the witnesses, baffling, and its direction somewhat off the town, or so nearly parallel with the shore as to be affected, close on this side of the river, by the tall buildings on the wharves. A vessel, under these circumstances, approaching her ground for tacking, especially at the moment of passing under the lee of another vessel that had tacked just before her, might lose the wind from her forward sails, so as to appear to others about to luff, when she was not. This may, perhaps, reconcile the conflicting testimony on the first point.

2. The position and character of the injuries sustained by the two vessels—the steamer having her upper works torn away on the starboard quarter, and the schooner being damaged on the starboard of her stem—proves conclusively, that the schooner had gone about, so far as to be heading down the river, when the collision took place.

3. The maneuver of fore-reaching—making a wide sweep in turning, so as to gain headway from the impetus she had acquired, instead of turning short—is not objectionable, unless there is some reason to apprehend collision in consequence; and it is plain, as the schooner had gone about, that she would have nothing to fear on that score, if the steamer had been out of the way.

4. The steamer ought not to have been there. The rule of navigation required her, as a vessel going free, to give way to the schooner, which was going close-hauled; and it was her own choice which, with the open river at her side, and perfect control over her movements, had so placed her near the city shore that she was unable to give way to vessels working down.

The occasion is, perhaps, a fitting one to renew the admonition to our steamers, that however important it may be to them, and convenient to the public, that they should keep up their speed, the law finds, in this consideration, no excuse for a collision whatever. They are, in this respect, on the same footing with the mail-coach, bound it may be by contract with the government, to *make quick time*, but not permitted on that account to infringe any of the rules of the road. It is the duty of every vessel to do all in her power to escape collision with another, and occurs very rarely indeed, in which the power of a steamer, properly fitted and managed, is not adequate to prevent her encountering a sailing vessel. She is regarded in the regulations of the Trinity House, which have been adopted in this court, as a vessel with the wind free; but she is more than this. The force which moves her is governed by her own will. She determines for herself what shall be its direction and intensity at the moment; and she is at rest when the engineer commands. There is no hardship for her, therefore, in the rule that requires her to give way to a sailing vessel, and the safety of navigation on our river makes it a duty of this court to enforce it rigidly.

In the case before us, the libel against the John W. Gandy must be dismissed, with costs; and a decree must be entered against the steamer Eagle for the amount of damages sustained by the other vessel in the encounter, also with costs.

Decree accordingly, and reference to Mr. Commissioner HEAZLITT, to assess the damages.

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**COMMERCIAL CHRONICLE AND REVIEW.**


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PROGRESS OF BUSINESS—IMPORTS—EXPORTS—GOLD—COURSE OF EXCHANGE—CURRENT OF CAPITAL—WANT OF EXCHANGE—ACCUMULATION OF SPECIE—INCREASE OF CAPITAL—RELATIVE DEMAND—PAPER MONEY AT THE WEST—INCREASE OF BANKS, 1837 AND 1857—FREE BANKS—DEPRECIATED CURRENCY—INEFFICIENCY OF CROPS—RATES OF MONEY—BANK DISCOUNTS—BILLS OF EXCHANGE—SPECIE MOVEMENT—EXPORTS FROM BOSTON—RECEIPTS FROM CALIFORNIA—MIGRATION OF CAPITAL—RISE IN GOLD—NEW YORK ASSAY-OFFICE—PHILADELPHIA MINT—DIMINUTION OF SPECIE BASIS—PROBABLE EFFECT OF A RENEWAL OF BUSINESS.

THE fall business has progressed, both financially and commercially, with much regularity. The importation of goods, as will be seen from our usual tables hereto annexed, has been large, but the quantity of goods in bond having been much less, the actual quantities sold have not been so much in excess of last year as the mere import figures would indicate. The exports of produce for the season have been fair, including cotton, which, with gold, now forms the chief staple export, since breadstuffs have ceased to figure in the account to any extent. The drain of gold has been very considerable from New York, which point has also been the focus to which specie from all sections of the interior has flowed, in the course of the settlements which are still going on; and this current to New York has sufficed nearly to meet the foreign drain. It seems to be the case that, in the few years of excitement which preceded 1858, capital flowed from east to west. It came from England and Europe for employment, as well upon railroads as in the hands of emigrants, who sought new homes in the West. These investments on their way were swollen by the capital and emigrants from the Atlantic States to avail of the railroad expenditure, the land speculation, the high prices of food, and all the advantages which the activity of that region held out. The current of capital was thus largely towards the "great West." Since the panic of 1857, there has been a reflux of capital. Many parties in Europe call their funds home by selling stocks, and in all the Atlantic States the effort for two years has been to withdraw capital from the West. Unfortunately, last year the crops were short, which hindered payments; and this year, with large crops, there is no export demand to give value to them, and as far as accounts are collected it is in gold. The export of specie from New York for the year ending with September was \$62,000,000, against \$32,000,000 in the corresponding previous year, and this reduced the specie in the banks of New York city but \$6,000,000. The interior furnished the large balance of some \$25,000,000 over the California supply. This continued supply from the interior seems to have prevented any adverse influence upon the rates of money in the city, which have remained comparatively easy. This, however, has been rather the absence of demand for capital than any excess of supply. It is no doubt the case that if capital has not positively diminished in the last two years, it has increased less rapidly than usual; but there has, from the stagnation of business, been less demand for it. The crops have required but little; shipping, railroads, and buildings have neither of them offered investments that tempt the employment of capital, which has gradually returned from old employments. With the drain of specie, a change has taken place in the position of Western currency, the progress of which in certain States has been as follows:—

| BANK CIRCULATION AT THE WEST. |             |            |            |           |             |
|-------------------------------|-------------|------------|------------|-----------|-------------|
| Years.                        | Illinois.   | Wisconsin. | Minnesota. | Nebraska. | Missouri.   |
| 1851.....                     | none.       | none.      | none.      | none.     | \$2,522,500 |
| 1853.....                     | \$1,351,788 | \$485,121  | "          | "         | 2,487,580   |
| 1856.....                     | 3,420,985   | 1,060,170  | "          | "         | 2,805,660   |
| 1857.....                     | 5,534,945   | 1,702,570  | "          | \$353,796 | 2,780,380   |
| 1858.....                     | 5,239,930   | 2,913,071  | "          | 3,637     | 1,718,750   |
| 1859.....                     | 5,707,048   | 4,695,170  | \$48,643   | 23,748    | 6,069,120   |

This remarkable expansion of State paper currency has taken place since the railroad excitement and expenditure in those regions commenced in 1850. That expenditure, employing thousands of persons, the land speculation, the migration, and the consequent active local demand for crops, caused, together, a good demand for currency, which, as seen, has been liberally supplied. The break-down in 1857 caused a suspension of all that activity, which had absorbed the paper currency. That paper has not shrunk back, however, but maintains its ground with great difficulty. It, in fact, has increased its volume with the embarrassment of the public. In 1851, in all that region, there was no paper money except in Missouri, and gold was abundant at par. In 1857, the circulation, following the excitement, had risen to 10½ millions, gold being still at par. Since the panic, when an active drain of capital from all that region has been kept up, the paper currency has risen to 16½ millions, and at the two great redeeming points—Chicago and St. Louis—gold is at 2 per cent premium. In the revolution of 1837 a similar state of things presented itself. The banking movement was then as follows in Illinois:—

|                    | Loans.    | Circulation.          |
|--------------------|-----------|-----------------------|
| January, 1835..... | \$313,902 | \$178,810             |
| 1836.....          | 1,203,763 | 653,651               |
| 1837.....          | 4,047,509 | 1,869,117—Suspension. |
| 1838.....          | 6,046,615 | 3,729,513             |

The banks continued to lend and push out circulation after the suspension until they became finally bankrupt, and the public opinion was so strong against them that the new State constitution prohibited any new charters. The free banking system has now, it appears, produced a similar state of things; but the banks hold some \$10,000,000 of State stocks, on which the currency is secured. Nevertheless, the evils of depreciated currency exist. With the strong current of exchange against that section, carrying off the gold, the bank paper increases, thus preventing a healthful reduction of the volume of the currency. The new crops were depended upon to redress the exchanges, but those crops, although much larger than last year in quantity, are less in value, and fail of the effect. The sale of stocks to some extent has aided the exchange, but the effort to withdraw capital from that region continues. This state of affairs has prevented, at this season, the usual demand for capital for the Western crops, but as the usual autumn harvests fell due, high rates for money were obtained in New York:—

#### RATES OF MONEY AT NEW YORK.

|                                     | July 1st. | Aug. 1st. | Sept. 1st. | Oct. 1st. | Sept. 15th. |
|-------------------------------------|-----------|-----------|------------|-----------|-------------|
| Loans on call, stock securities.... | 5 a 6     | 6 a 7     | 5½ a 6     | 6 a 7     | 5½ a 7      |
| Loans on call, other securities.... | 6 a 7     | 7 a 8     | 7 a 8      | 6½ a 7    | 6 a 7       |
| Prime indorsed bills, 60 days....   | 6½ a 7    | 6½ a 7    | 6 a 7      | 7 a 7     | 6½ a 7      |
| Prime indorsed bills, 4 a 6 mos.... | 7 a 7½    | 7 a 8     | 7 a 7      | 7½ a 8    | 8½ a 8      |
| First-class single signatures.....  | 8 a 9     | 8 a 9     | 8 a 8      | 8½ a 10   | 10 a 12     |
| Other good commercial paper....     | 10 a 12   | 11 a 13   | 11 a 14    | 12 a 15   | 10 a 15     |

The banks of the city have well maintained the line of discounts for the season, as will be seen in the banking tables annexed, in face of the continued high rates of exchange, which have been as follows:—

RATES OF BILLS IN NEW YORK.

|                  | August 1. |       | September 1. |       | October 1. |       | October 15. |       |
|------------------|-----------|-------|--------------|-------|------------|-------|-------------|-------|
| London .....     | 10½ a     | 10¾   | 9¾ a         | 10½   | 10 a       | 10¾   | 9¾ a        | 10½   |
| Paris .....      | 5.15 a    | 5.13½ | 5.15 a       | 5.11½ | 5.15 a     | 5.12½ | 5.15 a      | 5.13½ |
| Antwerp .....    | 5.13 a    | 5.10  | 5.13 a       | 5.10  | 5.15 a     | 5.11½ | 5.13½ a     | 5.12½ |
| Amsterdam .....  | 42½ a     | 42¾   | 42½ a        | 42½   | 41¾ a      | 42    | 41¾ a       | 42¾   |
| Frankfort .....  | 42½ a     | 42¾   | 42 a         | 42½   | 42½ a      | 42½   | 42 a        | 42¾   |
| Bremen .....     | 79½ a     | 80    | 79 a         | 79½   | 79¾ a      | 80    | 79½ a       | 79¾   |
| Berlin, &c. .... | 73¾ a     | 74½   | 73¾ a        | 74    | 73¾ a      | 74    | 73¾ a       | 73¾   |
| Hamburg .....    | 37½ a     | 37½   | 36¾ a        | 37    | 36¾ a      | 37½   | 36¾ a       | 37½   |

At these rates, although the insurance was raised at the close of September to ½ per cent for the winter rates, and some of the steamers asked more freight, the outward current of specie continued strong. The largest shipper does not, however, pay insurance. The movement, comparatively, was as follows :-

GOLD RECEIVED FROM CALIFORNIA AND EXPORTED FROM NEW YORK WEEKLY, WITH THE AMOUNT OF SPECIE IN SUB-TREASURY, AND THE TOTAL IN THE CITY.

| 1858.        |             | 1859.      |             | Specie in     | Total        |            |
|--------------|-------------|------------|-------------|---------------|--------------|------------|
| Received.    | Exported.   | Received.  | Exported.   | sub-treasury. | in the city. |            |
| Jan. 8.....  | \$2,398,684 | .....      | \$1,052,558 | \$4,202,151   | \$32,601,969 |            |
| 15.....      | \$1,607,440 | 1,045,490  | \$1,376,300 | 218,049       | 4,312,987    | 33,693,699 |
| 23.....      | .....       | 1,244,368  | .....       | 567,398       | 4,851,666    | 34,323,766 |
| 30.....      | 1,567,779   | 57,075     | 1,210,713   | 467,694       | 7,230,004    | 34,985,294 |
| Feb. 5.....  | .....       | 2,928,271  | .....       | 606,969       | 8,103,546    | 34,095,987 |
| 13.....      | 1,348,507   | 48,850     | 1,319,923   | 361,550       | 8,040,900    | 33,460,000 |
| 20.....      | .....       | 641,688    | .....       | 1,013,780     | 6,770,555    | 33,115,510 |
| 27.....      | 1,640,430   | 128,114    | 1,287,967   | 358,354       | 7,193,829    | 33,664,000 |
| Mar. 5.....  | .....       | 297,898    | .....       | 1,427,556     | 7,215,928    | 33,915,893 |
| 12.....      | 1,279,134   | 225,274    | 933,130     | 307,106       | 8,677,357    | 33,207,411 |
| 19.....      | 11,000      | 116,114    | .....       | 870,578       | 9,046,759    | 34,089,942 |
| 26.....      | 1,403,949   | 88,120     | .....       | 208,955       | 8,041,268    | 34,227,800 |
| Apr. 2.....  | .....       | 115,790    | 1,032,314   | 1,343,059     | 7,686,700    | 32,918,800 |
| 9.....       | .....       | 250,246    | .....       | 576,107       | 7,232,451    | 32,981,118 |
| 16.....      | 1,325,198   | 203,163    | 1,404,210   | 1,637,104     | 7,079,111    | 32,557,778 |
| 23.....      | 41,208      | 15,850     | .....       | 1,496,889     | 6,894,810    | 32,972,965 |
| 30.....      | 1,550,000   | 136,873    | 1,723,352   | 1,680,743     | 6,568,681    | 32,897,686 |
| May 7.....   | .....       | 106,110    | .....       | 2,169,197     | 6,481,913    | 32,568,545 |
| 14.....      | 1,626,171   | 720,710    | 1,480,115   | 1,926,491     | 6,020,400    | 31,191,731 |
| 21.....      | .....       | 532,862    | .....       | 2,223,578     | 5,488,205    | 31,578,209 |
| 28.....      | 1,575,995   | 400,300    | 1,938,669   | 5,126,643     | 4,752,084    | 29,171,906 |
| June 5.....  | .....       | 51,425     | .....       | 2,325,972     | 4,327,155    | 28,055,464 |
| 12.....      | 1,446,175   | 16,616     | 1,513,975   | 1,877,294     | 3,684,754    | 25,816,954 |
| 19.....      | .....       | 68,318     | .....       | 1,669,263     | 3,604,800    | 26,790,017 |
| 25.....      | 1,799,502   | 276,487    | .....       | 1,620,731     | 4,493,200    | 26,253,081 |
| July 2.....  | .....       | 317,110    | 2,041,237   | 1,861,163     | 4,086,751    | 27,023,416 |
| 9.....       | 1,500,000   | 564,030    | .....       | 1,398,885     | 4,278,400    | 26,773,049 |
| 16.....      | .....       | 637,240    | 1,736,861   | 2,495,127     | 4,282,600    | 27,506,279 |
| 23.....      | .....       | 1,028,270  | .....       | 2,030,220     | 5,114,600    | 26,361,512 |
| 30.....      | 1,163,818   | 303,318    | 2,145,000   | 2,344,040     | 5,116,800    | 25,881,300 |
| Aug. 6.....  | .....       | 786,841    | .....       | 1,284,855     | 5,341,000    | 25,424,877 |
| 13.....      | 1,531,514   | 440,729    | 1,860,274   | 1,505,389     | 5,347,389    | 26,085,269 |
| 20.....      | .....       | 844,781    | .....       | 1,594,933     | 4,960,400    | 26,363,848 |
| 27.....      | 1,434,674   | 187,941    | 2,126,332   | 1,584,879     | 4,869,800    | 25,597,866 |
| Sept. 3..... | .....       | 562,087    | *962,030    | 509,649       | 4,877,200    | 26,355,494 |
| 10.....      | 1,796,139   | 2,279,800  | 2,046,006   | 2,363,385     | 4,919,788    | 26,687,036 |
| 17.....      | .....       | 1,361,110  | .....       | 1,760,331     | 5,067,200    | 21,579,880 |
| 24.....      | 1,570,924   | 474,945    | 2,042,363   | 2,727,194     | 5,190,600    | 25,851,036 |
| Oct. 1.....  | .....       | 1,126,404  | .....       | 1,414,590     | 5,230,400    | 24,489,500 |
| 8.....       | 1,322,005   | 675,817    | †2,350,670  | 727,981       | 4,719,100    | 24,214,200 |
| Total.....   | 27,275,360  | 21,751,053 | 32,431,334  | 58,725,808    | .....        | .....      |

\* From New Orleans.

† \$500,000 silver from Mexico.

The exports from Boston for the month were \$500,000, making \$5,462,625. From both cities the amount was as follows:—

|               | September.  | Previous.    | Jan. 1 to<br>Oct. 8. |
|---------------|-------------|--------------|----------------------|
| Boston.....   | \$500,000   | \$4,962,625  | \$5,462,625          |
| New York..... | 6,630,286   | 52,195,712   | 58,725,808           |
| Total.....    | \$7,130,286 | \$57,168,337 | \$64,188,433         |

The receipts of gold from California continue to exceed those of the last and the preceding year—a fact somewhat singular, since the quantity of goods sent there, as well as the profits on them, have been less than in former years. It is to some extent the case that capital formerly sent to California is returning to its owners in the shape of gold. It is also the case that gold has this year been more valuable than usual. It commands a larger quantity of other products of labor than it did last year, and, as usual when the price of a product rises, its export is accelerated to the point of demand. The operations of the New York Assay-office have been as follows:—

NEW YORK ASSAY OFFICE.  
DEPOSITS.

|           | Foreign. |           |           |          | United States. |             |          |          |
|-----------|----------|-----------|-----------|----------|----------------|-------------|----------|----------|
|           | Gold.    |           | Silver.   |          | Gold.          |             | Silver.  |          |
|           | Coin.    | Bullion.  | Coin.     | Bullion. | Coin.          | Bullion.    | Coin.    | Bullion. |
| January.. | \$4,000  | \$13,000  | \$23,380  | ....     | ....           | \$365,000   | \$2,500  | \$4,120  |
| February. | 6,000    | 10,000    | 57,700    | \$9,000  | ....           | 669,000     | 2,300    | 6,000    |
| March ... | 8,000    | 3,000     | 82,000    | 3,000    | ....           | 351,000     | 3,500    | 4,500    |
| April ... | 8,000    | 10,000    | 31,000    | 28,000   | ....           | 328,000     | 1,000    | 4,000    |
| May ....  | 5,000    | 10,000    | 29,000    | 2,000    | ....           | 162,000     | 600      | 7,000    |
| June..... | 20,000   | 20,000    | 25,500    | 3,500    | ....           | 185,000     | 2,000    | 4,000    |
| July..... | 12,000   | 8,000     | 33,400    | 6,400    | ....           | 137,600     | 1,000    | 3,100    |
| August... | 16,000   | 8,000     | 30,800    | 10,000   | ....           | 201,000     | ....     | 3,200    |
| Septemb'r | 20,000   | 22,000    | 18,000    | 3,000    | ....           | 160,000     | ....     | 48,000   |
| Total..   | \$99,000 | \$104,000 | \$332,780 | \$64,900 | ....           | \$2,558,600 | \$12,900 | \$81,920 |

PAYMENTS BY ASSAY OFFICE.

|                | Bars.       | Coin.       |
|----------------|-------------|-------------|
| January .....  | \$387,000   | \$252,000   |
| February ..... | 750,000     | 10,000      |
| March.....     | 255,000     | 290,000     |
| April.....     | 336,000     | 74,000      |
| May.....       | 156,000     | 59,600      |
| June.....      | 140,000     | 120,000     |
| July.....      | 155,000     | 46,500      |
| August.....    | 165,000     | 104,000     |
| September..... | 175,000     | 75,000      |
| Total.....     | \$2,519,000 | \$1,030,100 |

In the same period the transactions of the United States Mint at Philadelphia have been as follows:—

UNITED STATES MINT, PHILADELPHIA.

|                 | Deposits.   |          | Coinage. |          |          |
|-----------------|-------------|----------|----------|----------|----------|
|                 | Gold.       | Silver.  | Gold.    | Silver.  | Cents.   |
| January .....   | \$148,040   | \$51,635 | \$59,825 | \$56,000 | \$35,000 |
| February .....  | 80,155      | 77,650   | 147,983  | 127,000  | 27,000   |
| March.....      | 67,000      | 107,640  | 119,519  | 108,000  | 27,000   |
| April.....      | 74,200      | 100,015  | 42,520   | 128,500  | 29,000   |
| May.....        | 215,760     | 86,710   | 76,640   | 104,000  | 25,000   |
| June .....      | 104,710     | 64,230   | 180,060  | 90,000   | 36,000   |
| July.....       | 158,720     | 57,770   | 117,788  | 43,000   | 30,000   |
| August.....     | 111,650     | 64,900   | 92,151   | 54,487   | 25,000   |
| September ..... | 138,500     | 118,610  | 122,804  | 54,909   | 36,000   |
| Total.....      | \$1,080,730 | 729,160  | 959,280  | 765,996  | 260,000  |

The course of events for the past three years has been rather to diminish than otherwise the amount of the precious metals in the country. These, from the date of the California discovery up to the year 1857, accumulated, since the quantity produced and that arrived exceeded the amount exported. The general impulse given to business, the large migration, the considerable expenditure in railroads, and the large sales of breadstuffs, all tended to keep specie in the country. Latterly this tendency has changed, and in the last three years the metallic basis has diminished nearly \$60,000,000. This outflow of the metals has left the paper currency in much greater ratio to the whole than before, but it has generally maintained itself. The diminution of general business, and the fall in prices, have rendered less currency necessary, and it has left the country in the shape of coin. No inconvenience from this source has yet manifested itself, but it may be questioned in how far the embarrassment may arise when returning activity of business shall inspire a renewed demand for money.

The amount of imports at the port of New York for the month of September has been rather more than for the same month of last year, and the quantities of goods put on the market show an excess over those sold for the same month last year, and also over those of 1857, when the money pressure caused a considerable amount of goods to be warehoused. The imports for the month are as follows :

FOREIGN IMPORTS AT NEW YORK IN SEPTEMBER.

|                                | 1856.        | 1857.        | 1858.        | 1859.        |
|--------------------------------|--------------|--------------|--------------|--------------|
| Entered for consumption.....   | \$10,934,435 | \$8,841,367  | \$11,180,523 | \$12,470,440 |
| Entered for warehousing.....   | 3,264,622    | 5,428,203    | 2,900,710    | 2,177,966    |
| Free goods.....                | 1,026,208    | 1,772,505    | 1,253,829    | 1,810,626    |
| Specie and bullion.....        | 84,097       | 805,285      | 188,233      | 184,553      |
| Total entered at the port..... | \$15,309,362 | \$16,847,360 | \$15,473,295 | \$16,643,585 |
| Withdrawn from warehouse.....  | 3,457,622    | 2,882,046    | 2,905,062    | 2,898,441    |

Last year the quantities in bond supplied the market, when imports were small, and this year, even with the large imports, the quantity withdrawn exceeds that entered. The total imports at New York since January 1st, including those warehoused, exceed the imports of any previous year, even that of 1857, and exceed those of last year by \$82,400,000. Nevertheless, the aggregate of the two years continues to be far behind that of the previous two years. The figures are as follows :—

FOREIGN IMPORTS AT NEW YORK FOR NINE MONTHS, FROM JANUARY 1st.

|                                | 1856.       | 1857.       | 1858.        | 1859.       |
|--------------------------------|-------------|-------------|--------------|-------------|
| Entered for consumption .....  | 128,900,191 | 114,522,999 | \$76,582,434 | 144,397,670 |
| Entered for warehousing .....  | 28,494,662  | 56,855,873  | 20,232,150   | 28,351,768  |
| Free goods.....                | 14,701,645  | 15,504,705  | 16,552,095   | 23,160,678  |
| Specie and bullion... ..       | 1,150,770   | 6,679,914   | 2,021,173    | 1,834,054   |
| Total entered at the port..... | 173,247,268 | 193,563,491 | 115,387,852  | 197,744,170 |
| Withdrawn from warehouse ....  | 19,094,642  | 32,122,274  | 31,097,577   | 20,305,309  |

The quantity of goods in bond has been reduced during the month \$1,500,000, notwithstanding the large imports :—

QUARTERLY STATEMENT OF FOREIGN IMPORTS AT NEW YORK FROM JANUARY 1st.

|                         | 1856.        | 1857.        | 1858.        | 1859.        |
|-------------------------|--------------|--------------|--------------|--------------|
| First quarter.....      | \$51,871,305 | \$65,666,728 | \$29,044,464 | \$59,116,788 |
| Second quarter .....    | 56,430,604   | 55,262,699   | 32,740,170   | 70,048,086   |
| Third quarter.....      | 64,945,359   | 72,634,064   | 53,603,218   | 68,579,296   |
| Total, nine months..... | 173,247,268  | 193,563,491  | 115,387,852  | 197,744,170  |

The imports of dry goods for consumption in September of the present year are somewhat larger than for the same month last year, and for the previous year, but less than for 1856. The increase is mostly woolens and flax. The quantities warehoused in September are less than those withdrawn, and the amount thrown upon the market is \$103,839 larger than the imports, showing a reduction in stocks :—

## IMPORTS OF FOREIGN DRY GOODS AT NEW YORK FOR THE MONTH OF SEPTEMBER.

## ENTERED FOR CONSUMPTION.

|                              | 1856.       | 1857.       | 1858.       | 1859.       |
|------------------------------|-------------|-------------|-------------|-------------|
| Manufactures of wool.....    | \$2,154,266 | \$1,362,495 | \$1,910,252 | \$2,005,381 |
| Manufactures of cotton.....  | 1,050,922   | 820,449     | 881,692     | 862,065     |
| Manufactures of silk.....    | 1,880,926   | 1,348,572   | 2,077,703   | 1,998,329   |
| Manufactures of flax.....    | 815,542     | 375,293     | 404,768     | 614,930     |
| Miscellaneous dry goods..... | 600,514     | 328,275     | 301,912     | 510,268     |
| Total.....                   | \$6,502,170 | \$4,235,084 | \$5,576,307 | \$5,990,973 |

## WITHDRAWN FROM WAREHOUSE.

|                                 | 1856.       | 1857.       | 1858.       | 1859.       |
|---------------------------------|-------------|-------------|-------------|-------------|
| Manufactures of wool.....       | \$524,532   | \$380,389   | \$484,900   | \$317,469   |
| Manufactures of cotton.....     | 166,728     | 87,362      | 128,765     | 96,581      |
| Manufactures of silk.....       | 163,573     | 107,333     | 178,456     | 76,672      |
| Manufactures of flax.....       | 80,139      | 93,091      | 121,410     | 109,614     |
| Miscellaneous dry goods.....    | 21,175      | 70,240      | 107,745     | 40,596      |
| Total.....                      | \$956,147   | \$668,415   | \$1,021,276 | \$640,932   |
| Add entered for consumption.... | 6,502,170   | 4,235,084   | 5,576,307   | 5,990,973   |
| Total thrown on market....      | \$7,458,317 | \$4,903,499 | \$6,597,583 | \$6,631,905 |

## ENTERED FOR WAREHOUSING.

|                                 | 1856.       | 1857.       | 1858.       | 1859.       |
|---------------------------------|-------------|-------------|-------------|-------------|
| Manufactures of wool.....       | \$332,632   | \$920,325   | \$178,150   | \$185,812   |
| Manufactures of cotton.....     | 154,866     | 455,549     | 100,492     | 115,460     |
| Manufactures of silk.....       | 181,766     | 440,269     | 44,416      | 67,446      |
| Manufactures of flax.....       | 143,687     | 420,909     | 79,043      | 130,088     |
| Miscellaneous dry goods.....    | 53,859      | 193,146     | 46,607      | 38,287      |
| Total.....                      | \$866,810   | \$2,430,198 | \$448,708   | \$537,093   |
| Add entered for consumption.... | 6,502,170   | 4,235,084   | 5,576,307   | 5,990,973   |
| Total entered at the port....   | \$7,368,980 | \$6,665,282 | \$6,025,015 | \$6,528,066 |

This leaves the total imports of foreign dry goods at this port, since January 1st, \$45,000,000 more than for the corresponding date of last year, while the amount put on the market is only \$38,200,000 more than last year :—

## IMPORTS OF FOREIGN DRY GOODS AT THE PORT OF NEW YORK, FOR NINE MONTHS, FROM JANUARY 1ST.

## ENTERED FOR CONSUMPTION.

|                              | 1856.        | 1857.        | 1858.        | 1859.        |
|------------------------------|--------------|--------------|--------------|--------------|
| Manufactures of wool.....    | \$21,315,298 | \$19,010,964 | \$13,890,836 | \$28,375,357 |
| Manufactures of cotton.....  | 12,763,076   | 13,748,031   | 9,557,995    | 18,868,286   |
| Manufactures of silk.....    | 25,254,582   | 21,911,711   | 14,459,562   | 27,476,406   |
| Manufactures of flax.....    | 6,649,357    | 5,044,318    | 3,359,963    | 8,089,840    |
| Miscellaneous dry goods..... | 5,873,957    | 5,380,366    | 2,698,170    | 4,695,304    |
| Total.....                   | \$71,856,272 | \$65,095,390 | \$41,966,527 | \$87,503,193 |

WITHDRAWN FROM WAREHOUSE.

|                                 | 1856.        | 1857.        | 1858.        | 1859.        |
|---------------------------------|--------------|--------------|--------------|--------------|
| Manufactures of wool.....       | \$2,317,929  | \$4,815,683  | \$4,003,246  | \$2,578,390  |
| Manufactures of cotton.....     | 1,819,911    | 2,718,415    | 3,230,663    | 1,404,902    |
| Manufactures of silk.....       | 1,764,310    | 3,862,866    | 3,065,465    | 796,003      |
| Manufactures of flax.....       | 864,858      | 1,889,126    | 1,868,026    | 880,313      |
| Miscellaneous dry goods.....    | 335,975      | 707,877      | 1,136,379    | 354,466      |
| Total.....                      | \$7,102,983  | \$13,493,967 | \$13,353,779 | \$6,014,074  |
| Add entered for consumption ... | 71,856,272   | 65,095,390   | 41,966,527   | 87,503,193   |
| Total thrown on market....      | \$78,959,255 | \$78,589,357 | \$55,320,306 | \$93,517,267 |

ENTERED FOR WAREHOUSING.

|                                 | 1856.        | 1857.        | 1858.        | 1859.        |
|---------------------------------|--------------|--------------|--------------|--------------|
| Manufactures of wool.....       | \$2,771,289  | \$6,650,196  | \$1,909,642  | \$2,886,053  |
| Manufactures of cotton.....     | 1,588,051    | 3,078,640    | 1,648,030    | 1,264,009    |
| Manufactures of silk.....       | 1,870,394    | 4,647,896    | 1,032,557    | 734,493      |
| Manufactures of flax.....       | 780,466      | 1,957,634    | 728,273      | 689,330      |
| Miscellaneous dry goods.....    | 492,547      | 1,417,544    | 483,884      | 380,879      |
| Total.....                      | \$7,502,747  | \$17,751,910 | \$5,802,386  | \$5,954,764  |
| Add entered for consumption ... | 71,856,272   | 65,095,390   | 41,966,527   | 87,503,193   |
| Total entered at the port....   | \$79,359,019 | \$82,847,300 | \$47,768,913 | \$93,457,957 |

The total exports, exclusive of specie, shipped from New York to foreign ports in the month of September is \$1,800,000 more than for the same period of last year, and more than of September of any year except 1856. We annex a comparison for four years:—

EXPORTS FROM NEW YORK TO FOREIGN PORTS FOR THE MONTH OF SEPTEMBER.

|                                   | 1856.        | 1857.       | 1858.       | 1859.        |
|-----------------------------------|--------------|-------------|-------------|--------------|
| Domestic produce.....             | \$7,045,202  | \$4,218,954 | \$3,521,992 | \$4,946,612  |
| Foreign merchandise (free).....   | 67,325       | 417,570     | 169,863     | 188,072      |
| Foreign merchandise (dutiabale).. | 509,752      | 566,106     | 204,390     | 635,172      |
| Specie and bullion.....           | 3,738,547    | 990,476     | 3,239,591   | 8,267,681    |
| Total exports.....                | \$11,360,826 | \$6,193,106 | \$7,135,836 | \$14,037,497 |
| Total, exclusive of specie ..     | 7,622,279    | 5,202,630   | 3,896,245   | 5,769,816    |

The shipments of specie for September have been larger than ever before for that month, and have swollen the aggregate to an unusual figure, without much affecting the value of exchange. The exports, exclusive of specie, from New York to foreign port this year are nearly as large as for the same time in 1857. The exports of specie show a large excess over any previous year:—

EXPORTS FROM NEW YORK TO FOREIGN PORTS FOR NINE MONTHS, FROM JANUARY 1.

|                                    | 1856.        | 1857.        | 1858.        | 1859.        |
|------------------------------------|--------------|--------------|--------------|--------------|
| Domestic produce.....              | \$56,336,195 | \$47,233,769 | \$41,534,618 | \$43,470,969 |
| Foreign merchandise (free).....    | 748,075      | 3,127,326    | 1,125,561    | 2,327,879    |
| Foreign merchandise (dutiabale)... | 2,554,853    | 4,104,150    | 2,986,672    | 3,447,668    |
| Specie and bullion.....            | 27,487,086   | 33,288,632   | 20,602,848   | 57,926,455   |
| Total exports.....                 | \$88,125,709 | \$87,753,877 | \$66,249,699 | 107,172,971  |
| Total, exclusive of specie....     | 60,638,623   | 54,465,245   | 45,646,851   | 49,246,561   |

The cash duties received at New York show an increase as compared with last year, owing to the large importation, notwithstanding the quantities then taken out of bond, and nearly equal those of 1857:—

## CASH DUTIES RECEIVED AT NEW YORK.

|                          | 1857.           | 1858.           | 1859.           |
|--------------------------|-----------------|-----------------|-----------------|
| First six months .....   | \$19,293,521 31 | \$11,089,112 57 | \$19,912,181 99 |
| In July.....             | 6,987,019 61    | 3,387,305 33    | 4,851,246 89    |
| In August.....           | 3,946,830 40    | 3,545,119 01    | 4,243,010 43    |
| In September.....        | 2,249,982 89    | 2,672,935 63    | 2,908,509 95    |
| Total since Jan. 1st.... | \$32,447,354 21 | \$20,694,472 54 | \$31,514,949 26 |

## JOURNAL OF BANKING, CURRENCY, AND FINANCE.

## CORPORATE CAPITAL IN GERMANY.

The *Statistical Annual* of OTTO HUBNER, published at Berlin, contains an extended account of the various credit companies in Germany. The nature of these various undertakings, and the amount of capital employed, is seen in the following table:—

|                                | Capital.      | Preferred capital. | Total paid in. |
|--------------------------------|---------------|--------------------|----------------|
| Prussian railroads.....thalers | 120,000,000   | 135,000,000        | 229,032,050    |
| Austrian German railroads..... | 136,000,000   | 47,000,000         | 183,000,000    |
| Other German railroads.....    | 102,500,000   | 17,000,000         | 49,500,000     |
| Fire insurance.....            | 48,932,137    | .....              | 14,122,950     |
| Life insurance.....            | 11,640,095    | .....              | 2,081,838      |
| Transport insurance.....       | 7,458,718     | .....              | 1,221,743      |
| Marine insurance.....          | 9,000,000     | .....              | 2,000,000      |
| Credit insurance.....          | 500,000       | .....              | 100,000        |
| Other insurance.....           | 17,508,930    | .....              | 3,597,430      |
| Banks of circulation.....      | 155,474,711   | .....              | 155,474,711    |
| Credit Mobilier.....           | 120,000,000   | .....              | 109,682,194    |
| Foundries, &c.....             | 131,147,009   | 20,125,179         | 116,809,794    |
| Navigation.....                | 40,763,544    | 17,253,833         | 55,165,457     |
| Baths and gambling houses..... | 4,576,662     | 235,700            | 4,812,362      |
| Building associations.....     | 755,000       | 200,000            | 955,000        |
| Cotton factories.....          | 22,210,834    | 2,834,137          | 22,987,884     |
| Breweries.....                 | 2,429,857     | 100,000            | 2,315,714      |
| Bakeries.....                  | 610,000       | .....              | 505,000        |
| Chemical factories.....        | 3,436,448     | 160,000            | 3,596,448      |
| Docks.....                     | 460,000       | .....              | 460,000        |
| Linen factories.....           | 3,735,708     | .....              | 3,106,428      |
| Gas companies.....             | 8,500,000     | .....              | 6,914,834      |
| Machine factories.....         | 5,362,900     | .....              | 5,362,900      |
| Mills.....                     | 3,676,666     | .....              | 3,360,381      |
| Paper mills.....               | 2,150,000     | .....              | 2,150,000      |
| Water works.....               | 3,132,550     | .....              | 3,132,550      |
| Woolen factories.....          | 3,900,004     | .....              | 3,900,004      |
| Sugar factories.....           | 4,740,698     | 388,570            | 4,506,411      |
| All other.....                 | 26,856,298    | .....              | 20,928,170     |
| Total.....                     | 962,699,769   | 249,297,419        | 1,057,788,258  |
| In United States currency....  | \$744,584,837 | \$186,973,065      | \$793,341,190  |

This amount is far from large for the whole of Germany. The credit system there is not developed in the same proportion as in America, where the system of associated capital has been pushed to a greater extent than in any other country. The cheaper and more effective system of individual industry and enterprise is more prevalent in Germany.

CITY WEEKLY BANK RETURNS.

NEW YORK WEEKLY BANK RETURNS.—(CAPITAL, \$68,645,014.)

|         | Loans.      | Specie.    | Circulation. | Deposits.   | Average clearings. | Actual deposits. |
|---------|-------------|------------|--------------|-------------|--------------------|------------------|
| Jan. 8  | 128,538,642 | 28,399,818 | 7,930,292    | 113,800,885 | 20,974,263         | 92,826,622       |
| 15      | 129,349,245 | 29,380,712 | 7,586,163    | 116,054,328 | 20,598,005         | 95,456,823       |
| 22      | 129,540,050 | 29,472,056 | 7,457,245    | 116,016,828 | 20,950,428         | 95,066,400       |
| 29      | 129,663,249 | 27,725,290 | 7,483,642    | 113,012,564 | 19,174,629         | 93,837,935       |
| Feb. 5  | 130,442,176 | 25,991,441 | 7,950,855    | 114,678,173 | 22,712,917         | 91,965,256       |
| 12      | 129,106,318 | 25,419,088 | 7,872,441    | 109,907,424 | 20,560,606         | 89,346,818       |
| 19      | 127,476,495 | 26,344,955 | 7,766,858    | 108,937,564 | 19,911,207         | 89,026,337       |
| 26      | 125,866,083 | 26,470,171 | 7,736,982    | 109,000,892 | 19,785,055         | 88,215,837       |
| Mar. 5  | 125,221,627 | 26,769,965 | 8,071,693    | 108,646,823 | 22,626,795         | 86,800,028       |
| 12      | 126,205,261 | 25,530,054 | 8,100,021    | 107,458,392 | 21,270,283         | 86,188,109       |
| 19      | 127,587,943 | 25,043,183 | 7,996,713    | 108,353,336 | 21,911,543         | 86,441,793       |
| 26      | 127,751,225 | 25,182,627 | 7,998,098    | 106,581,128 | 20,237,879         | 86,343,249       |
| Apr. 2  | 128,702,192 | 25,732,161 | 8,221,753    | 110,176,088 | 22,438,950         | 87,737,138       |
| 9       | 129,865,752 | 25,748,667 | 8,449,401    | 111,692,509 | 23,549,945         | 88,142,544       |
| 16      | 129,968,924 | 25,478,108 | 8,293,459    | 111,695,711 | 23,607,914         | 88,087,797       |
| 23      | 129,192,807 | 26,068,155 | 8,289,112    | 112,627,270 | 23,671,453         | 88,955,814       |
| 30      | 128,706,705 | 26,329,805 | 8,300,672    | 113,217,504 | 23,655,166         | 89,562,338       |
| May 7   | 129,519,905 | 26,086,632 | 8,804,032    | 115,586,810 | 26,714,767         | 88,872,043       |
| 14      | 129,680,408 | 25,171,335 | 8,490,933    | 113,141,178 | 24,445,039         | 88,696,639       |
| 21      | 128,701,553 | 26,090,008 | 8,352,723    | 112,731,646 | 24,177,516         | 88,554,130       |
| 28      | 127,137,660 | 24,319,822 | 8,232,653    | 107,064,005 | 21,501,650         | 85,562,355       |
| June 4  | 125,006,766 | 23,728,311 | 8,427,642    | 103,207,002 | 20,628,166         | 82,578,836       |
| 11      | 122,958,928 | 22,132,275 | 8,391,116    | 99,042,966  | 20,159,422         | 78,883,536       |
| 18      | 121,800,195 | 23,192,217 | 8,281,111    | 99,170,335  | 20,042,356         | 79,127,979       |
| 25      | 121,744,449 | 21,759,881 | 8,216,043    | 97,353,393  | 19,160,278         | 77,193,115       |
| July 2  | 122,401,773 | 22,491,665 | 8,365,790    | 98,920,313  | 20,787,701         | 78,132,612       |
| 9       | 121,614,633 | 22,494,649 | 8,553,061    | 98,090,655  | 21,077,643         | 77,013,012       |
| 16      | 120,405,658 | 23,323,679 | 8,201,675    | 97,257,070  | 19,121,159         | 78,136,911       |
| 23      | 119,934,160 | 21,196,912 | 8,170,626    | 94,416,054  | 19,114,111         | 75,301,943       |
| 30      | 119,347,412 | 20,764,564 | 8,214,959    | 91,707,877  | 17,232,982         | 74,474,895       |
| Aug. 6  | 118,938,059 | 20,083,877 | 8,623,050    | 91,891,234  | 19,366,379         | 72,524,855       |
| 13      | 117,757,141 | 20,744,532 | 8,419,606    | 88,975,864  | 17,443,211         | 71,532,353       |
| 20      | 117,990,199 | 21,403,448 | 8,317,669    | 91,248,799  | 18,038,889         | 73,209,910       |
| 27      | 117,541,070 | 20,728,066 | 8,234,279    | 89,471,646  | 17,679,829         | 71,791,817       |
| Sept. 3 | 118,184,258 | 21,478,299 | 8,373,318    | 93,250,438  | 20,094,727         | 73,155,709       |
| 10      | 118,421,430 | 21,767,248 | 8,513,062    | 92,732,324  | 20,095,939         | 72,636,895       |
| 17      | 119,366,352 | 21,512,680 | 8,444,766    | 94,002,721  | 20,855,322         | 73,147,399       |
| 24      | 119,387,320 | 20,660,436 | 8,357,206    | 93,460,300  | 20,729,701         | 72,730,599       |
| Oct. 1  | 118,208,752 | 19,259,126 | 8,337,702    | 91,823,441  | 21,011,336         | 70,812,105       |
| 8       | 117,211,627 | 19,493,144 | 8,585,739    | 92,550,175  | 23,048,968         | 69,501,307       |
| 15      | 117,289,067 | 19,651,293 | 8,463,816    | 91,921,699  | 21,830,679         | 70,091,020       |

BOSTON BANKS.—(CAPITAL, \$35,125,433.)

|           | Loans.     | Specie.   | Circulation. | Deposits.  | Due to banks. | Due from banks. |
|-----------|------------|-----------|--------------|------------|---------------|-----------------|
| Jan. 3 .. | 60,069,424 | 8,548,934 | 6,543,134    | 22,357,838 | 10,789,135    | 7,083,737       |
| 10 ..     | 60,310,965 | 8,295,392 | 7,016,104    | 21,615,468 | 11,263,766    | 7,137,234       |
| 17 ..     | 60,106,798 | 7,931,712 | 6,793,723    | 21,127,712 | 11,139,700    | 7,111,264       |
| 24 ..     | 59,400,354 | 7,383,391 | 6,609,374    | 20,727,905 | 10,430,454    | 7,037,715       |
| 31 ..     | 58,992,556 | 7,088,736 | 6,224,137    | 20,598,451 | 9,657,823     | 6,547,510       |
| Feb. 7 .. | 59,120,142 | 6,814,589 | 6,514,576    | 20,845,520 | 9,506,146     | 7,057,113       |
| 14 ..     | 59,087,249 | 6,671,619 | 6,332,342    | 19,983,531 | 9,391,733     | 6,763,270       |
| 21 ..     | 59,099,993 | 6,679,740 | 6,275,458    | 20,082,960 | 9,318,961     | 6,699,735       |
| 28 ..     | 58,636,328 | 6,410,563 | 6,283,959    | 19,469,489 | 9,184,941     | 6,815,160       |
| Mar. 7 .. | 58,892,981 | 6,386,580 | 6,578,472    | 19,935,649 | 8,477,968     | 6,673,623       |
| 14 ..     | 58,436,379 | 6,265,661 | 6,372,298    | 19,202,029 | 8,456,312     | 6,330,719       |
| 21 ..     | 58,152,742 | 6,238,518 | 6,227,150    | 19,809,807 | 7,945,389     | 6,817,363       |
| 28 ..     | 57,672,804 | 6,370,283 | 6,108,505    | 19,908,785 | 7,767,582     | 6,864,684       |
| Apr. 4 .. | 58,031,003 | 6,401,822 | 6,386,853    | 20,899,191 | 7,665,274     | 7,524,274       |

|            | Loans.     | Specie.   | Circulation. | Deposits.  | Due to banks. | Due from banks. |
|------------|------------|-----------|--------------|------------|---------------|-----------------|
| 11 ..      | 58,320,346 | 6,488,147 | 7,358,859    | 21,422,531 | 8,410,087     | 8,509,638       |
| 18 ..      | 58,496,225 | 6,466,137 | 6,985,273    | 21,666,840 | 8,663,857     | 8,343,446       |
| 25 ..      | 58,160,215 | 6,726,647 | 6,812,855    | 21,663,615 | 8,237,561     | 7,334,888       |
| May 2 ..   | 58,178,264 | 6,910,187 | 6,658,260    | 21,990,246 | 7,850,530     | 7,346,135       |
| 9 ..       | 58,211,765 | 6,907,557 | 7,241,597    | 21,852,338 | 7,998,226     | 8,077,777       |
| 16 ..      | 58,445,596 | 6,851,787 | 7,064,757    | 21,466,499 | 7,704,870     | 7,805,577       |
| 23 ..      | 57,996,456 | 6,706,975 | 7,013,197    | 20,845,917 | 7,542,472     | 7,565,826       |
| 30 ..      | 57,318,243 | 6,874,399 | 6,664,483    | 20,769,103 | 7,239,128     | 7,549,033       |
| June 6 ..  | 57,430,695 | 6,738,384 | 7,009,878    | 20,718,977 | 7,090,735     | 7,852,924       |
| 13 ..      | 57,972,199 | 6,672,767 | 6,863,659    | 20,118,426 | 6,865,611     | 7,778,657       |
| 20 ..      | 58,203,731 | 6,453,596 | 7,082,781    | 20,229,249 | 7,134,285     | 7,460,245       |
| 27 ..      | 58,474,200 | 6,180,858 | 6,552,901    | 19,878,006 | 7,099,339     | 6,663,773       |
| July 4 ..  | 59,037,935 | 5,493,396 | 6,935,803    | 20,017,147 | 7,076,162     | 7,283,020       |
| 11 ..      | 58,802,700 | 5,234,600 | 7,371,600    | 18,846,900 | 7,307,000     | 7,300,400       |
| 18 ..      | 58,773,537 | 4,645,866 | 6,890,858    | 18,422,769 | 6,854,245     | 6,731,181       |
| 25 ..      | 58,214,940 | 4,662,014 | 6,987,221    | 18,201,927 | 6,838,207     | 7,110,420       |
| Aug. 1 ..  | 57,972,321 | 4,667,352 | 6,387,768    | 18,033,821 | 6,511,893     | 6,331,385       |
| 8 ..       | 58,122,483 | 4,926,056 | 6,678,754    | 17,957,506 | 6,580,316     | 6,359,393       |
| 15 ..      | 58,123,231 | 4,769,101 | 6,570,163    | 17,417,279 | 6,570,922     | 5,764,922       |
| 22 ..      | 58,016,685 | 4,922,414 | 6,444,603    | 17,602,981 | 6,857,698     | 6,090,950       |
| 29 ..      | 58,089,045 | 5,094,717 | 6,259,360    | 17,569,101 | 6,892,813     | 5,749,899       |
| Sept. 5 .. | 58,567,981 | 5,115,478 | 6,495,950    | 18,159,586 | 6,921,705     | 6,153,490       |
| 12 ..      | 58,765,279 | 5,129,751 | 6,612,539    | 18,190,067 | 7,009,345     | 6,237,555       |
| 19 ..      | 58,851,495 | 5,342,342 | 6,650,333    | 18,459,463 | 6,946,411     | 6,296,528       |
| 26 ..      | 58,580,748 | 5,164,191 | 6,548,230    | 18,527,936 | 6,979,094     | 6,724,476       |
| Oct. 3 ..  | 58,735,636 | 5,195,497 | 6,694,038    | 19,165,983 | 7,000,547     | 7,237,090       |

## PHILADELPHIA BANKS.—(CAPITAL, \$11,632,295.)

| Date.       | Loans.     | Specie.   | Circulation. | Deposits.  | Due banks. |
|-------------|------------|-----------|--------------|------------|------------|
| Jan. 3 ...  | 26,451,057 | 6,063,356 | 2,741,754    | 17,049,005 | 3,424,569  |
| 10....      | 26,395,860 | 6,067,222 | 2,854,398    | 17,138,607 | 3,297,816  |
| 17....      | 26,365,385 | 6,050,743 | 2,830,384    | 17,323,908 | 3,258,315  |
| 24 ...      | 26,283,118 | 6,099,317 | 2,769,145    | 17,498,219 | 3,093,921  |
| 31....      | 26,320,089 | 6,138,245 | 2,709,311    | 17,557,809 | 3,159,539  |
| Feb. 7....  | 26,472,569 | 5,970,439 | 2,786,453    | 17,007,167 | 3,307,371  |
| 14....      | 26,527,304 | 5,991,541 | 2,804,052    | 16,384,087 | 3,695,963  |
| 21....      | 26,574,418 | 6,017,663 | 2,782,792    | 16,129,610 | 3,964,000  |
| 28....      | 26,509,977 | 5,982,260 | 2,778,252    | 16,012,765 | 4,086,651  |
| Mar. 7 ...  | 26,719,333 | 5,926,714 | 2,901,337    | 16,372,368 | 3,854,990  |
| 14....      | 26,685,873 | 6,046,248 | 2,900,832    | 16,703,049 | 3,841,605  |
| 21....      | 26,856,891 | 6,136,539 | 2,923,551    | 16,899,846 | 3,929,010  |
| 28....      | 26,967,429 | 6,296,429 | 3,029,255    | 17,476,060 | 4,109,455  |
| Apr. 4....  | 27,737,429 | 6,363,043 | 3,425,196    | 17,154,770 | 4,329,343  |
| 11....      | 27,884,568 | 6,144,905 | 3,580,447    | 17,002,878 | 4,668,135  |
| 18....      | 28,808,106 | 6,404,375 | 3,364,531    | 17,829,494 | 4,519,146  |
| 25....      | 27,817,918 | 6,689,591 | 3,179,236    | 17,804,212 | 4,439,457  |
| May 2... .. | 27,747,339 | 6,680,813 | 3,081,102    | 17,781,229 | 4,217,834  |
| 9....       | 27,693,408 | 6,349,390 | 3,152,725    | 17,441,125 | 4,160,780  |
| 16....      | 27,435,268 | 6,286,620 | 3,090,007    | 17,603,264 | 3,930,536  |
| 23....      | 26,837,976 | 5,922,147 | 3,014,659    | 17,182,349 | 3,462,753  |
| 30....      | 26,406,458 | 5,521,759 | 2,975,736    | 16,454,661 | 3,403,572  |
| June 6....  | 26,177,875 | 5,415,587 | 2,992,198    | 16,386,995 | 3,367,146  |
| 13....      | 25,920,993 | 5,521,188 | 2,918,426    | 16,207,149 | 3,177,859  |
| 20....      | 25,715,316 | 5,801,167 | 2,835,643    | 15,705,980 | 3,198,968  |
| 27....      | 25,406,842 | 5,066,847 | 2,729,953    | 16,114,269 | .....      |
| July 4....  | 25,416,440 | 4,897,863 | 2,808,208    | 15,533,496 | 2,855,312  |
| 11....      | 25,248,246 | 4,696,111 | 2,940,108    | 14,295,683 | 2,912,575  |
| 18....      | 25,200,073 | 4,824,864 | 2,873,947    | 15,011,670 | 2,803,179  |
| 25....      | 25,106,124 | 4,697,604 | 2,808,592    | 14,862,920 | 2,605,878  |
| Aug. 1....  | 25,007,875 | 4,942,313 | 2,775,043    | 14,854,543 | 2,789,268  |
| 8....       | 24,746,238 | 4,880,630 | 2,809,456    | 14,623,439 | 2,621,820  |

|             | Loans.     | Specie.   | Circulation. | Deposits.  | Due banks. |
|-------------|------------|-----------|--------------|------------|------------|
| 15....      | 24,497,730 | 4,996,541 | 2,786,302    | 14,249,758 | 2,721,907  |
| 22....      | 24,325,308 | 5,079,162 | 2,724,061    | 14,096,270 | 2,802,876  |
| 29....      | 24,363,912 | 5,235,976 | 2,655,866    | 14,292,308 | 3,003,258  |
| Sept. 5.... | 24,640,746 | 5,435,090 | 2,702,837    | 14,901,572 | 2,843,855  |
| 12....      | 24,686,821 | 5,431,509 | 2,785,146    | 14,909,709 | 2,861,091  |
| 19....      | 24,916,413 | 5,500,992 | 2,766,370    | 15,056,018 | 2,913,027  |
| 26....      | 25,125,114 | 5,437,722 | 2,730,835    | 15,243,099 | 2,780,398  |
| Oct. 3....  | 25,479,419 | 5,323,153 | 2,742,444    | 15,550,755 | 2,732,862  |

NEW ORLEANS BANKS.—(CAPITAL, \$19,284,000.)

|           | Short loans. | Specie.    | Circulation. | Deposits.  | Exchange.  | Distant balances. |
|-----------|--------------|------------|--------------|------------|------------|-------------------|
| Jan. 3..  | 20,537,567   | 16,013,189 | 9,551,324    | 22,643,428 | 9,882,602  | 2,331,233         |
| 10..      | 20,453,417   | 16,294,474 | 10,383,734   | 21,756,592 | 8,866,131  | 2,540,573         |
| 17..      | 20,904,840   | 16,343,810 | 10,819,419   | 22,194,957 | 9,666,070  | 2,380,707         |
| 24..      | 21,442,167   | 16,279,655 | 11,224,464   | 22,549,305 | 9,492,871  | 2,057,217         |
| 31..      | 21,837,791   | 16,101,158 | 11,616,119   | 22,554,889 | 9,508,703  | 1,861,866         |
| Feb. 5..  | 21,809,628   | 16,365,053 | 11,913,009   | 22,743,175 | 9,747,755  | 2,000,056         |
| 12..      | 22,594,245   | 16,700,188 | 12,148,174   | 23,830,045 | 9,686,145  | 1,879,644         |
| 19..      | 22,677,390   | 16,949,263 | 12,241,954   | 23,620,711 | 9,474,473  | 2,174,619         |
| 27..      | 23,126,625   | 16,806,998 | 12,522,244   | 23,203,848 | 9,217,655  | 2,320,031         |
| Mar. 12.. | 22,944,605   | 16,828,140 | 12,581,934   | 23,501,784 | 9,046,372  | 1,959,638         |
| 19..      | 22,633,181   | 17,013,593 | 12,777,999   | 22,364,430 | 8,563,771  | 2,432,776         |
| 26..      | 22,420,444   | 16,837,405 | 12,681,931   | 22,589,661 | 8,770,788  | 2,420,725         |
| Apr. 2..  | 22,465,730   | 16,179,137 | 13,054,416   | 22,465,730 | 9,059,382  | 2,545,873         |
| 9..       | 21,655,921   | 16,250,790 | 12,985,616   | 22,066,164 | 9,493,761  | 2,582,084         |
| 16..      | 21,132,186   | 15,975,547 | 12,777,079   | 22,356,833 | 9,949,531  | 2,243,528         |
| 23..      | 20,287,903   | 15,705,599 | 12,666,116   | 21,792,705 | 10,055,454 | 2,449,421         |
| 30..      | 19,926,487   | 15,650,736 | 12,578,111   | 21,315,664 | 9,537,886  | 2,100,219         |
| May 7..   | 19,443,947   | 15,539,235 | 12,711,640   | 21,396,145 | 9,271,213  | 2,029,992         |
| 14..      | 18,948,824   | 15,534,148 | 12,513,001   | 20,569,681 | 8,439,088  | 2,127,956         |
| 21..      | 18,925,857   | 15,203,875 | 12,326,726   | 19,890,960 | 7,428,213  | 2,062,447         |
| 28..      | 18,594,556   | 14,784,944 | 12,032,821   | 19,445,178 | 7,190,460  | 2,089,701         |
| June 4..  | 18,350,758   | 14,587,357 | 11,994,591   | 18,683,911 | 6,614,289  | 2,040,656         |
| 11..      | 17,889,718   | 14,240,114 | 11,825,081   | 18,159,432 | 6,481,915  | 1,928,315         |
| 18..      | 17,525,037   | 14,151,040 | 11,708,131   | 17,804,674 | 6,076,239  | 1,770,409         |
| 25..      | 17,262,214   | 13,597,084 | 11,501,679   | 17,139,130 | 5,853,472  | 1,774,067         |
| July 2..  | 17,198,658   | 13,524,959 | 11,284,564   | 16,891,446 | 5,550,384  | 1,705,349         |
| 9..       | 17,138,649   | 13,475,341 | 11,061,704   | 16,643,664 | 4,839,808  | 1,743,348         |
| 16..      | 16,763,853   | 13,666,522 | 10,743,414   | 16,330,871 | 4,043,047  | 1,642,797         |
| 23..      | 16,690,806   | 13,744,709 | 10,507,084   | 15,933,313 | 3,637,302  | 1,728,875         |
| 30..      | 17,020,100   | 13,763,222 | 10,338,819   | 15,940,824 | 3,197,339  | 1,694,469         |
| Aug. 6..  | 17,596,593   | 13,504,546 | 10,091,029   | 16,377,209 | 2,787,395  | 1,766,150         |
| 13..      | 18,032,892   | 13,124,146 | 9,951,954    | 15,356,742 | 2,647,128  | 1,852,705         |
| 20..      | 18,850,144   | 13,214,396 | 9,823,059    | 15,483,806 | 2,581,960  | 1,803,945         |
| 27..      | 19,505,226   | 12,924,929 | 9,788,919    | 15,314,628 | 2,411,899  | 1,788,802         |
| Sept. 3.. | 19,827,317   | 13,154,963 | 9,805,674    | 15,394,654 | 2,445,097  | 1,772,558         |
| 10..      | 20,629,817   | 12,749,427 | 9,567,333    | 15,260,331 | 2,003,175  | 1,619,886         |
| 17..      | 21,144,174   | 12,824,667 | 9,442,349    | 15,402,592 | 1,862,657  | 1,516,252         |
| 24..      | 22,228,245   | 12,601,590 | 9,306,194    | 15,596,759 | 2,001,524  | 1,525,035         |

PITTSBURG BANKS.—(CAPITAL, \$4,160,200.)

|             | Loans.    | Specie.   | Circulation. | Deposits. | Due banks. |
|-------------|-----------|-----------|--------------|-----------|------------|
| Jan. 3..... | 6,837,261 | 1,292,047 | 2,058,113    | 1,811,780 | 162,902    |
| 10.....     | 6,929,874 | 1,287,552 | 2,042,348    | 1,767,594 | 216,097    |
| 17.....     | 6,743,540 | 1,294,567 | 2,023,948    | 1,804,149 | 179,451    |
| 24.....     | 6,970,837 | 1,308,325 | 1,961,493    | 1,781,474 | 241,121    |
| 31.....     | 6,964,674 | 1,307,145 | 1,965,723    | 1,739,046 | 215,608    |
| Feb. 7..... | 6,988,923 | 1,260,532 | 1,904,978    | 1,748,144 | 202,505    |
| 14.....     | 7,027,680 | 1,219,551 | 1,958,098    | 1,724,773 | 164,859    |
| 21.....     | 6,953,599 | 1,223,396 | 1,919,658    | 1,699,020 | 134,859    |
| 28.....     | 7,001,804 | 1,213,552 | 1,937,498    | 1,683,030 | 175,640    |
| Mar. 7..... | 6,945,722 | 1,133,754 | 1,867,848    | 1,637,796 | 160,996    |

|       |         | Loans.    | Specie.   | Circulation. | Deposits. | Due banks. |
|-------|---------|-----------|-----------|--------------|-----------|------------|
|       | 14..... | 6,982,847 | 1,100,171 | 2,029,468    | 1,638,243 | 220,822    |
|       | 21..... | 7,069,162 | 1,156,682 | 1,961,843    | 1,625,949 | 215,029    |
|       | 28..... | 6,991,949 | 1,112,770 | 1,954,903    | 1,602,283 | 180,567    |
| Apr.  | 4.....  | 7,213,664 | 1,113,769 | 2,080,363    | 1,704,191 | 237,290    |
|       | 11..... | 7,212,513 | 1,128,686 | 2,085,188    | 1,747,237 | 196,288    |
|       | 18..... | 7,197,068 | 1,191,797 | 2,089,498    | 1,751,230 | 262,922    |
|       | 25..... | 7,245,963 | 1,155,780 | 2,084,153    | 1,782,131 | 274,549    |
| May   | 2.....  | 7,327,114 | 1,182,273 | 2,000,344    | 1,856,843 | 291,061    |
|       | 9.....  | 7,276,965 | 1,141,556 | 2,010,948    | 1,899,305 | 212,682    |
|       | 16..... | 7,235,561 | 1,089,513 | 2,101,348    | 1,865,657 | 228,187    |
|       | 23..... | 7,161,874 | 1,053,799 | 2,024,673    | 1,774,093 | .....      |
|       | 30..... | 7,082,987 | 1,036,945 | 1,952,238    | 1,699,393 | .....      |
| June  | 6.....  | 7,090,569 | 1,063,567 | 1,930,468    | 1,666,775 | .....      |
|       | 13..... | 7,006,137 | 990,307   | 1,878,298    | 1,577,358 | 266,305    |
|       | 18..... | 6,890,266 | 997,486   | 1,888,478    | 1,578,395 | 220,362    |
|       | 25..... | 6,918,435 | 1,014,657 | 1,863,653    | 1,636,933 | .....      |
| July  | 4.....  | 7,006,116 | 1,018,685 | 1,874,093    | 1,694,895 | .....      |
|       | 11..... | 6,944,782 | 1,025,986 | 1,824,928    | 1,718,566 | 225,404    |
|       | 18..... | 6,955,020 | 1,052,191 | 1,868,923    | 1,734,554 | 266,888    |
|       | 25..... | 6,961,268 | 1,119,255 | 1,868,243    | 1,750,313 | 232,171    |
|       | 31..... | 6,929,136 | 1,091,462 | 1,835,833    | 1,741,588 | 257,160    |
| Aug.  | 7.....  | 6,915,619 | 1,079,179 | 1,780,298    | 1,695,557 | 239,571    |
|       | 15..... | 6,829,277 | 1,095,789 | 1,776,633    | 1,646,966 | 248,565    |
|       | 22..... | 6,809,909 | 1,076,376 | 1,805,178    | 1,645,959 | 222,021    |
|       | 29..... | 6,767,148 | 1,099,419 | 1,735,836    | 1,657,486 | 200,076    |
| Sept. | 5.....  | 6,745,807 | 1,055,124 | 1,752,748    | 1,580,176 | 205,270    |
|       | 12..... | 6,696,995 | 1,073,545 | 1,753,783    | 1,570,561 | 190,068    |
|       | 19..... | 6,705,683 | 1,055,006 | 1,816,468    | 1,570,561 | 181,805    |
|       | 26..... | 6,689,029 | 1,042,775 | 1,781,793    | 1,596,295 | 182,642    |
| Oct.  | 3.....  | 6,749,855 | 1,073,083 | 1,808,398    | 1,604,173 | 176,755    |

## ST. LOUIS BANKS.

|      |         | Exchange. | Circulation. | Specie.   |
|------|---------|-----------|--------------|-----------|
| Jan. | 8.....  | 3,297,559 | 2,030,608    | 1,705,262 |
|      | 15..... | 3,345,015 | 1,992,670    | 1,578,800 |
|      | 22..... | 3,331,189 | 2,116,870    | 1,584,541 |
|      | 29..... | 3,409,026 | 2,185,385    | 1,640,541 |
| Feb. | 5.....  | 2,480,693 | 2,032,235    | 1,599,203 |
|      | 12..... | 3,557,028 | 1,865,125    | 1,682,084 |
|      | 19..... | 3,540,103 | 1,932,210    | 1,678,054 |
|      | 26..... | 3,549,330 | 1,819,745    | 1,636,054 |
| Mar. | 5.....  | 3,545,202 | 1,808,100    | 1,575,362 |
|      | 12..... | 3,400,186 | 1,733,620    | 1,569,742 |
|      | 19..... | 3,296,937 | 1,673,475    | 1,605,802 |
|      | 26..... | 3,422,612 | 1,596,806    | 1,642,589 |
| Apr. | 2.....  | 3,337,296 | 1,566,380    | 1,542,211 |
|      | 9.....  | 3,339,900 | 1,516,840    | 1,531,199 |
|      | 16..... | 3,464,386 | 1,492,055    | 1,525,315 |
|      | 23..... | 3,425,470 | 1,439,085    | 1,434,191 |
|      | 30..... | 3,410,135 | 1,332,355    | 1,435,568 |
| May  | 7.....  | 3,435,940 | 1,360,835    | 1,549,133 |
|      | 14..... | 3,475,945 | 1,359,241    | 1,574,657 |
|      | 21..... | 3,691,958 | 1,333,815    | 1,542,616 |
|      | 28..... | 3,615,197 | 1,274,605    | 1,373,194 |
| June | 4.....  | 3,678,049 | 1,267,675    | 1,367,181 |
|      | 11..... | 3,685,371 | 1,218,755    | 1,358,047 |
|      | 18..... | 3,710,240 | 1,163,440    | 1,441,301 |
|      | 25..... | 3,465,823 | 1,134,650    | 1,419,965 |
| July | 2.....  | 3,331,027 | 1,028,760    | 1,353,069 |
|      | 9.....  | 3,418,224 | 1,035,845    | 1,339,076 |
|      | 16..... | 3,419,031 | 1,042,310    | 1,325,552 |
|      | 23..... | 3,492,105 | 975,220      | 1,275,820 |
|      | 30..... | 3,358,648 | 942,460      | 1,229,777 |

|       |         | Exchange. | Circulation. | Specie.   |
|-------|---------|-----------|--------------|-----------|
| Aug.  | 6.....  | 3,265,140 | 919,415      | 1,120,829 |
|       | 13..... | 3,353,358 | 816,895      | 1,002,615 |
|       | 20..... | 3,317,433 | 778,365      | 986,750   |
|       | 27..... | 3,190,259 | 714,060      | 1,013,160 |
| Sept. | 3.....  | 3,306,732 | 684,745      | 894,998   |
|       | 10..... | 3,320,181 | 682,065      | 865,943   |
|       | 17..... | 3,411,213 | 648,890      | 867,943   |
|       | 24..... | 3,343,603 | 595,805      | 780,425   |
| Oct.  | 3.....  | 3,190,900 | 550,810      | 820,574   |

PROVIDENCE BANKS.—(CAPITAL, \$5,636,269.)

|              | Loans.     | Specie.    | Circulation. | Deposits. | Due oth. b'ks. |
|--------------|------------|------------|--------------|-----------|----------------|
| Jan. 17..... | 18,037,795 | 537,884    | 2,003,313    | 2,513,422 | 1,307,647      |
| Feb. 7.....  | 18,298,481 | 451,771    | 1,789,673    | 2,446,451 | 1,135,309      |
|              | 21.....    | 18,533,944 | 412,571      | 1,927,359 | 968,154        |
| Mar. 6.....  | 18,327,546 | 375,757    | 1,967,389    | 2,324,691 | 978,410        |
|              | 21.....    | 18,333,574 | 377,945      | 1,943,450 | 2,288,175      |
| Apr. 4.....  | 18,483,550 | 387,317    | 1,938,448    | 2,374,941 | 972,491        |
| May 2.....   | 18,260,520 | 399,294    | 1,920,391    | 2,394,688 | 803,729        |
| June 6.....  | 18,597,814 | 378,196    | 1,009,163    | 2,421,901 | 946,691        |
| July 4.....  | 19,124,155 | 336,398    | 1,407,141    | 2,399,843 | 1,076,323      |
| Aug. 4.....  | 18,972,736 | 315,810    | 2,018,775    | 2,331,568 | 1,559,874      |
| Sept. 5..... | 18,900,466 | 321,487    | 1,901,198    | 2,394,917 | 965,545        |

BOSTON BANK DIVIDENDS.

COMPILED FOR THE MERCHANTS' MAGAZINE BY JOSEPH G. MARTIN, COMMISSION STOCK BROKER, NO. 6 STATE-STREET, BOSTON, AUTHOR OF "TWENTY-ONE YEARS IN THE BOSTON STOCK MARKET."

The following table presents the capital of each bank, together with the last four semi-annual dividends, and the amount paid October 3, 1859; also, the market value of each stock, dividend off, April and October, 1858, and April and October, 1859.

The changes in the dividends from April last were an increase of  $\frac{1}{4}$  per cent by the Hamilton and Howard banks, and a decrease of  $\frac{1}{4}$  per cent by the City and Maverick. Twenty-four of the banks have paid the same dividend, each six months, through the two years given. The Suffolk also reduced from 5 to 4 per cent. the first time it has been less than 5 since October, 1846. Their country bank business has been greatly reduced since the Bank of Mutual Redemption went into operation.

The 2 per cent of the Bank of the Metropolis in April was for the first four months. The Safety Fund Bank went into operation February 1, and paid its first dividend of 4 per cent for eight months. The Revere commenced May 2, nominally, but did not get into full operation till June 1. and divided 2 per cent, or interest for four months, besides paying a portion of expenses incident to all new banking institutions. The Bank of Mutual Redemption, which commenced August 23, 1858, has not yet made any dividend.

The Atlas Bank increased its capital from \$500,000 to \$1,000,000, June 3, and paid at the rate of 8 per cent on the new capital. The North Bank is to increase from \$750,000 to \$1,000,000, and the addition is being gradually paid in. These banks increase their capital under the General Banking Law. The Safety Fund Bank increased from \$600,000 to \$1,000,000, October 1, and the Revere will probably to the same amount within a few months. The Bank of

the Metropolis will also probably increase its capital within a few months. The last three are organized under the General Banking Law of Massachusetts:—

| Banks.              | Capital stock. | Dividends. |      |       |      | Amount.<br>Oct. 1, 1859. | Value of stocks, divid. off. |        |       |      |
|---------------------|----------------|------------|------|-------|------|--------------------------|------------------------------|--------|-------|------|
|                     |                | 1858.      |      | 1859. |      |                          | 1858.                        |        | 1859. |      |
|                     |                | Apr.       | Oct. | Apr.  | Oct. | April.                   | Oct.                         | April. | Oct.  |      |
| Atlantic.....       | \$500,000      | 3          | 3½   | 3½    | 3½   | \$17,500                 | 101                          | 104½   | 103½  | 106½ |
| Atlas.....          | 500,000        | 4          | 4    | 4     | 4    | 20,000                   | 106                          | 106    | 106   | 104  |
| Blackstone.....     | 750,000        | 3½         | 3½   | 3½    | 3½   | 26,250                   | 101½                         | 103½   | 103½  | 104½ |
| Boston, (par \$50)  | 900,000        | 4          | 4    | 4     | 4    | 36,000                   | 115                          | 118    | 120   | 120½ |
| Boylston.....       | 400,000        | 4½         | 4½   | 4½    | 4½   | 18,000                   | 108½                         | 111½   | 115½  | 118½ |
| Broadway.....       | 150,000        | 3          | 3    | 3     | 3    | 4,500                    | 95                           | 98     | 98    | 98   |
| City.....           | 1,000,000      | 3½         | 3½   | 3½    | 3    | 30,000                   | 104½                         | 105    | 105   | 105  |
| Columbian.....      | 750,000        | 3½         | 3½   | 3½    | 3½   | 26,250                   | 104                          | 106½   | 105½  | 106½ |
| Commerce.....       | 2,000,000      | 3½         | 3½   | 3½    | 3½   | 70,000                   | 98½                          | 101    | 102   | 101½ |
| Eagle.....          | 700,000        | 4          | 4    | 4     | 4    | 28,000                   | 109                          | 111    | 111   | 111  |
| Eliot.....          | 600,000        | 3½         | 3½   | 3½    | 3½   | 21,000                   | 100                          | 103½   | 104   | 106½ |
| Exchange.....       | 1,000,000      | 5          | 5    | 5     | 5    | 50,000                   | 116                          | 120    | 123   | 128  |
| Faneuil Hall....    | 500,000        | 4          | 4    | 4     | 4    | 20,000                   | 108                          | 109½   | 111   | 112  |
| Freeman's.....      | 400,000        | 4          | 4    | 4     | 4    | 16,000                   | 114                          | 112    | 115   | 113  |
| Globe.....          | 1,000,000      | 4          | 4    | 4     | 4    | 40,000                   | 113½                         | 114    | 116   | 116  |
| Granite.....        | 500,000        | 3          | 3    | 3     | 3    | 27,000                   | 97½                          | 98     | 100   | 101½ |
| Hamilton.....       | 500,000        | 4          | 4    | 4     | 4½   | 22,500                   | 116                          | 120    | 120   | 121½ |
| Hide & Leather.     | 1,000,000      | new        | 3    | 3     | 3    | 30,000                   | new                          | 100    | 104   | 105  |
| Howard.....         | 500,000        | 3          | 3    | 3     | 3½   | 17,500                   | 96                           | 98½    | 101   | 102  |
| Market, (par \$70)  | 500,000        | 4          | 4    | 3½    | 3½   | 19,600                   | 114                          | 117    | 114   | 112  |
| Massa'tts, (\$250). | 800,000        | \$8        | \$8  | \$8   | *\$8 | 25,600                   | 101                          | 105    | 108   | 105  |
| Maverick.....       | 400,000        | 3½         | 3½   | 3½    | 3    | 12,000                   | 91¼                          | 94¼    | 100   | 99   |
| Mechanics'.....     | 250,000        | 4          | 4    | 4     | 4    | 10,000                   | 106                          | 108    | 114   | 111  |
| Merchants'.....     | 4,000,000      | 3½         | 3    | 3     | 3    | 120,000                  | 99½                          | 102    | 102   | 100½ |
| Metropolis.....     | 200,000        | .          | new  | 2     | 3    | 6,000                    | .                            | new    | 97    | 99½  |
| National.....       | 750,000        | 3½         | 3½   | 3½    | 3½   | 26,250                   | 97½                          | 100    | 100½  | 100½ |
| New England....     | 1,000,000      | 4          | 4    | 3½    | 3½   | 35,000                   | 111                          | 112½   | 111   | 110½ |
| North.....          | 750,000        | 3          | 3    | 3     | 3    | 22,500                   | 96                           | 97     | 98    | 97½  |
| North America..     | 750,000        | 3          | 3    | 3     | 3    | 22,500                   | 99½                          | 102    | 101   | 104  |
| Revere.....         | 600,000        | .          | .    | .     | 2    | 12,000                   | .                            | .      | new   | 99½  |
| Safety Fund....     | 600,000        | .          | .    | .     | 4    | 24,000                   | .                            | .      | 101   | 101  |
| Shawmut.....        | 750,000        | 4          | 3    | 3     | 3    | 22,500                   | 101                          | 104    | 100½  | 101  |
| Shoe & Leather..    | 1,000,000      | 4½         | 4½   | 4½    | 4½   | 45,000                   | 114½                         | 118½   | 121   | 124½ |
| State, (par \$60).. | 1,800,000      | 3½         | 3½   | 3½    | 3½   | 63,000                   | 111½                         | 111½   | 115   | 113  |
| Suffolk.....        | 1,000,000      | 5          | 5    | 5     | 4    | 40,000                   | 129                          | 127    | 127½  | 127  |
| Traders'.....       | 600,000        | 3          | 3    | 3     | 3    | 18,000                   | 97                           | 98½    | 99    | 98½  |
| Tremont.....        | 1,250,000      | 4          | 4    | 4     | 4    | 50,000                   | 110                          | 111½   | 113   | 114½ |
| Union.....          | 1,000,000      | 4          | 3½   | 3½    | 3½   | 35,000                   | 110                          | 111½   | 110½  | 111½ |
| Washington.....     | 750,000        | 3½         | 3½   | 4     | 4    | 30,000                   | 104½                         | 107    | 108   | 106½ |
| Webster.....        | 1,500,000      | 3½         | 3½   | 3½    | 3½   | 52,500                   | 102½                         | 104    | 103½  | 106  |
| Total, Oct., 1859.  | 34,360,000     |            |      |       |      | \$1,201,950              |                              |        |       |      |
| Total, Apr., 1859.  | 33,160,000     |            |      |       |      | 1,185,950                |                              |        |       |      |
| Total, Oct., 1858.  | 32,635,000     |            |      |       |      | 1,176,250                |                              |        |       |      |
| Total, Apr., 1858.  | 31,960,000     |            |      |       |      | 1,186,000                |                              |        |       |      |
| Total, Oct., 1857.  | 31,960,000     |            |      |       |      | 1,204,350                |                              |        |       |      |

## MISCELLANEOUS DIVIDENDS.

The following dividends and interest were also paid at the dates given. In addition to these, early in October was the usual period for dividends by the Boylston, City, Eliot, Manufacturers', Merchants', National, Neptune, Warren, and Washington insurance companies, as also the Boston Exchange Company, quarterly, Columbian Manufacturing, and probably Franklin Manufacturing,

\* The dividend of the Massachusetts Bank is 3-1-5 per cent, (par \$250), equal to \$8 per share.

(Lewiston, Maine,) its first dividend, adding, in round numbers, over \$250,000, and making the total paid out in October fully \$2,000,000.

The only changes from April are \$5 more per share (par \$750) by the Boston Manufacturing Company, and 8 per cent instead of 5 by the New England Glass Company, a very pleasing result to the stockholders:—

| Payable.   | Name of companies, &c.                     | Capital.  | Dividends. |      |           |
|------------|--|-----------|------------|------|-----------|
|            |  |           | April.     | Oct. | Amount.   |
| Oct. 3..   | Bangor city bonds, 1874.....               | \$500,000 | 2          | 3    | \$15,000  |
| 1..        | Boston city bonds, interest.....           | .....     | .          | .    | 85,000    |
| 4..        | Boston Manufacturing Company... shares     | 600       | \$25       | \$30 | 18,000    |
| 1..        | Boston Steam Flour Mills bonds.....        | 100,000   | 3          | 3    | 3,000     |
| 1..        | Cambridge (horse) Railroad.....            | 210,000   | 4½         | 4½   | 9,450     |
| 1..        | Chelsea (horse) Railroad.....              | 70,000    | *          | 4    | 2,800     |
| 1..        | Manchester & Lawrence Railroad bonds..     | 33,800    | 3          | 3    | 1,014     |
| 1..        | Massachusetts State bonds, interest....    | .....     | .          | .    | 8,625     |
| 1..        | Michigan Central Railroad bonds, interest  | .....     | 4          | 4    | 176,520   |
| 1..        | Michigan Central Railroad bonds, princip'l | .....     | .          | .    | 1,000     |
| 4..        | New England Glass Company.....             | 500,000   | 5          | 8    | 40,000    |
| 3..        | Newton (horse) Railroad.....               | 28,000    | *          | 3    | 840       |
| 1..        | Northampton Bridge Company.....            | 33,000    | 1½         | 1½   | 578       |
| 1..        | Northern (N. H.) Railroad bonds, 1864..    | 71,700    | 3          | 3    | 2,151     |
| 1..        | Northern (N. H.) Railroad bonds, 1874..    | 192,600   | 3          | 3    | 5,778     |
| 3..        | Ogdensburg 1st mortgage.....               | 1,500,000 | 3½         | 3½   | 52,500    |
| 1..        | Old Colony Railroad bonds.....             | 134,500   | 3          | 3    | 4,035     |
| 1..        | Philad., Wilmington, & Baltimore Railr'd.  | 5,600,000 | 3          | 3    | 168,000   |
| 1..        | Prescott Insurance Company.....            | 100,000   | 5          | 5    | 5,000     |
| 1..        | Shoe & Leather Fire & Marine Ins. Co...    | 100,000   | 5          | 5    | 5,000     |
| Total..... |  |           |            |      | \$604,291 |

The bond of \$1,000 paid October 1 by the Michigan Central Railroad completes all the debt maturing previous to April (\$699,000) and October, 1860, (\$535,000,) which it is proposed to exchange for the first mortgage sinking fund bonds of 1882.

### FINANCES OF CHARLESTON, SOUTH CAROLINA.

The annual statement of the finances of the city for the fiscal year ending August 31, presents the following summary:—

#### RECEIPTS AND TAX RETURNS.

|  |                |
|--|----------------|
| The receipts for the lower wards amounted to.....                                    | \$1,348,662 48 |
| Expenditures to.....   | 1,802,757 36   |
| Cash on hand August 31, 1859.....  | 251,438 03     |
| The receipts for the upper wards amounted to.....                                    | 180,203 97     |
| Expenditures to.....   | 180,203 97     |
| The tax returns of the Assessor give as the aggregate of all the taxes for 1859..... | 460,795 11     |
| For 1858.....  | 461,247 21     |
| Decrease in 1859.....  | 452 10         |

#### LIABILITIES AND RESOURCES.

|  |                |
|--|----------------|
| The city is debited in the sum of.....                           | \$4,717,691 26 |
| Credited in bonds payable and issues of stock in the sum of..... | 4,508,695 31   |

#### SINKING FUND.

|  |              |
|--|--------------|
| The sinking fund is debited in the sum of..... | \$984,485 51 |
| Credited in the sum of.....                    | 969,485 51   |

\* Chelsea and Newton Horse Railroads make their first dividends at this time.

## REVENUE FROM CROTON WATER RENTS.

The recent annual report of Controller Haws gives the following statement of the amount of water rents actually received in New York city during each year since 1842, when the same first began to yield an income to the corporation :

| Year.     | Amount.     | Year.       | Amount.        |
|-----------|-------------|-------------|----------------|
| 1842..... | \$17,862 17 | 1852.....   | \$562,189 89   |
| 1843..... | 86,887 31   | 1853.....   | 600,039 66     |
| 1844..... | 118,124 35  | 1854.....   | 641,113 27     |
| 1845..... | 157,791 66  | 1855.....   | 708,690 38     |
| 1846..... | 193,914 70  | 1856.....   | 702,242 60     |
| 1847..... | 221,635 10  | 1857.....   | 734,732 81     |
| 1848..... | 255,053 09  | 1858.....   | 783,623 88     |
| 1849..... | 278,811 72  |             |                |
| 1850..... | 458,951 87  | Total ..... | \$6,980,454 24 |
| 1851..... | 458,789 78  |             |                |

## NEW YORK CLEARING-HOUSE.

The New York Clearing-house commenced business October 1, 1853; that at Boston, April 1, 1858, and at Philadelphia March 22, 1858. The business done at the New York Clearing-house in six years, ending October 1, 1859, has been in exchanges and balances \$39,522,836,090, viz. :—

| 1 year to    | Total exchanges. | Total balances. | 1 year to    | Total exchanges | Total balances. |
|--------------|------------------|-----------------|--------------|-----------------|-----------------|
| Oct. 1, 1854 | \$5,750,455,987  | \$297,411,493   | Oct. 1, 1857 | \$8,333,226,718 | \$365,313,901   |
| " 1855       | 5,362,912,098    | 289,694,137     | " 1858       | 4,756,664,385   | 314,238,910     |
| " 1856       | 6,906,213,328    | 334,714,489     | " 1859       | 6,448,005,956   | 363,984,682     |
| Total .....  |                  |                 |              | 37,557,478,474  | 1,965,357,616   |

The exchanges for the past fiscal year of the three cities were as follows :—

|                   | Year ending.    | Clearings.      | Total balances. | No. of banks. |
|-------------------|-----------------|-----------------|-----------------|---------------|
| New York.....     | October 1, 1859 | \$6,448,005,956 | \$363,984,682   | 54            |
| Boston.....       | March 31, 1859  | 1,262,795,000   | 119,823,000     | 39            |
| Philadelphia..... | March 22, 1859  | 876,379,552     | 55,716,000      | 19            |

The magnitude of these clearing operations in this city is very great. The saving of labor, time, and risk to each bank is also great.

Formerly, says the *New York Courier*, the daily exchanges occupied about 150 hours per day—that is, the loss to each bank was at least three hours per day. Now the work is done in one hour per day for the whole, and more than twenty-five hundred unnecessary accounts have been closed on the ledgers of the fifty-four banks.

Formerly the losses were frequent in effecting the exchanges. The runners or porters would lose occasionally a pocket-book or a roll of bank bills. A bag of specie was at one time abstracted from the Merchants' Bank, another from the Bank of the State of New York. The specie was frequently short; and, in the hurry of receiving and paying, mistakes would be made by the porters and clerks.

All these liabilities and risks are now obviated; \$39,522,000,000 have been in six years received and paid *without the loss of a dollar*. The bustle and confusion formerly arising from carting kegs of specie from one bank to another, have almost entirely ceased, and the machinery for exchanging twenty-one millions per day, (the average for the past year.) works to the perfect satisfaction of all parties.

At the annual meeting of the Clearing-house Association, Tuesday, October 4th, 1859, the following members were elected for the coming year :—

CHAIRMAN.—Shepherd Knapp, of Mechanics' Bank.

SECRETARY.—W. B. Meeker, of Bank of New York.

CLEARING-HOUSE COMMITTEE.—Lucius Hopkins, of Importers' and Traders' Bank, *Chairman*; E. W. Dunham, of Corn Exchange Bank; William T. Hooker, of Continental Bank; Edward H. Arthur, of Union Bank; R. H. Lowry, of Bank of the Republic.

COMMITTEE ON SUSPENSIONS.—William H. Macy, of Leather Manufacturers' Bank, *Chairman*; A. V. Stout, of Shoe and Leather Bank; James M. Morrison, of Manhattan Company; Robert S. Oakley, of American Exchange Bank; James Barnes, of Merchants' Exchange Bank.

COMMITTEE ON ADMISSIONS.—Thomas Tileston, of Phoenix Bank, *Chairman*; H. Blydenburg, of Nassau Bank; William F. Havemeyer, of Bank of North America; R. Withers, of Bank of State of New York; Moses Taylor, of City Bank.

ARBITRATION COMMITTEE.—William Halsey, of Seventh Ward Bank, *Chairman*; Parker Handy, of Ocean Bank; R. W. Howes, of Park Bank; Charles F. Hunter, of Peoples' Bank; R. H. Haydock, of Market Bank.

#### GOVERNMENT LOANS IN EUROPE.

In England a new East India loan for £5,000,000 has been made; Austria has recently made a forced loan; Sardinia has negotiated one; and Russia, for £12,000,000 at three per cent, put forth at 68. England has also parted with its capital freely to Russia, Holland, &c. Portugal, Spain, Mexico, Peru, and Venezuela have, in various degrees, failed to pay principal or interest. The national debt of England is now quite four thousand millions of dollars, upon which she can only afford to pay three per cent. The following table shows the condition of the London market for government securities :—

| * Loans.                  | Interest. | Price.    |
|---------------------------|-----------|-----------|
| English consols.....      | 3         | 94½ a 95  |
| French rentes.....        | 3         | 69½ a 70  |
| French rentes.....        | 4½        | 97 a 98   |
| Portugal.....             | 3         | 44½ a 44½ |
| Mexican.....              | 3         | 18½ a 19  |
| Dutch.....                | 2½        | 65 a 66   |
| Dutch.....                | 4         | 100 a ..  |
| Russian.....              | 4½        | 98 a 100  |
| Russian.....              | 5         | 110 a 111 |
| Peruvian.....             | 4½        | 89 a 90   |
| Turkish.....              | 6         | 80½ a 81  |
| Spanish.....              | 3         | 43½ a 44  |
| Spanish new deferred..... | 3         | 82½ a 83  |

#### REDUCTION OF THE PENNSYLVANIA STATE DEBT.

The Commissioners of the Sinking Fund have issued a proclamation setting forth that within the past two years, that is, from November 30th, 1857, to September 5th, 1859, they have paid off \$1,137,155 of the public debt, made up as follows :—

|   |                |
|---|----------------|
| Certificates of stock loan of 11th April, 1848, 6 per cent..... | \$44,550 00    |
| Certificates of stock loans of various dates, 5 per cent.....   | 1,047,238 26   |
| Relief issues canceled.....                                     | 41,071 00      |
| Interest certificates of various dates redeemed.....            | 4,296 10       |
| Total.....  | \$1,137,155 86 |

**LAW OF VIRGINIA IN RELATION TO BANKS.**

AN ACT PROVIDING FOR A MORE UNIFORM CURRENCY OF THE BANKS OF THE STATE OF VIRGINIA, PASSED APRIL 2, 1858.

1. Be it ordained by the General Assembly, that it shall be the duty of every branch of a bank, which is now or may hereafter be authorized by law, in addition to the redemption now required at such branch to redeem on demand all circulating notes issued or payable by such branch, which may be presented for payment at the parent bank of such branch, at a rate of discount not exceeding one-fourth of one per cent; and for failure to redeem the same, the holder thereof may recover the same damages, and in the same mode now provided by law, for failure to pay in specie at the office or bank where payable, provided that the other branches of the Exchange Bank of Virginia shall redeem at the branch thereof established in the city of Richmond on like terms and penalties.

2. Every independent bank which is now, or may hereafter be authorized by law, shall establish an agency for the redemption of its circulating notes in the city of Richmond, or in Baltimore, in the State of Maryland, in addition to the redemption now required by law. The location of such agency shall be certified by the president of the bank to the Governor of Virginia, with each quarterly report of the bank, and shall be published with the same. For failure to establish and report the agency, the bank shall forfeit to the Commonwealth one hundred dollars for the first offence, and five hundred dollars for each separate violation of the law thereafter.

3. It shall be the duty of the bank, in addition to the redemption now required by law, to redeem, on demand, all circulating notes issued by such bank, or payable by the same, which may be presented for payment at the agency thereof, at a rate of discount not exceeding one-fourth of one per cent; and for failure to redeem the same, the holder thereof may recover the same damages, and in the same mode now provided by law, for failure to pay in specie at the bank where payable.

4. Whenever the notes of any bank shall be presented for redemption at the bank where they are payable, such bank or branch may redeem the same by a specific draft at par for the amount upon the parent bank, or agency in Richmond or Baltimore, where it has made provision for the redemption of its notes; provided, the aggregate amount of the notes so presented and held by the same person, shall exceed the sum of five hundred dollars; and the person refusing to accept such draft in redemption of the notes held by him, shall not be entitled to proceed against such bank, under the fifteenth section of the fifty-eighth chapter of the code, or under the provision in the charters of the stock banks, requiring the Treasurer of the State to sell the securities held by such bank.

5. No bank or branch thereof shall give any certificate of deposit, draft, or other evidence of debt, which is not payable in specie.

6. No bank or branch thereof shall pay out the bills or notes of any bank or branch, excepting such as it will receive at par in payment of debts due the bank.

7. No bank shall directly or indirectly loan its bills or notes for circulation to any person, persons, or corporation, under any agreement or understanding that such person, persons, or corporation, shall protect or guaranty the circulation of such or any other bills or notes issued by the bank, or redeem the same when payment has been demanded.

8. This act shall commence and be in force from and after the first day of April, 1859.

**VALUATION OF PROPERTY IN BROOKLYN.**

The assessed valuation of the city of Brooklyn is as follows:—

| Years.   | Real.        | Personal.    | Total.       |
|--|--------------|--------------|--------------|
| 1858.....  | \$88,136,781 | \$10,338,494 | \$98,475,275 |
| 1859.....  | 90,150,396   | 10,896,740   | 101,047,136  |
| Total taxes.....   |              |              | 988,706      |
| Estimated city revenue to be deducted from the tax on the whole city |              |              | 168,451      |

UNITED STATES BRANCH MINT, NEW ORLEANS.

STATEMENT OF THE DEPOSITS AND COINAGE AT THE BRANCH MINT, NEW ORLEANS, FROM THE 1ST OF AUGUST, 1858, TO THE 31ST OF JULY, 1859.

| GOLD DEPOSITS.                               |              |                |
|--|--------------|----------------|
| California gold bullion.....                 | \$91,303 28  |                |
| Other gold bullion.....                      | 420,606 16   |                |
|  |              | \$511,909 44   |
| SILVER DEPOSITS.                             |              |                |
| Extracted from California gold.....          | \$581 43     |                |
| Other silver bullion.....                    | 2,633,389 23 |                |
|  |              | 2,633,970 66   |
| Total gold and silver deposits.....          |              | \$3,145,880 10 |
| Total gold and silver deposits, 1857-58..... |              | 4,776,669 43   |
| Decrease.....                                |              | \$1,630,789 33 |

| GOLD COINAGE.      |         |              |
|--------------------|---------|--------------|
|                    | Pieces. | Value.       |
| Double eagles..... | 25,250  | \$505,000 00 |
| Eagles.....        | 4,000   | 40,000 00    |
|                    |         | \$545,000 00 |

| SILVER COINAGE.                      |           |                |
|--------------------------------------|-----------|----------------|
| Silver dollars.....                  | 310,000   | \$310,000 00   |
| Half dollars.....                    | 4,882,000 | 2,191,000 00   |
| Quarter dollars.....                 | 404,000   | 101,000 00     |
| Dimes.....                           | 440,000   | 44,000 00      |
| Half dimes.....                      | 1,060,000 | 53,000 00      |
| In silver bars.....                  |           | 2,699,000 00   |
|                                      |           | 334,996 47     |
| Total coinage, 6,625,250 pieces..... |           | \$3,578,996 47 |
| Total coinage, 1857-58.....          |           | 4,442,000 00   |
| Decrease.....                        |           | \$863,003 53   |

WEALTH OF WISCONSIN.

The Secretary of State of Wisconsin furnishes the following figures of the wealth of that State:—

|   | 1858.            | 1859.                |
|---|------------------|----------------------|
| Number of acres.....                          | 16,493,518.05    | 17,411,318.79        |
| Value per acre.....                           |                  | \$5 90 $\frac{1}{2}$ |
| Aggregate value.....                          | \$110,269,274 05 | 102,814,502 14       |
| Aggregate value of city and village lots..... | 40,655,647 73    | 36,115,304 82        |
| Aggregate value of personal property.....     | 25,522,577 15    | 13,607,893 04        |
| Total aggregate.....                          | 177,820,765 96   | 152,537,700 00       |

Returns of personal property have fallen off immensely, in consequence of the deduction of debts from personal property, authorized by the present assessment law.

REAL ESTATE IN RICHMOND, VIRGINIA.

The books of the City Assessor give the following comparison of the assessed value of the real estate in that city, for the fiscal years 1859, 1858, and 1854:—

| Wards.         | 1859.        | 1858.        | 1854.        |
|----------------|--------------|--------------|--------------|
| Jefferson..... | \$4,340,668  | \$4,291,675  | \$4,065,986  |
| Madison.....   | 8,933,920    | 8,147,759    | 7,670,303    |
| Monroe.....    | 6,901,766    | 6,386,250    | 5,957,163    |
| Total.....     | \$20,176,354 | \$18,825,684 | \$17,693,455 |

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**STATISTICS OF TRADE AND COMMERCE.**


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**COTTON CROPS.**

In our last number we gave the full crop statement as made-up annually by the New York *Shipping and Commercial List*. That annual statement has been the crop authority for the last thirty years, and is as near right as one not absolutely official can be. It will be borne in mind, however, that it is the crop received at the ports, and not the absolute production of each state. This has been twice given by authority--once in the census of 1840 and again in 1850, and will probably be again so given next year. The following are comparative figures of the crops from the *Shipping List* for some years:—

**RECEIPTS OF COTTON AT THE PORTS OF THE UNITED STATES.**

|                         | 1854-5.          | 1855-6.          | 1856-7.          | 1857-8.          | 1858-9.          |
|-------------------------|------------------|------------------|------------------|------------------|------------------|
| New Orleans.....bales   | 1,232,644        | 1,661,488        | 1,435,000        | 1,576,409        | 1,669,274        |
| Mobile.....             | 454,595          | 659,738          | 503,177          | 522,364          | 704,406          |
| Florida.....            | 136,597          | 144,404          | 136,344          | 122,351          | 173,484          |
| Texas.....              | 80,737           | 116,028          | 89,882           | 145,286          | 192,062          |
| Georgia.....            | 378,694          | 389,445          | 322,111          | 282,973          | 475,788          |
| South Carolina.....     | 499,272          | 495,976          | 397,331          | 406,251          | 480,653          |
| North Carolina.....     | 26,139           | 26,698           | 27,147           | 23,999           | 37,432           |
| Virginia, &c.....       | 38,661           | 34,073           | 28,527           | 34,329           | 128,332          |
| <b>Total crops.....</b> | <b>2,847,339</b> | <b>3,527,845</b> | <b>2,939,519</b> | <b>3,113,962</b> | <b>3,851,481</b> |

**TOTAL EXPORTS OF COTTON FROM THE UNITED STATES TO FOREIGN PORTS.**

|                          | 1854-5.          | 1855-6.          | 1856-7.          | 1857-8.          | 1858-9.          |
|--------------------------|------------------|------------------|------------------|------------------|------------------|
| To Great Britain...bales | 1,549,716        | 1,921,386        | 1,428,870        | 1,809,966        | 2,019,252        |
| France.....              | 400,931          | 480,637          | 413,357          | 384,002          | 450,896          |
| North of Europe.....     | 135,200          | 304,005          | 245,798          | 215,145          | 330,012          |
| Other foreign ports...   | 149,362          | 248,578          | 164,632          | 181,342          | 221,443          |
| <b>Total.....</b>        | <b>2,244,209</b> | <b>2,954,606</b> | <b>2,252,657</b> | <b>2,590,455</b> | <b>3,021,403</b> |

**STOCK OF COTTON ON HAND IN THE UNITED STATES.**

|                           | 1855.          | 1856.         | 1857.         | 1858.          | 1859.          |
|---------------------------|----------------|---------------|---------------|----------------|----------------|
| New Orleans.....bales     | 39,425         | 6,995         | 7,321         | 30,230         | 26,022         |
| Mobile.....               | 28,519         | 5,005         | 4,504         | 10,495         | 20,106         |
| Florida.....              | 166            | 74            | 56            | 80             | 236            |
| Texas.....                | 2,062          | 623           | 962           | 1,899          | 2,655          |
| Savannah and Augusta..    | 3,837          | 3,331         | 4,673         | 12,585         | 18,383         |
| Charleston.....           | 2,085          | 3,144         | 5,644         | 11,715         | 11,715         |
| Virginia.....             | 550            | 842           | 420           | 600            | 375            |
| New York.....             | 56,846         | 34,657        | 16,778        | 25,000         | 35,578         |
| Other northern ports..... | 9,846          | 9,500         | 8,900         | 20,322         | 28,290         |
| <b>Total.....</b>         | <b>143,336</b> | <b>64,171</b> | <b>49,258</b> | <b>102,926</b> | <b>149,237</b> |

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**NEW YORK SALT INSPECTION.**

The Syracuse *Journal* says the whole amount of salt inspected on the Onondaga Salt Springs Reservation, from January 1, 1859, to August 27, is 3,507,371 bushels; the whole amount inspected during the same time in 1858, was 3,698,995 bushels; decrease, 191,624 bushels.

EXPORTS OF BREADSTUFFS FROM THE UNITED STATES.

|                          |             | TO GREAT BRITAIN AND IRELAND. |                   |                    |                   |
|--------------------------|-------------|-------------------------------|-------------------|--------------------|-------------------|
|                          |             | Flour,<br>barrels.            | Meal,<br>barrels. | Wheat,<br>bushels. | Corn,<br>bushels. |
| Year ending September 1, | 1859.....   | 102,032                       | 23                | 468,788            | 320,681           |
| "                        | " 1858..... | 1,300,906                     | 607               | 6,658,639          | 3,372,444         |
| "                        | " 1857..... | 863,179                       | 686               | 7,567,001          | 4,793,134         |
| "                        | " 1856..... | 1,665,552                     | 8,721             | 7,939,955          | 7,063,821         |
| "                        | " 1855..... | 170,329                       | 5,536             | 317,713            | 6,848,242         |
| "                        | " 1854..... | 1,824,920                     | 40,660            | 5,918,317          | 6,215,936         |
| "                        | " 1853..... | 1,618,060                     | 683               | 5,543,460          | 1,517,087         |
| "                        | " 1852..... | 1,444,640                     | 1,810             | 2,712,120          | 1,576,749         |
| "                        | " 1851..... | 1,581,702                     | 5,553             | 1,523,908          | 2,368,860         |
| "                        | " 1850..... | 463,460                       | 6,086             | 463,015            | 4,873,446         |
| "                        | " 1849..... | 1,118,316                     | 86,058            | 1,091,385          | 12,729,626        |
| "                        | " 1848..... | 183,533                       | 105,350           | 251,622            | 4,581,367         |
| "                        | " 1847..... | 3,150,689                     | 847,280           | 4,015,134          | 17,298,744        |

|                          |             | TO THE CONTINENT.  |                    |                   |                  |
|--------------------------|-------------|--------------------|--------------------|-------------------|------------------|
|                          |             | Flour,<br>barrels. | Wheat,<br>bushels. | Corn,<br>bushels. | Rye,<br>bushels. |
| Year ending September 1, | 1859.....   | 51,388             | 57,845             | 25,519            | .....            |
| "                        | " 1858..... | 303,100            | 390,428            | 16,348            | 13,100           |
| "                        | " 1857..... | 483,344            | 2,875,653          | 543,590           | 216,162          |
| "                        | " 1856..... | 748,408            | 2,610,079          | 282,083           | 1,975,178        |
| "                        | " 1855..... | 7,763              | 4,972              | 308,428           | 35,569           |

TRADE OF ITALY.

The returns of the bonding operations in certain ports, as Leghorn, Genoa, and others, show with what reason Austria clung to the agricultural region of Lombardo-Venetia. The average trade may be fairly estimated at almost a third of the total commerce of the Austrian empire. Its produce of silk alone represents a capital of 180,000,000 francs, a capital when manufactured at Lyons, St. Etienne, Zurich, Eberfeld, and Birmingham, becomes worth 2,000,000,000 kilogrammes—each kilogramme being over £2 of manufactured silk. The increase during the last twelve years has been considerable:—

|                          | Average of<br>1844-45. | 1857.         |
|--------------------------|------------------------|---------------|
| Lombardo-Venetia .....   | 410,000,000            | 500,000,000   |
| Sardinian States .....   | 330,000,000            | 843,000,000   |
| Tuscany and Duchies..... | 170,000,000            | 245,000,000   |
| Pontifical States .....  | 65,000,000             | 118,000,000   |
| Two Sicilies.....        | 170,000,000            | 180,000,000   |
| Total.....               | 1,145,000,000          | 1,886,000,000 |

The increase is thus sixty per cent, and affords an idea of what those countries may become which have hitherto been the worst administered in the world.

COMMERCE OF CINCINNATI.

The usual returns of the trade of Cincinnati have been made up by the *Prices Current* of that city, and the results are flattering. The aggregates for some years are given as follows:—

|            | Imports.     | Exports.     |            | Imports.     | Exports.     |
|------------|--------------|--------------|------------|--------------|--------------|
| 1851-2.... | \$41,256,199 | \$33,234,896 | 1855-6.... | \$75,295,901 | \$50,744,786 |
| 1852-3.... | 51,230,644   | 36,266,108   | 1856-7.... | 77,090,146   | 55,642,171   |
| 1853-4.... | 65,730,029   | 45,432,780   | 1857-8.... | 80,144,747   | 52,906,506   |
| 1854-5.... | 67,501,341   | 38,777,394   | 1858-9.... | 96,213,274   | 66,007,707   |

The return last year, as found on page 605, vol. xxxix., was less than the figures here given for that year. It would seem that the figures, not being official, are approximated in the best manner, and many articles are added this year. The return also adds an estimate of from \$30,000,000 to \$40,000,000 for sundries "not specified," which swells the amount without much interest. The comparison is as follows:—

VALUE OF PRINCIPAL IMPORTS INTO THE PORT OF CINCINNATI FOR THE YEARS ENDING  
AUGUST 31, 1858 AND 1859.

| Articles.                      | Quantity.              | Average price. | Value.    | Value last year. |
|--------------------------------|------------------------|----------------|-----------|------------------|
| Apples, green . . . . .        | bbls. 24 531           | \$1 75         | \$42,929  | \$40,023         |
| Ale, beer, and porter. . . . . | 8,545                  | 4 50           | 38,453    | 27,495           |
| Buffalo robes. . . . .         | bales 4,211            | 36 00          | 151,596   | 113,328          |
| Beef . . . . .                 | bbls. 1,600            | 14 00          | 22,400    | 4,700            |
| Beef. . . . .                  | trcs. 481              | 19 00          | 9,139     | 462              |
| Bagging. . . . .               | pieces 2,408           | 3 50           | 8,428     | 294              |
| Barley. . . . .                | bush. 455,781          | 80             | 364,584   | 260,628          |
| Beans. . . . .                 | 44,623                 | 1 50           | 66,935    | 35,759           |
| Butter . . . . .               | bbls. 10,034           | 25 00          | 250,850   | 435,750          |
| Butter . . . . .               | firkins & kegs 23,055  | 9 50           | 219,023   | 183,936          |
| Blooms . . . . .               | tons 2,678             | 60 00          | 160,680   | 197,094          |
| Boots and shoes. . . . .       | cases 49,554           | 46 00          | 2,279,484 | 1,112,878        |
| Bran, middlings, &c. . . . .   | sacks 154,024          | 90             | 138,621   | 123,610          |
| Crockery ware, &c. . . . .     | crates 2,914           | 50 00          | 145,700   | 142,550          |
| Candles . . . . .              | boxes 2,754            | 7 00           | 19,278    | 9,094            |
| Corn . . . . .                 | bush. 1,139,022        | 70             | 797,315   | 381,582          |
| Corn meal. . . . .             | 4,499                  | 3 25           | 14,622    | 2,420            |
| Cider . . . . .                | bbls. 370              | 6 00           | 2,220     | 6,310            |
| Cheese . . . . .               | casks 50               | 22 00          | 1,100     | 1,638            |
| Cheese . . . . .               | boxes 223,250          | 2 80           | 625,100   | 638,649          |
| Cotton. . . . .                | bales 49,946           | 58 00          | 2,896,868 | 1,087,732        |
| Coffee . . . . .               | sacks 143,452          | 17 50          | 2,510,310 | 2,325,323        |
| Codfish . . . . .              | drums 2,402            | 29 00          | 69,658    | 64,903           |
| Cooperage. . . . .             | pieces 246,768         | 70             | 172,737   | 223,784          |
| Cattle . . . . .               | head 43,100            | 68 00          | 2,930,800 | 2,010,488        |
| Cement and plaster. . . . .    | bbls. 22,142           | 2 00           | 44,284    | 39,606           |
| Eggs. . . . .                  | boxes & bbls. 16,740   | 7 00           | 117,180   | 172,044          |
| Flour . . . . .                | bbls. 558,173          | 5 00           | 2,790,865 | 2,469,940        |
| Feathers. . . . .              | sacks 4,064            | 30 00          | 121,920   | 150,969          |
| Fish, sundries. . . . .        | bbls. 18,263           | 11 50          | 211,375   | 183,550          |
| Fish, sundries. . . . .        | kegs & kits 10,546     | 2 75           | 29,002    | 34,196           |
| Fruits, dried. . . . .         | bush. 137,870          | 2 50           | 345,675   | 97,748           |
| Grease . . . . .               | bbls. 4,691            | 18 50          | 86,784    | 113,392          |
| Glass . . . . .                | boxes 51,362           | 2 00           | 102,724   | 417,655          |
| Glassware . . . . .            | packages 46,124        | 4 25           | 196,027   | 143,255          |
| Hemp . . . . .                 | bundles & bales 12,198 | 18 00          | 219,564   | 99,165           |
| Hides. . . . .                 | No. 156,360            | 3 80           | 594,168   | 342,098          |
| Hides. . . . .                 | lbs. 65,378            | 13             | 8,499     | 1,631            |
| Hardware. . . . .              | boxes & casks 17,027   | 70 00          | 1,191,890 | 634,060          |
| Hay. . . . .                   | bales 47,276           | 2 25           | 106,371   | 99,530           |
| Herrings. . . . .              | boxes 14,769           | 30             | 4,430     | 5,078            |
| Hogs . . . . .                 | head 445,842           | 12 00          | 5,350,104 | 4,513,530        |
| Hops. . . . .                  | bales 5,008            | 21 00          | 105,168   | 101,760          |
| Horses. . . . .                | head 8,987             | 130 00         | 1,168,310 | 498,940          |
| Iron and steel. . . . .        | pieces 298,560         | 1 30           | 388,128   | 447,851          |
| Iron and steel. . . . .        | bundles 174,291        | 3 30           | 575,160   | 443,920          |
| Iron and steel. . . . .        | tons 8,947             | 70 00          | 626,290   | 425,440          |
| Iron, pig . . . . .            | 33,960                 | 30 00          | 1,018,800 | 601,978          |
| Lead . . . . .                 | pigs 52,035            | 5 75           | 299,202   | 359,596          |
| Lard . . . . .                 | bbls. 48,033           | 23 50          | 1,128,776 | 1,619,624        |
| Lard . . . . .                 | kegs 8,212             | 5 50           | 45,166    | 80,987           |

| Articles.  | Quantity.  | Average price. | Value.     | Value last year. |
|--|------------|----------------|------------|------------------|
| Leather.....bundles                                  | 21,710     | 14 50          | 314,795    | 239,218          |
| Lemons.....boxes                                     | 13,564     | 4 25           | 57,647     | 36,334           |
| Lime.....bbls.                                       | 81,914     | 90             | 73,722     | 62,847           |
| Liquors.....hhds. & pipes                            | 3,279      | 190 00         | 623,010    | 292,110          |
| Merchandise & sundries..packages                     | 944,860    | 35 00          | 33,070,100 | 33,932,675       |
| Merchandise.....tons                                 | 4,181      | 620 00         | 2,592,220  | 2,114,820        |
| Molasses.....bbls.                                   | 116,193    | 14 00          | 1,626,702  | 723,690          |
| Malt.....bush.                                       | 71,400     | 85             | 60,690     | 60,692           |
| Nails.....kegs                                       | 138,740    | 4 00           | 554,960    | 315,555          |
| Oils.....bbls.                                       | 17,975     | 28 00          | 503,300    | 652,460          |
| Oranges.....boxes                                    | 27,137     | 4 50           | 122,117    | 52,510           |
| Oakum.....bales                                      | 3,622      | 14 50          | 52,519     | 49,897           |
| Oats.....bush.                                       | 557,701    | 55             | 306,755    | 206,482          |
| Oil cake.....tons                                    | 34         | 24 00          | 816        | 20,550           |
| Onions.....bbls. & sacks                             | 1,533      | 1 75           | 2,633      | 3,451            |
| Pork and bacon.....hhds.                             | 5,155      | 78 00          | 402,090    | 387,010          |
| Pork and bacon.....tierces                           | 2,199      | 24 00          | 52,776     | 29,740           |
| Pork and bacon.....bbls.                             | 38,630     | 16 50          | 637,445    | 310,074          |
| Pork and bacon.....boxes                             | 915        | 30 00          | 27,450     | 22,200           |
| Pork and bacon.....lbs.                              | 18,975,099 | 7½             | 1,375,694  | 1,078,721        |
| Potatoes.....bbls.                                   | 165,300    | 2 00           | 330,600    | 44,686           |
| Pitch.....   | 550        | 3 75           | 2,063      | 822              |
| Pimento, pepper, &c.....bags                         | 7,935      | 12 00          | 95,220     | 69,168           |
| Rye.....bush.  | 82,572     | 78             | 64,406     | 38,631           |
| Rosin.....bbls.                                      | 9,554      | 2 75           | 26,274     | 41,715           |
| Raisins and figs.....boxes                           | 34,337     | 4 00           | 137,348    | 102,956          |
| Rope, twine, &c.....packages                         | 17,257     | 6 00           | 103,542    | 57,512           |
| Rice.....tierces                                     | 6,265      | 34 00          | 213,010    | 125,202          |
| Sugar.....hhds.                                      | 58,885     | 78 00          | 4,593,030  | 3,373,200        |
| Sugar.....bbls.                                      | 28,359     | 20 00          | 567,180    | 924,940          |
| Sugar.....boxes                                      | 1,353      | 55 00          | 74,415     | 58,850           |
| Seed, flax.....bbls.                                 | 20,108     | 4 00           | 80,432     | 127,239          |
| Seed, grass and clover.....                          | 17,086     | 17 00          | 290,462    | 347,760          |
| Seed, hemp.....                                      | 364        | 3 00           | 1,092      | 2,481            |
| Salt.....  | 80,584     | 1 75           | 141,022    | 109,680          |
| Salt.....sacks                                       | 44,356     | 1 10           | 48,791     | 83,441           |
| Shot.....kegs  | 2,068      | 20 00          | 41,360     | 32,040           |
| Starch.....boxes                                     | 45,618     | 2 75           | 125,450    | 78,887           |
| Sheep.....head                                       | 24,064     | 1 75           | 42,112     | 31,318           |
| Stearine.....bbls.                                   | 1,771      | 25 00          | 44,275     | 51,025           |
| Tea.....packages                                     | 22,602     | 40 00          | 904,080    | 576,927          |
| Tobacco.....hhds.                                    | 5,328      | 100 00         | 532,800    | 469,980          |
| Tobacco.....bbls. & bales                            | 6,871      | 9 50           | 65,275     | 41,427           |
| Tobacco.....boxes & kegs                             | 56,330     | 20 00          | 1,126,600  | 843,625          |
| Tallow.....bbls.                                     | 5,595      | 25 00          | 139,875    | 83,472           |
| Tar.....   | 4,655      | 3 00           | 13,965     | 14,058           |
| Turpentine.....                                      | 6,882      | 16 00          | 110,112    | 86,176           |
| Wines.....bbls. & ¼ casks                            | 5,058      | 60 00          | 303,480    | 182,390          |
| Wines.....baskets & boxes                            | 16,245     | 8 00           | 129,960    | 84,080           |
| Wheat.....bush.                                      | 1,274,685  | 1 15           | 1,465,887  | 1,029,811        |
| Wool.....bales                                       | 8,064      | 20 00          | 161,280    | 77,875           |
| Whisky.....bbls.                                     | 382,412    | 11 47½         | 4,388,177  | 4,112,290        |
| Yarns, cotton.....packages                           | 19,689     | 1 50           | 29,534     | 17,730           |
| Yarns, cotton.....lbs.                               | .....      | .....          | .....      | 634              |
| Lumber.....feet                                      | 75,000,000 | 1¾             | 1,031,250  | 1,000,000        |
| Coal.....bush.                                       | 12,392,702 | 7½             | 929,452    | 1,220,800        |
| Shingles.....M.                                      | 30,000     | 3 75           | 112,500    | 135,000          |
| Staves, wood, and stone, estimated.....              | .....      | .....          | 475,000    | 400,000          |
| Various articles not specified above, estimated..... | .....      | .....          | 4,000,000  | 3,500,000        |

Total value..... \$96,213,274 \$83,644,747

VALUE OF PRINCIPAL EXPORTS FROM THE PORT OF CINCINNATI, FOR THE YEARS ENDING  
AUGUST 31st, 1858 AND 1859.

| Articles.                       | Quantity. | Average price. | Value.    | Value last year. |
|---------------------------------|-----------|----------------|-----------|------------------|
| Apples, green . . . . .         | 1,980     | \$2 00         | \$3,860   | \$11,745         |
| Alcohol . . . . .               | 23,467    | 23 00          | 539,741   | 1,240,491        |
| Ale, beer, and porter . . . . . | 21,852    | 4 50           | 98,334    | 105,700          |
| Buffalo robes . . . . .         | 4,532     | 36 00          | 163,152   | 116,568          |
| Beef . . . . .                  | 21,972    | 14 00          | 307,608   | 198,125          |
| Beef . . . . .                  | 2,337     | 19 00          | 44,403    | 84,508           |
| Bagging . . . . .               | 4,767     | 3 50           | 16,685    | 8,478            |
| Barley . . . . .                | 59,607    | 2 00           | 119,214   | 80,226           |
| Beans . . . . .                 | 10,330    | 4 75           | 49,068    | 20,328           |
| Brooms . . . . .                | 19,214    | 1 75           | 33,625    | 27,927           |
| Butter . . . . .                | 1,607     | 30 00          | 48,210    | 88,470           |
| Butter . . . . .                | 27,286    | 10 50          | 286,503   | 304,573          |
| Bran, shorts, &c . . . . .      | 20,211    | 1 90           | 20,211    | 29,754           |
| Boots and shoes . . . . .       | 49,070    | 46 00          | 2,257,220 | 2,023,034        |
| Crockery-ware, &c . . . . .     | 1,588     | 50 00          | 79,400    | 43,450           |
| Chairs . . . . .                | 10,218    | 16 00          | 163,488   | 164,512          |
| Candles . . . . .               | 220,075   | 6 30           | 1,386,473 | 993,644          |
| Corn . . . . .                  | 28,503    | 1 50           | 42,755    | 17,236           |
| Corn-meal . . . . .             | 457       | 3 25           | 1,485     | 1,534            |
| Cheese . . . . .                | 23        | 22 00          | 506       | 798              |
| Cheese . . . . .                | 146,196   | 3 15           | 460,517   | 399,532          |
| Cotton . . . . .                | 44,135    | 61 00          | 2,692,235 | 1,124,098        |
| Coffee . . . . .                | 66,617    | 18 00          | 1,199,106 | 1,237,392        |
| Cooperage . . . . .             | 146,018   | 1 00           | 140,018   | 136,079          |
| Cattle . . . . .                | 23,615    | 68 00          | 1,605,320 | 1,026,900        |
| Cement and plaster . . . . .    | 4,869     | 2 25           | 10,955    | 7,706            |
| Eggs . . . . .                  | 4,060     | 12 50          | 50,750    | 172,290          |
| Flour . . . . .                 | 562,139   | 5 10           | 2,866,909 | 2,375,938        |
| Feathers . . . . .              | 6,221     | 36 35          | 226,133   | 128,088          |
| Fish, sundry . . . . .          | 7,413     | 12 00          | 88,956    | 43,044           |
| Fish . . . . .                  | 3,485     | 3 00           | 10,455    | 6,741            |
| Fruit, dried . . . . .          | 50,411    | 2 75           | 138,631   | 43,450           |
| Furniture . . . . .             | 171,205   | 23 00          | 3,937,715 | 2,073,197        |
| Grease . . . . .                | 4,490     | 20 00          | 89,800    | 68,505           |
| Glass . . . . .                 | 13,115    | 2 15           | 28,197    | 26,227           |
| Glass-ware . . . . .            | 11,812    | 4 40           | 51,972    | 43,978           |
| Hemp . . . . .                  | 3,372     | 20 00          | 67,440    | 30,580           |
| Hides . . . . .                 | 138,299   | 4 25           | 587,771   | 321,807          |
| Hides . . . . .                 | 192,418   | 14             | 26,938    | 43,486           |
| Hardware . . . . .              | 7,413     | 70 00          | 518,910   | 422,240          |
| Hay . . . . .                   | 3,901     | 2 50           | 9,753     | 5,810            |
| Hogs . . . . .                  | 12,441    | 11 50          | 143,072   | 69,921           |
| Hops . . . . .                  | 1,532     | 20 00          | 30,640    | 24,660           |
| Horses . . . . .                | 5,836     | 130 00         | 758,680   | 314,210          |
| Iron and steel . . . . .        | 532,995   | 1 40           | 746,193   | 681,504          |
| Iron . . . . .                  | 111,703   | 3 45           | 385,375   | 238,430          |
| Iron . . . . .                  | 7,908     | 72 00          | 569,376   | 624,240          |
| Iron, pig . . . . .             | 3,987     | 31 00          | 123,597   | 107,353          |
| Lard . . . . .                  | 44,634    | 25 00          | 1,115,800 | 1,281,216        |
| Lard . . . . .                  | 49,959    | 5 75           | 287,264   | 254,495          |
| Leather . . . . .               | 24,120    | 15 00          | 361,800   | 317,025          |
| Lime . . . . .                  | 5,350     | 1 10           | 5,885     | 5,294            |
| Molasses . . . . .              | 69,999    | 14 00          | 979,986   | 475,563          |
| Malt . . . . .                  | 167,478   | 85             | 142,356   | 106,505          |
| Nails . . . . .                 | 59,102    | 4 50           | 265,959   | 219,897          |
| Oil . . . . .                   | 41,146    | 33 00          | 1,357,818 | 1,486,900        |
| Oats . . . . .                  | 27,415    | 60             | 16,449    | 4,680            |
| Oil cake . . . . .              | 399       | 25 00          | 9,975     | 64,792           |
| Onions . . . . .                | 1,652     | 2 00           | 3,304     | 1,658            |
| Pork and bacon . . . . .        | 42,142    | 80 00          | 3,371,360 | 3,243,525        |

| Articles.  | Quantity. | Average price. | Value.             | Value last year.  |
|--|-----------|----------------|--------------------|-------------------|
| Pork and bacon..... tierces  | 32,573    | 25 00          | 814,325            | 831,552           |
| Pork and bacon..... bbls.  | 112,160   | 17 00          | 1,906,720          | 1,703,910         |
| Pork and bacon..... boxes  | 8,208     | 32 00          | 262,656            | 682,176           |
| Pork and bacon, in bulk..... lbs.  | 546,400   | 7½             | 40,980             | 40,192            |
| Potatoes..... bbls.  | 44,997    | 2 50           | 112,493            | 125,821           |
| Rye..... bush.   | 30,127    | 80             | 24,101             | 15,712            |
| Rope, twine, &c..... packages  | 20,307    | 6 25           | 126,918            | 80,012            |
| Sugar..... hhds.   | 34,078    | 77 00          | 2,624,006          | 2,341,360         |
| Seed, flax..... bbls.  | 890       | 4 50           | 4,005              | 7,086             |
| Seed, grass and clover.....  | 9,724     | 18 00          | 175,032            | 149,800           |
| Soap..... boxes  | 62,790    | 4 00           | 251,160            | 206,832           |
| Salt..... bbls.  | 49,958    | 2 00           | 99,916             | 88,582            |
| Salt..... sacks  | 19,208    | 1 20           | 23,050             | 32,286            |
| Starch..... boxes  | 39,257    | 3 00           | 117,771            | 83,130            |
| Sheep..... head  | 5,025     | 2 00           | 10,050             | 7,635             |
| Stearine..... bbls.  | 1,506     | 25 00          | 37,650             | 39,800            |
| Sundry merchandise.... packages  | 1,547,905 | 8 25           | 12,770,216         | 10,364,925        |
| Sundry merchandise..... tons   | 11,691    | 630 00         | 7,365,330          | 4,280,900         |
| Sundry liquors..... bbls.  | 27,846    | 35 00          | 974,610            | 1,148,240         |
| Sundry manufactures.... packages   | 27,230    | 4 00           | 108,920            | 454,660           |
| Spices..... boxes  | 4,670     | 2 00           | 9,340              | 9,288             |
| Tobacco..... hhds.   | 4,493     | 105 00         | 471,765            | 481,740           |
| Tobacco..... bbls. & bales   | 5,598     | 10 50          | 58,779             | 59,429            |
| Tobacco..... boxes & kegs  | 45,030    | 22 00          | 990,660            | 710,138           |
| Tallow..... bbls.  | 577       | 27 00          | 15,579             | 57,600            |
| Vinegar..... bbls.   | 10,264    | 4 00           | 41,056             | 46,264            |
| Wines..... baskets & boxes   | 14,305    | 9 00           | 128,745            | 73,206            |
| Wheat..... bush.   | 609,848   | 1 20           | 731,818            | 505,328           |
| Wool..... sacks & bales  | 9,169     | 24 00          | 220,056            | 110,064           |
| Whisky..... bbls.  | 305,888   | 11 47½         | 3,510,064          | 2,749,316         |
| White-lead..... kegs   | 69,096    | 2 25           | 155,466            | 136,309           |
| Castings..... pieces   | 73,522    | 4 50           | 330,849            | 198,776           |
| Castings..... tons   | 4,272     | 80 00          | 341,760            | 223,780           |
| Various articles of merchandise and manufactures not specified above, estimated value..... |           |                | 41,000,000         | 39,000,000        |
| <b>Total.....</b>  |           |                | <b>107,007,707</b> | <b>91,906,506</b> |

EXPORTS OF TEA FROM CHINA TO THE UNITED STATES.

EXPORTS FROM ALL PORTS IN CHINA TO UNITED STATES, YEAR ENDING JUNE 30.

|                             | 1859.             | 1858.             | 1857.             |
|-----------------------------|-------------------|-------------------|-------------------|
| Young hyson..... lbs.       | 11,713,388        | 11,384,842        | 11,552,184        |
| Hyson.....                  | 834,133           | 821,776           | 1,238,379         |
| Hyson skin.....             | 310,954           | 475,827           | 330,091           |
| Twankay.....                | 1,476,205         | 1,163,145         | 1,114,450         |
| Gunpowder.....              | 2,666,808         | 2,264,094         | 1,622,244         |
| Imperial.....               | 2,004,580         | 1,892,902         | 1,529,873         |
| <b>Total green.....</b>     | <b>19,006,068</b> | <b>18,002,586</b> | <b>17,386,721</b> |
| Congou and Souchong.....    | 3,131,031         | 2,635,369         | 1,869,616         |
| Powchong.....               | 267,500           | 35,362            | 94,400            |
| Pekoe and Oolong Pekoe..... | 514,890           | 529,980           | 29,600            |
| Ankoi.....                  | 1,134,511         | 8,531,971         | 5,919,959         |
| Oolong and Ningyong.....    | 7,152,174         |                   |                   |
| <b>Total black.....</b>     | <b>12,200,079</b> | <b>11,732,682</b> | <b>7,913,575</b>  |

Export from Foochow unspecified. AUGUSTINE HEARD & Co.'s circular, Foochow, July 16, reports the exports from there to United States, 1858-9, at 6,701,735 pounds against 6,259,438 in 1857-8.

## COMMERCE OF MOBILE.

STATEMENT OF THE VALUE OF FOREIGN EXPORTS FROM THE PORT OF MOBILE FOR THE YEAR 1858, AND FOR THE FIRST SIX MONTHS OF 1859.

|   |             |              |
|---|-------------|--------------|
| 1858—First quarter...In American vessels..... | \$6,692,719 |              |
| “ ..In foreign vessels.....                   | 2,953,975   | \$9,646,694  |
| Second quarter...In American vessels.....     | 5,942,665   |              |
| “ ..In foreign vessels.....                   | 1,317,800   | 7,260,465    |
| Third quarter ...In American vessels.....     | 2,026,398   |              |
| “ ..In foreign vessels.....                   | 90,515      | 2,116,913    |
| Fourth quarter...In American vessels.....     | 8,943,218   |              |
| “ ..In foreign vessels.....                   | 586,446     | 9,529,664    |
| Total, 1858.....                              |             | \$28,553,736 |
| Total, 1857.....                              |             | 21,832,493   |
| 1859—First quarter...In American vessels..... | \$6,681,291 |              |
| “ ..In foreign vessels.....                   | 4,833,381   | 11,519,672   |
| Second quarter...In American vessels.....     | 4,474,340   |              |
| “ ..In foreign vessels.....                   | 1,293,091   | 5,767,431    |
| Total.....                                    |             | \$17,287,103 |

STATEMENT OF THE VALUE OF IMPORTS AND DUTIES AT MOBILE FOR THE YEAR 1858, AND FOR THE FIRST AND SECOND QUARTERS OF 1859.

|                      | Dutiable. | Free.     | Total.    | Duties.     |
|----------------------|-----------|-----------|-----------|-------------|
| First quarter .....  | \$109,065 | \$178,747 | \$287,812 | \$24,176 40 |
| Second quarter ..... | 66,555    | 41,630    | 108,185   | 15,843 89   |
| Third quarter .....  | 2,583     | .....     | 2,583     | 408 20      |
| Fourth quarter.....  | 129,562   | 106,484   | 236,046   | 27,347 08   |
| Total, 1858.....     | \$307,765 | \$326,861 | \$634,626 | \$67,775 57 |
| Total, 1857.....     | .....     | .....     | 563,917   | 94,135 86   |
| First quarter .....  | \$181,666 | \$130,567 | \$312,233 | \$41,445 45 |
| Second quarter ..... | 214,485   | 22,392    | 236,877   | 50,885 17   |
| Total, 1859.....     | \$396,151 | \$152,959 | \$549,110 | \$92,330 62 |

EXPORTS OF COTTON FROM THE PORT OF MOBILE TO FOREIGN PORTS, WITH THE WEIGHT AND VALUE ATTACHED, FOR THE YEAR ENDING AUGUST 31, 1859.

|                                       | Bales.  | Pounds.     | Value.          |
|---------------------------------------|---------|-------------|-----------------|
| Great Britain, in American vessels... | 240,148 | 126,445,278 | \$14,319,706 87 |
| “ ..in British vessels.....           | 111,236 | 58,308,572  | 6,635,744 23    |
| Total to Great Britain.....           | 351,384 | 184,753,850 | \$20,955,451 10 |
| France ..                             | 105,770 | 55,843,385  | 6,388,556 85    |
| Spain.....                            | 7,800   | 3,925,849   | 495,690 02      |
| Holland .....                         | 1,802   | 946,424     | 110,787 92      |
| Belgium.....                          | 6,904   | 3,569,308   | 410,497 87      |
| Bremen.....                           | 6,772   | 3,487,926   | 394,707 93      |
| Russia.....                           | 18,141  | 9,387,294   | 1,165,376 36    |
| Sweden.....                           | 4,668   | 2,422,270   | 284,546 80      |
| Sardinia.....                         | 250     | 127,336     | 13,995 35       |
| Austria.....                          | 8,584   | 4,438,508   | 522,443 21      |
| Hamburg.....                          | 2,860   | 1,464,646   | 168,763 85      |
| Total.....                            | 514,935 | 270,366,816 | \$30,910,817 26 |

NAVIGATION OF THE HANSE TOWNS.

The following is a comparative table of ships and tonnage cleared for the transatlantic trade from Hamburg and Bremen in 1858 :—

| Countries.                            | Hamburg. |        | Bremen. |         |        |        |
|---------------------------------------|----------|--------|---------|---------|--------|--------|
|                                       | Ships.   | Last.  | Ships.  | Last.   | Ships. | Last.  |
| Australia.....                        | 20       | 4,672  | 6       | 1,997   | 5      | 1,591  |
| Sandwich Islands.....                 | 1        | 246    | 5       | 827     | 5      | 827    |
| China.....                            | 10       | 1,791  | 4       | 1,257   | ..     | ....   |
| Philippines.....                      | 2        | 508    | 1       | 599     | ..     | ....   |
| Dutch East Indies.....                | 2        | 345    | 2       | 800     | 1      | 416    |
| Singapore.....                        | 2        | 265    | ..      | ....    | ..     | ....   |
| British East Indies.....              | 1        | 288    | 11      | 4,002   | 1      | 425    |
| Africa, east coast.....               | 3        | 486    | ..      | ....    | ..     | ....   |
| Cape of Good Hope.....                | 12       | 3,319  | ..      | ....    | ..     | ....   |
| Cape de Verd Island.....              | ..       | ....   | 1       | 60      | 1      | ....   |
| Canary Islands.....                   | 1        | 52     | 2       | 158     | 2      | 158    |
| Africa, west coast.....               | 10       | 1,352  | 2       | 198     | 2      | 198    |
| California.....                       | 8        | 1,996  | ..      | ....    | ..     | ....   |
| America, west coast.....              | 37       | 6,788  | 7       | 1,589   | 4      | 830    |
| Argentine and Uruguay.....            | 43       | 4,978  | 7       | 951     | 2      | 263    |
| Brazil.....                           | 103      | 13,083 | 26      | 3,963   | 6      | 784    |
| Venezuela.....                        | 28       | 3,225  | 7       | 904     | 7      | 904    |
| New Granada.....                      | 2        | 196    | 10      | 1,092   | 6      | 613    |
| St. Thomas and Porto Rico.....        | 31       | 3,756  | 23      | 4,299   | 14     | 1,753  |
| Hayti.....                            | 12       | 1,150  | 4       | 426     | 4      | 426    |
| Cuba.....                             | 22       | 3,669  | 49      | 8,864   | 39     | 6,723  |
| Jamaica.....                          | ..       | ....   | 3       | 668     | 1      | 123    |
| Mexico, west coast.....               | 14       | 1,606  | ..      | ....    | ..     | ....   |
| Central America.....                  | ..       | ....   | 2       | 320     | 2      | 320    |
| U. States, other than California..... | 53       | 26,990 | 170     | 88,626  | 138    | 74,526 |
| British North America.....            | 23       | 3,586  | 1       | 170     | 1      | 170    |
| Total.....                            | 440      | 84,200 | 354     | 123,044 | 243    | 90,428 |

IMPORTS AND EXPORTS OF THE UNITED KINGDOM FOR FIVE YEARS.

IMPORTS.

|            | Merchandise. | Bullion.     | Total imports. |
|------------|--------------|--------------|----------------|
| 1854.....  | £152,389,053 | £26,545,000  | £178,934,053   |
| 1855.....  | 143,542,850  | 23,891,000   | 167,433,850    |
| 1856.....  | 172,544,154  | 26,907,000   | 199,451,154    |
| 1857.....  | 187,844,441  | 27,000,000   | 214,844,441    |
| 1858.....  | 163,795,803  | 29,493,100   | 193,288,903    |
| Total..... | £310,116,301 | £133,836,100 | £943,952,401   |

EXPORTS.

|           | British merchandise. | Foreign and colonial merchandise. | Bullion.    | Total exports. |
|-----------|----------------------|-----------------------------------|-------------|----------------|
| 1854..... | £97,184,726          | £18,648,978                       | £22,586,568 | £138,422,272   |
| 1855..... | 95,688,085           | 21,012,956                        | 18,828,178  | 135,529,219    |
| 1856..... | 115,826,948          | 23,393,405                        | 24,851,797  | 164,072,150    |
| 1857..... | 122,066,107          | 24,108,194                        | 33,566,968  | 179,741,269    |
| 1858..... | 116,641,331          | 25,197,100                        | 19,628,876  | 161,467,307    |

|                                       |              |              |              |              |
|---------------------------------------|--------------|--------------|--------------|--------------|
| Total.....                            | £547,407,197 | £102,350,633 | £119,462,387 | £779,230,223 |
| Total imports for the five years..... |              |              |              | £943,952,403 |
| Total exports for the five years..... |              |              |              | 779,230,223  |

Trade balance against Great Britain..... £164,822,280

The British official returns give some interesting facts in relation to the effects of the panic of 1857 upon the course of trade for the past two years. The aggregate figures are as follows, distinguishing official from real value:—

|            | Imports.     |              | Exports.     |             |
|------------|--------------|--------------|--------------|-------------|
|            | Official.    | Actual.      | Official.    | Actual.     |
| 1854 ..... | £124,338,478 | £152,359,053 | £214,071,848 | £97,184,726 |
| 1855 ..... | 117,402,366  | 143,542,850  | 226,920,262  | 95,688,085  |
| 1856 ..... | 131,937,763  | 172,544,154  | 258,505,653  | 115,823,948 |
| 1857 ..... | 136,215,849  | 187,844,441  | 255,396,713  | 122,026,107 |
| 1858 ..... | 138,159,144  | 163,795,803  | 271,654,822  | 116,608,911 |

These official values represent a uniform rate, and indicate, therefore, more an aggregate fluctuation in quantity than in value, while the "declared" is the actual or invoice value. The figures together show the change in prices. Thus in 1855, the official value or quantity exported rose £12,900,000 or 6 per cent, while the actual value fell off £1,500,000 or 1½ per cent. In the year 1857, the quantity, as expressed in the official value, declined £3,000,000, while the value rose £6,200,000, showing a considerable rise in prices. The maximum trade of that year was in the third quarter, when it declined under the influence of the panic; and for the year 1858, the quantity exported had risen £16,000,000, while the value had declined £5,500,000, which would indicate a decline of 10 per cent in the prices of the goods exported by Great Britain. The column of imports show a similar result. In each of the years, 1855, 1856, and 1857, there was a rise in the official quantities imported, accompanied by a rise in prices. In 1856, the official value or quantity increased 13 per cent, and the value 20 per cent. In 1857, the quantity increased £4,300,000, or 3½ per cent, and the value 9 per cent. The effect of the panic was, in 1858, to reduce the value imported by the large sum of £24,000,000, or 13 per cent, while the quantity was actually greater. This larger quantity of most articles of import was actually consumed in face of the panic, which affected only "price," thus showing that, while the material interests of England were as flourishing as ever, her people quite as able to consume as many goods as usual, the panic was purely financial, affecting only the supply of money and means among the larger operators in commodities.

#### GRAIN TRADE OF FRANCE.

An official report gives the import and export of grain in France for the year ending August 1, 1859, as follows:—

|                     | Hectolitres. | Bushels.   |
|---------------------|--------------|------------|
| Import.....         | 3,055,396    | 8,394,006  |
| Export.....         | 10,050,783   | 27,639,649 |
| Excess exports..... | 6,995,387    | 19,245,643 |

The business for the three previous years, ending December 31, 1858, was as follows:—

| Years.               | Import.   |         | Export.   |         |
|----------------------|-----------|---------|-----------|---------|
|                      | Grain.    | Flour.  | Grain.    | Flour.  |
| 1856.....hectolitres | 8,364,017 | 851,647 | 196,863   | 88,768  |
| 1857.....            | 5,437,017 | 113,101 | 249,357   | 148,032 |
| 1858.....            | 3,276,755 | 49,906  | 5,900,815 | 339,714 |

These figures show the immense change which good harvests have made in the course of trade. Unfortunately, the sliding scale now goes again into operation.

NAVIGATION OF CINCINNATI.

STATEMENT OF STEAMBOAT ARRIVALS AND DEPARTURES AT CINCINNATI FOR TWO YEARS, ENDING AUGUST 31ST EACH YEAR.

| Months.        | ARRIVALS.    |        |            |        |            |        |              |        |        |        |
|----------------|--------------|--------|------------|--------|------------|--------|--------------|--------|--------|--------|
|                | New Orleans. |        | Pittsburg. |        | St. Louis. |        | Other ports. |        | Total. |        |
|                | '57-8.       | '58-9. | '57-8.     | '58-9. | '57-8.     | '58-9. | '57-8.       | '58-9. | '57-8. | '58-9. |
| September..... | 2            | 1      | 28         | ..     | 22         | 12     | 201          | 183    | 253    | 195    |
| October.....   | 1            | ..     | 16         | 3      | 28         | 10     | 180          | 193    | 225    | 206    |
| November.....  | 6            | 1      | 29         | 39     | 26         | 22     | 198          | 229    | 259    | 291    |
| December.....  | 15           | 30     | 31         | 42     | 11         | 36     | 197          | 214    | 254    | 322    |
| January.....   | 21           | 31     | 27         | 32     | 11         | 13     | 192          | 210    | 251    | 286    |
| February.....  | 22           | 25     | 17         | 35     | 6          | 15     | 173          | 180    | 218    | 255    |
| March.....     | 30           | 34     | 51         | 45     | 18         | 29     | 200          | 208    | 299    | 316    |
| April.....     | 26           | 15     | 70         | 44     | 37         | 35     | 194          | 185    | 327    | 279    |
| May.....       | 16           | 18     | 51         | 40     | 38         | 32     | 214          | 176    | 319    | 266    |
| June.....      | 10           | 9      | 35         | 27     | 21         | 21     | 202          | 158    | 268    | 215    |
| July.....      | 7            | 7      | 35         | 21     | 27         | 21     | 195          | 153    | 264    | 202    |
| August.....    | 2            | 1      | 24         | 12     | 17         | 17     | 188          | 142    | 231    | 172    |
| Total.....     | 158          | 172    | 414        | 340    | 262        | 263    | 2,334        | 2,231  | 3,168  | 3,106  |

  

| Months.        | DEPARTURES.  |        |            |        |            |        |              |        |        |        |
|----------------|--------------|--------|------------|--------|------------|--------|--------------|--------|--------|--------|
|                | New Orleans. |        | Pittsburg. |        | St. Louis. |        | Other ports. |        | Total. |        |
|                | '57-8.       | '58-9. | '57-8.     | '58-9. | '57-8.     | '58-9. | '57-8.       | '58-9. | '57-8. | '58-9. |
| September..... | 3            | ..     | 16         | ..     | 28         | 10     | 200          | 183    | 247    | 193    |
| October.....   | 11           | 4      | 36         | 7      | 17         | 11     | 164          | 169    | 228    | 191    |
| November.....  | 16           | 23     | 35         | 34     | 18         | 26     | 199          | 202    | 268    | 285    |
| December.....  | 20           | 31     | 36         | 47     | 12         | 21     | 189          | 212    | 257    | 311    |
| January.....   | 22           | 28     | 26         | 35     | 8          | 14     | 203          | 202    | 259    | 279    |
| February.....  | 21           | 27     | 19         | 34     | 7          | 15     | 165          | 179    | 212    | 255    |
| March.....     | 21           | 21     | 35         | 34     | 28         | 37     | 246          | 199    | 330    | 291    |
| April.....     | 15           | 15     | 62         | 38     | 39         | 37     | 196          | 190    | 312    | 280    |
| May.....       | 10           | 12     | 52         | 45     | 25         | 25     | 263          | 149    | 350    | 231    |
| June.....      | ..           | 9      | 38         | 32     | 25         | 19     | 196          | 151    | 266    | 211    |
| July.....      | 4            | 6      | 31         | 18     | 19         | 17     | 201          | 144    | 254    | 185    |
| August.....    | ..           | 6      | 6          | 6      | 11         | 12     | 186          | 136    | 207    | 160    |
| Total.....     | 153          | 182    | 392        | 330    | 237        | 244    | 2,408        | 2,116  | 3,190  | 2,872  |

TONNAGE OF CINCINNATI.

| Years.       | Steamers and barges. |          |        |          |
|--------------|----------------------|----------|--------|----------|
|              | Running.             |          | Built. |          |
|              | No.                  | Tonnage. | No.    | Tonnage. |
| 1850-51..... | 233                  | 49,274   | 31     | 8,206    |
| 1851-52..... | 203                  | 60,542   | 33     | 8,896    |
| 1852-53..... | 298                  | 76,647   | 29     | 10,252   |
| 1853-54..... | 314                  | 80,266   | 31     | 9,358    |
| 1854-55..... | 318                  | 80,874   | 27     | 8,698    |
| 1855-56..... | 365                  | 92,401   | 33     | 11,526   |
| 1856-57..... | 357                  | 87,453   | 34     | 10,600   |
| 1857-58..... | 319                  | 74,483   | 14     | 5,334    |
| 1858-59..... | 327                  | 73,222   | 11     | 3,735    |

NEW STEAMERS BUILT SINCE SEPTEMBER 1st, 1858.

|                      |     |                            |       |
|----------------------|-----|----------------------------|-------|
| Tiger.....           | 352 | Kate May.....              | 214   |
| Telegram.....        | 221 | Clipper.....               | 246   |
| Eleanor.....         | 221 | Ellen Gray.....            | 111   |
| Dew Drop, No. 2..... | 174 |                            |       |
| John Walsh.....      | 812 | Total tonnage.....         | 3,735 |
| Tigress.....         | 328 | Total tonnage last year... | 5,334 |
| Charmer.....         | 866 |                            |       |
| Hope.....            | 190 | Decrease.....              | 1,599 |

## INSPECTIONS OF TOBACCO IN VIRGINIA.

The following are the inspections of tobacco in Virginia from October 1st, 1857, to September 1st, 1858, and from October 1st, 1858, to September 1st, 1859 :—

|                    | 1858.  | 1859.  |
|--------------------|--------|--------|
| Richmond.....hhds. | 41,369 | 39,099 |
| Farmville.....     | 2,264  | 1,128  |
| Petersburg.....    | 13,880 | 15,022 |
| Clarksville.....   | 1,475  | 2,095  |
| Lynchburg.....     | 8,044  | 7,309  |
| Total.....         | 67,932 | 64,651 |

Showing a decrease of 2,378 hogsheads.

The following is a comparative statement of the inspections of tobacco in the different warehouses of Richmond, Virginia, from 1st October, 1857, to 1st October, 1858, and from 1st October, 1858, to 1st October, 1859 :—

|                   | 1858.  | 1859.  |
|-------------------|--------|--------|
| Shockoe.....hhds. | 18,751 | 14,070 |
| Public.....       | 11,665 | 12,208 |
| Seabrook's.....   | 10,195 | 9,315  |
| Dibrell's.....    | 4,015  | 6,204  |
| Total.....        | 44,626 | 41,797 |

Decrease, as compared with last year, 2,829 hogsheads.

## EXPORTS OF PORTO RICO.

The *Boletin* of Porto Rico furnishes the following summary of the exports from that island during the first six months of the present year, with the estimated value of the same :—

|                    | Quantity.  | Value.      |                  | Quantity. | Value.      |
|--------------------|------------|-------------|------------------|-----------|-------------|
| Sugar.....lbs.     | 56,118,200 | \$2,521,319 | Cotton.....lbs.  | 4,400     | \$572       |
| Coffee.....lbs.    | 12,018,883 | 1,322,077   | Tobacco.....     | 767,791   | 122,846     |
| Molasses.....gals. | 2,124,943  | 276,242     |                  |           |             |
| Hides.....lbs      | 187,316    | 26,223      | Total value..... |           | \$4,269,798 |

As compared with the exports of last year, there is a very large falling off in the article of sugar ; while, on the contrary, the tables show a considerable increase in coffee, tobacco, and molasses. In the article of sugar, the exports to the United States have been largest ; in that of coffee, they have been largest to Great Britain.

## NEW ORLEANS EXPORTS.

The following very interesting particulars of the export trade of New Orleans for the last fiscal year, we copy from the *New Orleans Crescent* :—

COMPARATIVE VALUE OF THE EXPORTS OF DOMESTIC PRODUCE FOR FOREIGN COUNTRIES FROM THE PORT AND DISTRICT OF NEW ORLEANS FOR THE LAST SEVEN YEARS, YEAR ENDING JUNE 30.

|           |              |           |             |
|-----------|--------------|-----------|-------------|
| 1853..... | \$67,768,784 | 1857..... | 91,514,286  |
| 1854..... | 60,176,683   | 1858..... | 88,382,435  |
| 1855..... | 55,688,552   | 1859..... | 100,350,658 |
| 1856..... | 80,547,963   |           |             |

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**JOURNAL OF INSURANCE.**


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**NEW YORK CITY INSURANCE DIVIDENDS.**

Forty-five companies (out of fifty) have declared their July dividends, amounting to \$679,950 on a capital of \$8,712,000, or nearly eight per cent for the six months. The following is a summary of the capital, rate of January dividend and July dividend:—

| Companies.                    | Capital.    | ---Dividends--- |      | Amount,<br>July, 1859. |
|-------------------------------|-------------|-----------------|------|------------------------|
|                               |             | January.        | July |                        |
| Aetna .....                   | \$200,000   | 6               | 6    | \$12,000               |
| American .....                | 200,000     | 6               | 7    | 14,000                 |
| Arctic .....                  | 250,000     | 8               | 8    | 20,000                 |
| Brevoort .....                | 150,000     | 6               | 5    | 7,500                  |
| Brooklyn .....                | 102,000     | 10              | 10   | 10,000                 |
| Citizens' .....               | 150,000     | 12½             | 15   | 22,500                 |
| Clinton .....                 | 250,000     | 7               | 7    | 17,500                 |
| Columbia .....                | 200,000     | 6               | 6    | 12,000                 |
| Commercial .....              | 200,000     | 10              | 8    | 16,000                 |
| Continental .....             | 500,000     | 6               | 7    | 35,000                 |
| East River .....              | 150,000     | 6               | 7    | 10,500                 |
| Empire City .....             | 200,000     | 7               | 7    | 14,000                 |
| Excelsior .....               | 200,000     | 6               | 7    | 14,000                 |
| Gebhard .....                 | 200,000     | 5               | 5    | 10,000                 |
| Goodhue .....                 | 200,000     | 6               | 6    | 12,000                 |
| Hamilton .....                | 150,000     | ..              | 4    | 6,000                  |
| Hanover .....                 | 200,000     | 6               | 6    | 12,000                 |
| Harmony .....                 | 150,000     | 5               | 5    | 7,500                  |
| Hope .....                    | 150,000     | 5               | 5    | 7,500                  |
| Humboldt .....                | 200,000     | 5               | 6    | 12,000                 |
| Jersey City .....             | 150,000     | 5               | 5    | 7,500                  |
| Lafayette .....               | 150,000     | 7               | 7    | 10,500                 |
| Lamar .....                   | 300,000     | 10              | 8    | 24,000                 |
| Long Island .....             | 200,000     | 10              | 10   | 20,000                 |
| Market .....                  | 200,000     | 10              | 7    | 14,000                 |
| Mechanics' and Traders' ..... | 200,000     | 10              | 10   | 20,000                 |
| Mechanics' .....              | 150,000     | 7               | 10   | 15,000                 |
| Mercantile .....              | 200,000     | 8               | 6    | 12,000                 |
| Merchants' .....              | 200,000     | 15              | 15   | 30,000                 |
| Montauk .....                 | 150,000     | 7               | 7    | 10,500                 |
| Nassau .....                  | 150,000     | 10              | 10   | 15,000                 |
| National .....                | 200,000     | 12              | 12   | 24,000                 |
| New Amsterdam .....           | 200,000     | 8               | 8    | 16,000                 |
| New York Equitable .....      | 210,000     | 15              | 15   | 31,500                 |
| Pacific .....                 | 200,000     | 9               | 9    | 18,000                 |
| Park .....                    | 200,000     | 10              | 10   | 20,000                 |
| Peoples' .....                | 150,000     | 6               | 6    | 9,000                  |
| Relief .....                  | 200,000     | 8               | 8    | 16,000                 |
| Republic .....                | 150,000     | 6½              | 3½   | 4,250                  |
| Resolute .....                | 200,000     | 6               | 10   | 20,000                 |
| United States .....           | 250,000     | 7               | 7    | 17,500                 |
| Washington .....              | 200,000     | 10              | 10   | 20,000                 |
| Williamsburg City .....       | 150,000     | 10              | 10   | 15,000                 |
| Adriatic .....                | 150,000     | ..              | ..   | .....                  |
| Commerce .....                | 200,000     | ..              | ..   | .....                  |
| Tradesmen's .....             | 150,000     | ..              | ..   | .....                  |
| Importers' and Traders' ..... | 200,000     | ..              | ..   | .....                  |
| Kings County .....            | 150,000     | ..              | 5    | 7,500                  |
| Standard .....                | 200,000     | ..              | ..   | .....                  |
| Commonwealth .....            | 250,000     | 6               | 5    | 12,500                 |
| Total .....                   | \$9,612,000 | ..              | ..   | \$679,950              |

The five companies that have not declared dividends have not been in operation twelve months, or long enough to make their profits known. In addition to these dividends the Fulton Company has declared an extra dividend of ten per cent, and the Metropolitan an extra of three per cent.

PHILADELPHIA FIRE AND MARINE INSURANCE COMPANIES, 1859.

| Organ-<br>ized. | Name of Company.                       | Authorized<br>capital. | Par<br>value. | Subscribed<br>capital. | Assets,<br>Jan. 1, 1859. | Receipts.    | Ex-<br>penditures. |
|-----------------|--|------------------------|---------------|------------------------|--------------------------|--------------|--------------------|
| 17...           | Philadelphia Contributionship ..       | .....                  | .....         | .....                  | \$789,960 03             | .....        | .....              |
| 1794            | Insurance Co. of North America.        | \$500,000              | \$10          | \$500,000              | 1,159,924 87             | .....        | .....              |
| 1794            | Insurance Co. of State of Penn.        | 200,000                | 200           | 200,000                | 847,446 50               | .....        | .....              |
| 1804            | Union Mutual Insurance Co. ....        | 300,000                | ...           | 225,000                | 253,486 00               | \$249,492 08 | \$194,020 81       |
| 1804            | Phenix Mutual Insurance Co. ....       | 120,000                | 20            | .....                  | 225,000 00               | .....        | .....              |
| 1810            | American Fire Insurance Co. ....       | 277,500                | 75            | 277,500                | 584,956 70               | .....        | .....              |
| 1812            | Pa. Life Insurance & Trust Co. ....    | 500,000                | 100           | 500,000                | 2,262,027 02             | .....        | .....              |
| 1825            | Pa. Fire Insurance Co. ....            | 200,000                | 100           | 200,000                | 783,941 15               | .....        | .....              |
| 1825            | American Mutual Insurance Co. ....     | 250,000                | 12            | 125,000                | .....                    | .....        | .....              |
| 1833            | County Fire Insurance Co. ....         | 400,000                | 100           | 200,000                | .....                    | .....        | .....              |
| 1835            | Del. Mutual Safety Insurance Co. ....  | .....                  | 5             | .....                  | 698,804 70               | .....        | .....              |
| 1835            | Franklin Insurance Co. ....            | 400,000                | 100           | 400,000                | 2,016,328 62             | .....        | .....              |
| 1835            | Spring Garden Insurance Co. ....       | 200,000                | 50            | 120,000                | 184,979 93               | 53,895 93    | 16,419 45          |
| 1836            | Girard Life Ins. and Trust Co. ....    | 300,000                | 25            | 300,000                | 1,324,363 09             | .....        | .....              |
| 1836            | Columbia Mutual Insurance Co. ....     | 500,000                | 100           | .....                  | .....                    | .....        | .....              |
| 1844            | Reliance Mutual Insurance Co. ....     | 300,000                | 50            | 177,000                | 276,478 43               | 54,739 76    | 26,378 65          |
| 1847            | Penn Mutual Life Insurance Co. ....    | .....                  | none.         | .....                  | 912,168 05               | 207,514 25   | 81,621 14          |
| 1848            | Phila. Fire & Life Insurance Co. ....  | 300,000                | 25            | 210,100                | 287,207 87               | .....        | .....              |
| 1848            | Globe Life Insurance & Trust Co. ....  | .....                  | .....         | .....                  | .....                    | .....        | .....              |
| 1850            | American Life Ins. & Trust Co. ....    | 500,000                | 50            | 100,000                | .....                    | .....        | .....              |
| 1850            | National Safety Ins. & Trust Co. ....  | 250,000                | 50            | 250,000                | .....                    | .....        | .....              |
| 1851            | Fire Association .....                 | none.                  | .....         | none.                  | 598,066 98               | .....        | .....              |
| 1853            | Equitable Mutual Insurance Co. ....    | 250,000                | 25            | 101,550                | 171,502 30               | 23,291 20    | 9,974 16           |
| 1853            | Girard Fire and Marine Ins. Co. ....   | 300,000                | 100           | 200,000                | 284,789 73               | 56,729 83    | 48,880 90          |
| 1854            | Commonwealth Insurance Co. ....        | 500,000                | 50            | 500,000                | 207,169 32               | 43,380 72    | 25,013 18          |
| 1854            | Anthracite Insurance Co. ....          | 400,000                | 50            | 100,000                | .....                    | .....        | .....              |
| 1854            | Hope Mutual Insurance Co. ....         | 500,000                | 10            | 75,000                 | .....                    | .....        | .....              |
| 1854            | Phila. Fire & Live Stock Ins. Co. .... | 300,000                | .....         | .....                  | .....                    | .....        | .....              |
| 1854            | Merchants' Insurance Co. ....          | 400,000                | 25            | 150,000                | .....                    | .....        | .....              |
| 1854            | Mechanics' Insurance Co. ....          | 100,000                | 100           | 100,000                | .....                    | .....        | .....              |
| 1855            | Manufacturers' Insurance Co. ....      | 500,000                | 50            | .....                  | .....                    | .....        | .....              |
| 1855            | Exchange Mutual Insurance Co. ....     | 300,000                | 50            | 150,350                | 182,070 97               | .....        | .....              |
| 1856            | Consolidated Insurance Co. ....        | 300,000                | 50            | 100,000                | 245,000 00               | 36,628 25    | 30,183 66          |
| 1856            | Fame Mutual Insurance Co. ....         | 100,000                | 50            | 100,000                | 61,655 81                | 14,550 07    | 11,940 25          |
| 1856            | Jefferson Insurance Co. ....           | 500,000                | 50            | 100,000                | 138,488 64               | 18,817 29    | 8,319 88           |
| 1856            | Great Western Ins. & Trust Co. ....    | 500,000                | 50            | 222,300                | 276,253 03               | 99,890 94    | 70,383 00          |
| 1856            | Howard Insurance Co. ....              | 500,000                | 100           | .....                  | 299,314 57               | .....        | .....              |
| 1856            | Quaker City Insurance Co. ....         | 500,000                | 100           | 200,000                | 324,351 42               | 268,427 09   | 216,755 54         |
| 1857            | Neptune Insurance Co. ....             | 500,000                | 100           | 100,000                | 127,181 22               | 56,557 25    | 58,399 81          |
| 1857            | Kensington Insurance Co. ....          | 300,000                | 20            | 10,000                 | .....                    | .....        | 58,399 81          |
| 1857            | Corn Exchange Insurance Co. ....       | 500,000                | 50            | 140,000                | 365,148 35               | .....        | .....              |
| 1858            | Safeguard Insurance Co. ....           | 500,000                | 50            | 446,950                | 249,457 07               | 87,397 33    | 84,217 94          |
| 1858            | Eastern Insurance Co. ....             | 500,000                | 100           | 50,000                 | 50,624 06                | .....        | .....              |
| 1858            | City Insurance Co. ....                | 200,000                | .....         | .....                  | .....                    | .....        | .....              |
| 1858            | Central Insurance Co. ....             | .....                  | .....         | .....                  | .....                    | .....        | .....              |
| 1859            | Enterprise Insurance Co. ....          | .....                  | .....         | 200,000                | 100,000 00               | .....        | .....              |
| 1859            | Washington Fire & Mar. Ins. Co. ....   | .....                  | .....         | .....                  | .....                    | .....        | .....              |

INSURANCE EXPENSES.

PER CENTAGE OF EXPENSES ON CASH RECEIPTS FOR PREMIUMS IN 1858, OF THE SEVERAL FOREIGN FIRE INSURANCE COMPANIES RETURNED TO THE CONTROLLER OF THE STATE OF NEW YORK.

Our June issue, says the *Insurance Monitor*, contained a table showing the average loss of foreign fire insurance companies on their New York business for 1858, to be 55 per cent. We then *estimated* the average expenses of the New York business at 12 per cent, which, it will now be seen, was too low, as the average aggregate of expenses is 27 per cent. We then predicted a reduction this fall of 20 per cent on the New York rates of last winter, which would leave these companies without the power to do a paying business in this State. That reduction, to the amount of 30 per cent, is now established. It is evident that the New York business of 1859 must prove unremunerative to foreign companies:—

| Names of Companies.                 | CONNECTICUT COMPANIES. |                                  |           | P'r cent of exp'n-<br>ses for 1858<br>on premi-<br>ums re-<br>ceived. |
|-------------------------------------|------------------------|----------------------------------|-----------|---|
|                                     | Assets.                | Premium<br>receipts for<br>1858. | Expenses. |   |
| Ætna Insurance Company, Hartford... | \$1,867,920            | \$1,566,864                      | \$325,053 | 20  |
| Charter Oak, Hartford .....         | 341,556                | 143,909                          | 32,703    | 22  |
| Connecticut, Hartford .....         | 233,074                | 74,685                           | 13,165    | 17  |
| Citizens', Hartford .....           | 308,231                | 142,212                          | 37,566    | 26  |
| Hartford, Hartford .....            | 801,957                | 485,529                          | 88,995    | 18  |
| Merchants', Hartford .....          | 239,079                | 51,013                           | 21,145    | 41  |
| New England, Hartford .....         | 206,295                | 2,906                            | 2,384     | 82  |
| North American, Hartford .....      | 366,590                | 105,472                          | 20,695    | 19  |
| Phoenix, Hartford .....             | 419,084                | 312,936                          | 76,297    | 24  |
| City Fire, New Haven .....          | 262,920                | 85,759                           | 21,274    | 24  |
| State, New Haven .....              | 223,220                | 31,852                           | 14,001    | 43  |
| Norwich, Norwich .....              | 168,729                | 34,721                           | 6,797     | 15  |

| MASSACHUSETTS COMPANIES.                |           |         |        |            |
|---|-----------|---------|--------|------------|
| American, Boston .....                  | 639,561   | .....   | .....  | Imp'rfect. |
| Boylston, Fire and Marine, Boston ..... | 1,029,648 | 551,530 | 85,375 | 15         |
| Conway, Boston .....                    | 273,066   | 111,306 | 28,747 | 25         |
| Eliot, Boston .....                     | 378,826   | 55,519  | 8,390  | 15         |
| Franklin, Boston .....                  | 365,909   | 51,087  | 10,527 | 20         |
| Merchants', Boston .....                | 837,585   | 252,570 | 89,811 | 35         |
| Manufacturing, Boston .....             | 985,977   | 119,859 | 13,933 | 11         |
| National, Boston .....                  | 1,091,346 | 187,021 | 35,652 | 19         |
| Neptune, Boston .....                   | 667,681   | 540,206 | 22,588 | 4          |
| North American, Boston .....            | 343,239   | 50,417  | 12,426 | 24         |
| Western Massachusetts, Pittsfield ..... | 206,147   | 80,435  | 16,907 | 21         |
| Hamilton Mutual, Salem .....            | 175,686   | 23,990  | 8,300  | 34         |
| Hampden, Springfield .....              | 222,480   | 115,106 | 21,089 | 18         |
| Massasoit, Springfield .....            | 216,987   | 69,020  | 14,754 | 21         |
| Springfield, Springfield .....          | 445,754   | 207,317 | 34,792 | 16         |

| PENNSYLVANIA COMPANIES.                 |           |         |         |    |
|---|-----------|---------|---------|----|
| American, Philadelphia .....            | 869,900   | 83,369  | 15,679  | 18 |
| Commonwealth, Philadelphia .....        | 512,680   | 35,991  | 17,558  | 48 |
| Delaware Mutual, Philadelphia .....     | 708,867   | 460,648 | 113,268 | 24 |
| Franklin, Philadelphia .....            | 2,056,997 | 283,085 | 52,667  | 18 |
| Girard, Philadelphia .....              | 284,789   | 50,201  | 17,625  | 35 |
| Great Western, Philadelphia .....       | 267,207   | 69,871  | 33,896  | 49 |
| Insurance Company of N. America, Phila. | 1,159,924 | 430,364 | 26,890  | 5  |
| Quaker City, Philadelphia .....         | 324,351   | 146,526 | 73,766  | 50 |
| Reliance, Philadelphia .....            | 274,328   | 41,645  | 9,933   | 23 |
| Safeguard, Philadelphia .....           | 249,407   | 35,455  | 30,875  | 87 |
| Union Mutual, Philadelphia .....        | 259,669   | 77,329  | 43,772  | 56 |

| RHODE ISLAND COMPANIES.              |         |         |        |            |
|--------------------------------------|---------|---------|--------|------------|
| Providence Washington, Providence... | 315,132 | 72,766  | 12,568 | 17         |
| Atlantic, Providence .....           | 239,140 | .....   | 24,693 | Imp'rfect. |
| Merchants' Providence .....          | 286,584 | 81,555  | 11,898 | 14         |
| Roger Williams, Providence .....     | 176,902 | 62,953  | 13,524 | 21         |
| Jersey City, Jersey City .....       | 191,722 | 34,813  | 12,399 | 35         |
| Augusta, Augusta .....               | 990,594 | 150,831 | 28,574 | 18         |

#### MUTUAL COMPANIES.

At the Convention of Life Assurers, the president, in his address, remarked upon the mutual system as follows:—

Look for a moment at the rapid growth and the present magnitude of life assurance in this country. In 1825, the first company chartered, the Massachusetts Hospital and Life Insurance Company, commenced its business. In 1829, the New York Life Insurance and Trust Company was chartered. Though of the highest standing, and possessing fully the public confidence, both of these

institutions found the trust business authorized by their charter to be more attractive than life assurance; and for several years neither of these companies have made any effort to increase the number of its policies. Most of the remaining companies in this country are of recent date, and very few of the number have seen the period of half a generation, yet the magnitude of this business is such that the following facts appear in the reports of but ten companies doing business in this State for the year 1857. They are taken from sworn reports made to the Controller of this State, on file in his department.

|   |              |
|---|--------------|
| Number of policies issued in 1857.....      | 7,000        |
| Amount assured .....                        | \$20,478,857 |
| Whole number of running policies.....       | 40,518       |
| Whole amount at risk.....                   | 110,124,014  |
| Income of these companies for the year..... | 3,965,600    |
| Paid claims by death.....                   | 1,153,665    |
| Total assets of these ten companies.....    | 14,240,700   |

### COMPARATIVE RATES OF DOMESTIC AND FOREIGN LIFE INSURANCE.

PARTICIPATION OR MUTUAL SCALE FOR INSURANCE OF \$1,000.

| AGE.    | British Commerce <sup>1</sup> | International..... | Eagle and Albion..... | Ketchikanooker..... | Manhattan..... | Mutual New York..... | New England Mutual, Boston..... | New York Life..... | New York Life & Trust..... | Edna Hartford..... | Girard, Philadel..... | American Life and Trust, Philadel..... | Baltimore Life ..... |
|---------|-------------------------------|--------------------|-----------------------|---------------------|----------------|----------------------|---------------------------------|--------------------|----------------------------|--------------------|-----------------------|--|----------------------|
| 15..... | 15.40                         | 16.50              | 15.10                 | 15.60               | 15.11          | 15.29                | 15.60                           | 15.60              | 15.60                      | 15.60              | 15.60                 | 15.60                                  | 15.60                |
| 20..... | 20.80                         | 18.70              | 20.80                 | 17.26               | 17.80          | 17.30                | 17.80                           | 17.70              | 17.70                      | 17.70              | 17.70                 | 17.70                                  | 17.70                |
| 25..... | 22.90                         | 21.40              | 22.70                 | 19.85               | 20.40          | 19.89                | 19.80                           | 20.40              | 20.40                      | 20.40              | 20.40                 | 20.40                                  | 20.40                |
| 30..... | 25.40                         | 24.70              | 25.30                 | 23.08               | 23.60          | 23.02                | 22.70                           | 23.60              | 23.60                      | 23.60              | 23.60                 | 23.60                                  | 23.60                |
| 35..... | 28.50                         | 28.30              | 28.50                 | 26.82               | 27.30          | 26.87                | 26.50                           | 27.50              | 27.50                      | 27.50              | 27.50                 | 27.50                                  | 27.50                |
| 40..... | 32.30                         | 32.70              | 32.70                 | 31.71               | 32.00          | 31.78                | 31.50                           | 32.00              | 32.00                      | 32.00              | 32.00                 | 32.00                                  | 32.00                |
| 45..... | 37.00                         | 38.50              | 38.20                 | 37.76               | 37.40          | 38.04                | 38.00                           | 37.30              | 37.30                      | 37.30              | 37.30                 | 37.30                                  | 37.30                |
| 50..... | 45.50                         | 46.80              | 45.60                 | 45.91               | 45.40          | 46.42                | 47.00                           | 46.00              | 46.00                      | 46.00              | 46.00                 | 46.47                                  | 46.47                |
| 55..... | 55.90                         | 58.60              | 55.40                 | 57.74               | 57.80          | 57.58                | 59.40                           | 57.80              | 57.80                      | 57.80              | 57.80                 | 57.80                                  | 57.80                |
| 60..... | 66.90                         | 74.20              | 68.60                 | 74.30               | 74.60          | 76.40                | 76.40                           | 76.40              | 76.40                      | 76.40              | 76.40                 | 76.40                                  | 76.40                |

NON-PARTICIPATION SCALE FOR INSURANCE OF \$1,000.

|         |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 15..... | 15.00 | 13.90 | 16.50 | 13.59 | 14.10 | ..... | ..... | 12.48 | 14.60 | 13.00 | ..... | 13.00 | 14.60 |
| 20..... | 17.00 | 15.80 | 18.10 | 15.54 | 16.00 | ..... | ..... | 14.14 | 16.50 | 14.80 | ..... | 14.70 | 16.50 |
| 25..... | 18.70 | 18.10 | 20.10 | 17.96 | 18.40 | ..... | ..... | 16.44 | 19.00 | 17.10 | ..... | 17.00 | 19.00 |
| 30..... | 21.00 | 20.80 | 22.70 | 20.77 | 21.30 | ..... | ..... | 19.20 | 21.90 | 19.90 | ..... | 19.60 | 21.90 |
| 35..... | 24.30 | 23.90 | 25.90 | 24.14 | 24.60 | ..... | ..... | 22.20 | 25.30 | 23.00 | ..... | 22.90 | 25.30 |
| 40..... | 20.50 | 28.50 | 30.00 | 28.54 | 28.80 | ..... | ..... | 26.28 | 29.70 | 27.30 | ..... | 26.70 | 29.60 |
| 45..... | 33.60 | 32.60 | 35.60 | 33.98 | 33.70 | ..... | ..... | 30.72 | 34.70 | 32.00 | ..... | 31.00 | 34.70 |
| 50..... | 48.00 | 39.50 | 43.00 | 41.32 | 40.90 | ..... | ..... | 37.68 | 42.10 | 39.10 | ..... | 38.40 | 42.10 |
| 55..... | 52.50 | 49.50 | ..... | 51.97 | 52.10 | ..... | ..... | 48.60 | 53.60 | 50.60 | ..... | 48.20 | 53.50 |
| 60..... | 63.70 | 62.60 | ..... | 66.87 | 67.20 | ..... | ..... | 67.50 | 66.20 | 66.20 | ..... | 58.40 | 66.80 |

### MARINE INSURANCE CAPITAL.

STATEMENT FOR THE YEAR 1858 OF THE SEVERAL MARINE INSURANCE COMPANIES TRANSACTING BUSINESS IN THIS CITY, REQUIRED BY LAW TO BE PUBLISHED UNDER THE OATH OF THE OFFICERS RESPECTIVELY.

| Companies.         | Premiums earned. | Losses, &c. | Profits.  | Dividnds, pr cent. |
|--------------------|------------------|-------------|-----------|--------------------|
| Commercial.....    | \$635,249        | \$475,669   | \$159,580 | 20                 |
| Sun.....           | 928,866          | 635,745     | 293,121   | 25                 |
| Columbian.....     | 372,424          | 234,477     | 141,977   | 25                 |
| Atlantic.....      | 3,494,614        | 2,094,561   | 1,399,953 | 40                 |
| Mercantile.....    | 713,763          | 502,294     | 211,468   | 20                 |
| Pacific.....       | 551,832          | 299,681     | 258,263   | 43                 |
| Great Western..... | 1,893,042        | 1,132,109   | 760,933   | 20                 |
| Union.....         | 544,775          | 314,160     | 230,614   | 45                 |
| Orient.....        | 542,371          | 381,847     | 160,523   | 21                 |

There are now engaged in the business of marine insurance, as will be seen by the above table, ten incorporated companies, the oldest of which was established

in 1842, with an aggregate capital of \$17,089,187. All of them transact their business in whole or in part on the mutual plan. Within the last twenty years twenty-two companies have been organized, twelve of which have failed, and of the remainder, five have called in or reduced their scrip. The average net earnings of the last twenty years of the capital employed have been variously estimated at from three to six per cent. The amount of annual losses in the United States since 1850, has ranged from \$18,000,000 to \$39,000,000. The disastrous year of 1854 reached the latter figure.

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## NAUTICAL INTELLIGENCE.

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### NAUTICAL SCHOOLS.

The education of boys for seamen, says the Baltimore *Price Current*, as practiced on board the floating school of this city, established by the Board of Trade, through the liberality of a comparatively few of our merchants, has, we are pleased to say, thus far, been eminently successful, and thereby instrumental in attracting other communities on the sea-board to the necessity of establishing similar institutions. The Governor of Massachusetts, in a recent message to the Legislature of that State, now in session, earnestly urges the subject upon the members' attention, in the following language:—

The present time affords a favorable opportunity for the consideration of the subject of nautical schools. In the great national interest of commerce, in which Massachusetts ranks as a pioneer, and still maintains an honorable position, no greater evil is experienced than those which arise from scarcity of American seamen. In our ships engaged in the foreign trade, it is stated, upon high authority, that not more than one-fifth or one-fourth of the seamen are Americans. [Memorial of ROBERT B. FORBES, Esq., to Congress, on the subject of floating schools for the education of seamen.] Other nations are making great exertions to increase the number of efficient seamen. England pays them liberal bounties on entering her service, and France has encouraged this branch of her maritime interests by paying a bounty equal to 25 per cent to those employed in her fisheries. In our own country, sea service, one of the most important to which men can be called, either as regards the prosperity of the country or the honor of the flag, receives no favor from government, alike to the detriment of commerce and the strength of the navy, which is in *men* rather than in ships or engines of war.

American seamanship, in contradistinction from other national vocations, fails to maintain its reputation and its capacity. The fisheries, the early and prolific nursery of American seamen, are rapidly declining, and upon the threatened withdrawal of the existing light bounty, will fail long to contend against English and French competition. There is no institution of the general government in which young men are made seamen. No State has entered upon this duty; and, unlike every other calling, there is no opportunity, except in a single school of this character in the city of Baltimore, for those who desire to become educated seamen.

Will it not be wise for the Legislature to consider the expediency of making some provision of this character, for the surplus energy and intellect of its misdirected youth who now are led to criminal courses, and end with the life of the convict. Americans love the sea. They are, as it was said by the first NAPOLEON, "the best sailors of the world." No career offers a more certain and liberal compensation for intelligent enterprise. There is no surer avenue to individual and national prosperity than that which lies in the direction of an extension of commerce. It is a rational substitute for the barbarian filibusters of the age. We want commerce and not dominion.

To maintain commerce, we must obtain seamen. The romance of a depraved youth generally leads him to the sea. His readings are from the pages of DEFOE, COOPER, BYRON, MARRYATT, and FALCONER, whose glowing portraitures have drawn from the hearthstones of inland homes, as well as from city haunts, in times past, the best or the wildest of their sons. The terrible disasters that occur at sea, which have engulfed so many of our people, are caused or increased in too many instances by the scarcity or incompetency of seamen. Bad seamen make inefficient officers, and good seamen render it impossible that incompetency shall maintain the highest position on the quarter deck. Is it not practicable to turn, therefore, something of the excess of vicious youth to pursuits so congenial to many, and which will minister so directly to their own advancement in honorable courses of life—to the enlargement of our commerce—to the security of ocean travel—to the prosperity of the people, the extension in other lands of the principles of American liberty, and the honor of the American flag?

A vessel of seven hundred tons would accommodate, I am informed, two hundred and fifty boys. It could be purchased for this purpose, probably for \$5,000 or \$8,000. It is not impossible that a condemned government ship, in every respect suitable for this purpose, could be obtained at a favorable opportunity from the general government, which could hardly fail to favor a sale of an unseaworthy ship-of-the-line for such an object at a reasonable cost. And it is probable that at a period of greater commercial prosperity than the present, those engaged in the merchant service would liberally contribute in aid of an enterprise of this kind. Boys could be received on board ship, at a riper age than at Westborough. A more stringent discipline could be enforced, and good conduct and rapid advance in study be rewarded by promotion to honorable offices and duties on board ship. At the age of fifteen or sixteen years, after study and practice of one or two years, they would be received in the merchant service at wages, and, as educated seamen, have opened to them profitable and respectable courses of life.

If the Legislature should hereafter, upon due investigation, and upon proper aid rendered by other parties interested, think it expedient to enter upon a limited experiment of this character, to Massachusetts would belong the honor of having established the first State Reform School for boys; the first State Industrial School for girls, and the first State Nautical School for educating seamen.

#### LEVEL AND COLOR OF THE OCEAN.

Were it not for the disturbing actions of the sun and moon, and of the winds, the level of the ocean would be everywhere the same, and its surface would have the form of a perfect spheroid. This uniformity, however, can never be established. The tide at every instant is at different heights in different parts of the ocean; and thus its form of surface is variable. But aside from the tidal rise and fall of the water, and taking the surface of the ocean at its mean height, it is found by accurate leveling that all its parts do not coincide with the surface of the same spheroid. Gulfs and inland seas, which communicate with the ocean by narrow openings, are affected according to their position with regard to the prevailing winds. The level of the Red Sea has been found, by French engineers, to be  $32\frac{1}{2}$  feet higher than the Mediterranean, which is supposed to be little lower than the ocean.

The usual color of the ocean is a bluish-green, of a darker tint at a distance from land, and clearer toward the shores. The hue of the Greenland Sea varies from ultramarine blue to olive green, and from the purest transparency to great opacity. The surface of the Mediterranean, in its upper part, is said to have at times a purple tint. In the Gulf of Guinea the sea sometimes appears white; about the Maldivé Islands black; and near California it has a reddish appearance.

The prevailing blue color has been ascribed to the greater refrangibility of the blue rays of light, which, through that property, pass in greatest abundance through the water. The other colors are ascribed to the existence of vast numbers of minute animalculæ; to marine vegetables at or near the surface; to the color of the soil, the infusion of earthy substances; and very frequently the tint is modified by the aspect of the sky. The phosphorescent or shining appearance of the ocean, which is a common phenomenon, is also ascribed to animalculæ, and to semi-putrescent matter diffused through the water.

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#### A NEW LIFE-BOAT.

Some preliminary trials were made with a new life boat, which the National Life-boat Institution is about to send to Whitburn, on the coast of Durham. The boat, which is 32 feet long, and 7 feet 10 inches wide, is on the design of JAMES PEAKE, Esq., and was built by the Messrs. FORREST, of Limehouse. Having been capsized by some tackling attached to a crane, her self-righting power was found to be perfectly effective. The water the boat thus shipped was self-ejected through six relieving valves in 25 seconds. With her crew of 13 men and gear on board, her line of floatation was found to be  $5\frac{1}{2}$  inches below the deck; 23 men had to rest on the gunwale, or side of the boat, before it touched the water's edge—an evidence of the boat's great stability or power against capsizing. The trial was in every respect satisfactory, and reflected much credit on all concerned in her construction.

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#### LIVERPOOL, THE PORT OF THE WORLD.

A recent number of *Chambers' Journal* contained an article embodying some interesting facts regarding Liverpool, the greatest seaport of England and of the world. It appears that in 1857 nearly one-half of all the products exported from England were shipped from this port. Out of £122,000,000 of exportation, £55,000,000 were exported from Liverpool, about half that amount from London, £16,000,000 from Hull, and the rest from Glasgow, Southampton, &c. The population, within four miles of the exchange, at the present time is about 600,000, and the rate of annual increase about 10,000. The property and income tax paid by the inhabitants in 1857 amounted to upwards of £7,000,000, or \$35,000,000. The amount of tonnage belonging to the port in the same year was 936,022 tons, being greater by 76,882 tons than that of London itself. The amount of shipping which entered and cleared during the same year was upwards of 9,000,000 tons. Of the vessels which arrived from abroad, the United States sent by far the largest and most numerous fleet, viz.:—934 ships, of an average burthen of more than 1,000 tons. There were from Italy 174 vessels, from Russia 102, from France 317.

One great branch of the shipping business of Liverpool is the shipment of emigrants to foreign and colonial countries. The tide of German emigration, even now, flows through England and escapes through Liverpool, in preference to Hamburg and Bremen. Of the 212,875 British emigrants in 1857, nearly 156,000 sailed from this port. Of the above number the United States attracted 126,905, British America 21,000, and Australia 61,248. The number of emigrants who left the shores of Great Britain from 1815 to 1857 was upwards of 4,500,000.

The pride of Liverpool is her docks, which cover a space of no less than 400 acres of water along the Mersey. They extend on the Liverpool side of the river a distance of five miles, and two miles off the Birkenhead side. The sea-wall along the Liverpool side, by which the shipping in the docks is preserved from wind and storm, is one of the greatest works of any age. Its length is upwards of five miles, its average thickness eleven feet, and its average height from the foundations forty feet. Great difficulty was experienced in gaining a stable foundation for this great structure, and thousands of piles were driven, and many great beams of timber sunk to secure a firm bottom. Upwards of eighty pairs of gigantic gates have been put up within the last thirty years, and some of them reach to the unparalleled width of 100 feet.

#### CAPE LOOKOUT LIGHTHOUSE, COAST OF NORTH CAROLINA.

Official information has been received at this office from Captain W. H. C. WIRING, Corps of Engineers, United States Army, that the new lighthouse at Cape Lookout has been completed. The tower is the frustum of a cone. It is built of brick, and is surmounted by an iron lantern painted black. The color of the tower is red, and the focal plane is 156 feet above the level of the sea. The keepers' dwelling, which is a part of the old tower, is painted in red and white horizontal stripes. The illuminating apparatus is a catadioptric Fresnel lens of the first order, showing a fixed light of the natural color, which should be visible in ordinary weather a distance of 22 nautical miles. The position of this lighthouse, as given by the Coast Survey, is latitude  $34^{\circ} 37' 20''$  north; longitude  $76^{\circ} 30' 41''$  west of Greenwich. The new lighthouse will be lighted for the first time at sunset on Tuesday, the first day of November next, and will be kept burning during that and every night thereafter until further orders. By order of the Lighthouse Board,

W. B. FRANKLIN, Secretary.

WASHINGTON, September 19, 1859.

#### DISCONTINUANCE OF LIGHTS.

The third section of the act of Congress, approved March 3, 1859, making appropriations "for lighthouses, light-boats, buoys, &c.," authorized the Secretary of the Treasury, in his discretion, on the recommendation of the Lighthouse Board, to discontinue, from time to time, such lights as may become useless, by reason of mutations of commerce, and changes of channels, of harbors, and other causes. The Lighthouse Board, at its meeting held on the 15th instant, recommended that the following named lights be discontinued, viz.:—Lighthouse at Barataria Bay, on the coast of Louisiana; lighthouse at Corpus Christi, on the coast of Texas. It is therefore ordered and directed that the aforesaid lights be discontinued, on and after the 1st day of November next. By order of the Secretary of the Treasury,

R. SEMMES, Secretary of the Lighthouse Board.

WASHINGTON, September 20, 1859.

#### LIGHT ON KILI POINT, COAST OF ANATOLIA.

Official information has been received at this office that the Director of Lights for the Turkish Government has given notice, that on and after the 8th August, 1859, a light will be established at Kili Point, on the coast of Anatolia, 22 miles to the eastward of the entrance to the Bosphorus. The light revolves once a minute. It is placed at an elevation of 221 English feet above the level of the sea, and in clear weather should be visible from a distance of 25 miles. The form, height, and color of the lighthouse are not stated. It stands in lat.  $41^{\circ} 10' N.$ ; long.  $29^{\circ} 38'$  east of Greenwich. By order,

R. SEMMES, Secretary.

WASHINGTON, September 2, 1859.

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**POSTAL DEPARTMENT.**


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**CUBA POST-OFFICE.**


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*Government and Captain Generalship of the ever faithful Island of Cuba:—*

The considerable detriment that the Royal Post-office suffers in its revenue by the punishable transmission of correspondence out of the mails or parcels directed by the administrations and post-offices, as well as by introducing it from beyond the seas by private means, in contravention to the established laws, royal orders, and dispositions of the government, has called my attention upon so important a matter to adopt convenient measures in order to restore to its vigor those which might be neglected or in disuse, and for that purpose, having heard the consultation of the General Postmaster's Office, and with the object to put a stop to the smuggling of correspondence henceforward, in which fault many persons may incur ignorantly, or with false ideas of friendly service, as also it happens that others hide letters and printed papers with malicious and criminal designs, I have resolved in virtue of the faculties invested in me by Her Majesty as Governor and Captain General and as Chief Subdelegate of the post, as follows:—

7. All correspondence brought either by Spanish or foreign vessels arriving at this island shall be delivered in the act of the visits to the collector of the post-office, by the master, supercargo, passenger, or man under whose charge it may be.

8. In the ports where there is no collector, the masters, supercargoes, and passengers are obliged to deliver the letters under their charge to the post-office or administration immediately after the vessel has anchored.

9. It shall be paid as a remuneration the rate of one cent for each piece, be it either a single or double letter, or a package from the United States or the Indies, and two cents for those from any other part. If the correspondence should be in bags or closed bundles, said payment shall be made at the post-office; and in both instances under receipt of the number of pieces and amount received by the bearer.

10. If after the lapse of twenty-four hours since the vessel has anchored, the delivery of the correspondence to the administration should be omitted, a fine of one dollar shall be imposed for every single letter, and in proportion that of two, three, and four dollars for the double, triple, &c. And in order that no person shall allege ignorance, a copy of the articles contained in this obligation, in the Spanish, English, and French languages, shall be handed to each master of vessel at the moment of being visited. The post collector is authorized to compel that said fines be made effective immediately; and in the unexpected case of resistance, he shall ask for the arrest of the disobedient to the captain of the port or to the visiting adjutant, reporting it to the superior local authority, who may double the fine to the transgressors, or order them to remain in jail two days for each letter they may bring, besides the proceedings to which they might give motive according to the circumstances and the tendency or object of the concealment.

12. All owners or consignees of vessels are obliged to enjoin to the masters and skippers of their vessels under their responsibility, that by all means in their power not to permit any correspondence to be carried out of the parcels that may have been delivered to them by the administration of the department.

This is a copy of some of the dispositions of the 1st of March, 1849, which, from that day, shall be considered as an additional part of the edict of government and police.

MANUEL ARIAS, Postmaster.

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**TELEGRAPHING IN INDIA.**


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Telegraphing in India is attended with peculiar difficulties. White ants eat the bottom of the posts away; elephants rub against the posts and push them over; the monkeys use the wire for gymnastic exploits and often wrench it from the insulators, and hurricanes often prostrate miles of posts at once.

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## RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

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### CITY RAILROAD IMPROVEMENTS.

Improvements for propelling cars upon city railroads seem to be imperatively demanded. On the several lines in New York, Philadelphia, and other cities, all the cars are either drawn by horses or mules, and each company requires a horde of these animals to do the necessary work. As their sinews can only be kept in motion for a very limited period of time, a great number of relay teams must always be maintained, thus involving a vast expenditure. The proprietors of these lines would gladly avail themselves of a more economical substitute for animal power, and it is to this new field for improvement we wish to direct public attention by some brief considerations.

A gentleman connected with one of them, advanced money to a projector to make experiments and efforts to apply a spring-power to one of their cars. It consists in the application of coiled springs to the axles, which are operated by such an arrangement that they exert their tension force when uncoiling to revolve the wheels; and while one spring is actuating an axle, the other is being wound up for keeping the car in motion. It has been asserted that, with the labor of one man for coiling up the springs, a car can be moved as easily as with two horses. This project affords good evidence of the eagerness with which a new substitute for horses is sought, for the purpose of abolishing their employment entirely.

We have also noticed, that a peculiar class of steam-engines has been proposed in Philadelphia. The engine is described as direct-acting, with horizontal cylinders, a vertical boiler, and a condenser to obviate the noise of the exhaust blast in the chimney. The *Ledger* states that "it is designed to box up the machine so as to present the appearance of an ordinary car, with a small chimney like a stove pipe. Built upon the plan proposed, the engine will occupy about the same space as the horses. The cars can be heated by steam in the winter, and cooled by a fan in the summer. Another advantage claimed for steam over horses is, that there will not be any dust, and that it can be more easily managed, the cars being stopped in less time. The engine can be applied to the cars now in use, and will, with ease, ascend any of the grades in the city. It is claimed that, on the score of economy, steam has a decided advantage over horses, costing from one-third to one-half less." Such engines may operate very well, but they are not new, although we have no doubt they are original with the inventor who now proposes them. Several years ago either one or two of such engines were constructed for the Hudson River Railroad Company, to draw their cars through this city. It was stated that they fulfilled all the conditions for which they were engaged, but for some reason (unknown to us) they were only used for a very brief period.

There is a strong prejudice existing in the minds of our citizens against the use of steam-engines running in the streets; hence not only the city railroads proper, but all lines which converge here (and it is the same in other cities) have to unharness their iron horses at the corporation precincts, and use animals to perform the rest of the journey. The vast extra expense incurred by this mixed

system of railroad conveyance stamps it at once as being either behind the intelligence or the engineering skill of the age. It is not impossible that since the great impulse given to the use of caloric engines for small power that these may supplant horses ultimately.

RAILROAD BONDS DUE IN 1860.

The following debts of railroads, and one coal company, a total of \$15,000,000, says the Boston *Courier*, mature during the year 1860, and some of them are quite heavy in amount. We give the current market value of the bonds, so far as it can be ascertained, and the figures show to some extent the probability of payment at maturity, or a provision for them satisfactory to holders :—

| Name of company.                                       | Amount.      | Per cent |
|--|--------------|----------|
| Boston and Worcester 6's, July 1.....                  | \$500,000    | 100      |
| Boston, Concord, and Montreal 6's and 7's.....         | 500,000      | 85       |
| Cheshire 6's, July 1.....                              | 522,400      | 96       |
| Cleveland and Pittsburg first 7's.....                 | 800,000      | 64       |
| Columbus and Xenia dividend bonds.....                 | 70,000       | 95       |
| Covington and Lexington income bonds.....              | 115,000      | 10       |
| Eastern income 6's, December 1.....                    | 75,000       | 100      |
| Hudson River second mortgage 7's.....                  | 2,000,000    | 95       |
| Illinois Central freeland 7's, September 1.....        | 3,900,000    | 93       |
| Indiana and Bellefontaine 7's, 1860-61.....            | 450,000      | 70       |
| Michigan Central 8's, April 1 and October 1.....       | 1,234,000    | 90       |
| Michigan Southern first mortgage 7's.....              | 993,000      | 70       |
| New Jersey Central first 7's.....                      | 500,000      | 100      |
| New York and New Haven 7's.....                        | 312,000      | 93       |
| New York Central 5½ per cents, August 1.....           | 100,000      | 100      |
| Pennsylvania Coal Company's first mortgage.....        | 600,000      | ..       |
| Reading convertible and income bonds.....              | 3,411,000    | 91       |
| Terre Haute, Alton, and St. Louis fourth mortgage..... | 57,000       | ..       |
| Total.....   | \$15,239,000 | ..       |

The New York Central 5½ per cents were originally issued by the State to the Auburn and Rochester road, since consolidated with others into the New York Central. A like amount is to mature January 1, 1861. We also find by the company's report a 6 per cent loan of \$10,000, maturing May 1, 1860, issued to the "New York, Albany, and Buffalo" Telegraph Company for the exclusive use for railroad purposes by the New York Central of one of the wires of said telegraph. A single 7 per cent bond of the Albany and Schenectady road for \$1,000, will mature July 15, 1860.

The Reading Company has an equal amount of 1886 bonds reserved to meet the 1860 bonds, but the former sell at about 69. The Boston, Concord, and Montreal Company propose, we believe, changing the 1860 bonds for a new issue, with a sinking fund.

SHIP CANAL ACROSS THE ISTHMUS OF DARIEN.

A party of American engineers, under the charge of the Navy Department, are about to proceed to the Isthmus of Darien, to search for a practical route for a ship canal across the Isthmus; they are instructed to explore the coast of the Caribbean Sea, with a view to test the statements of GIBBORNE and CULLEN (Englishmen) that there is such a depression of the eastern Cordillera as to admit of the easy construction of a ship canal; the country west thereof to the Pacific Ocean being without any considerable elevation. Should the party not be able

to find the gap of depression referred to, by reason of the overlapping of mountains or other causes, they may proceed to the Pacific side of the continent, and seek a practical route for a canal along the line traversed by Surgeon CALDWELL, U. S. N., in 1857. This gentleman, inspired by the reports of old residents in respect to the existence of a region nearly level stretching across the continent, proceeded with a small party from the excellent bay of San Miguel, several miles in a north-easterly direction, up the navigable river Savana, and thence east, across the country to a point regarded as not far in a direct line from the Atlantic. Here, on account of the dearth of provisions, Dr. CALDWELL was forced to close his tour and return to the Pacific Coast. His conclusions, as reported to the Navy Department through his commanding officer, Com. MERVINE, are as follows:—

1. That the summit level of a route from Principe northerly to the Atlantic is within eight miles of the Savana River, and being but 160 feet above the ocean level, will not prove insuperable to engineering skill in constructing a ship canal.

2. That there is a low tract of land extending from the summit level east to the Atlantic.

3. That a gap in the eastern Cordillera exists near the northwestern limits of the Caledonia Bay, on the Caribbean Sea. From the tops near the summit level referred to, such gap in the mountain was descried, and through it the great sea beyond. This was afterwards lost to the view of the explorers by the overlapping of mountain ranges.

The new exploring party are to have every desirable facility for prosecuting their survey, and among other things a balloon, from which observations of the country may be taken by experienced aeronauts, through the use of what is called an "instant-type." This gives the most minute objects, which are brought out by use of the microscope. Ravines, gaps, or depressions thus discovered may, it is held, be easily found and explored, so as to demonstrate reliably whether there is such a route as has been so often asserted by both British and American officers or not.

#### FINANCES OF THE NEW YORK CENTRAL RAILROAD COMPANY.

We copy from the *Railroad Journal* the following exhibit of the progress of the capital and funded debt of the New York Central Railroad Company for each year since the consolidation:—

EXHIBIT OF THE CAPITAL AND FUNDED DEBT OF THE NEW YORK CENTRAL RAILROAD COMPANY FOR EACH YEAR SINCE THE CONSOLIDATION.

|   | 1853.       | 1854.       | 1855.       | 1856.       | 1857.       | 1858.       |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Debt certificates outstanding.....                              | \$8,885,210 | \$8,734,500 | \$8,543,700 | \$8,422,600 | \$8,260,000 | \$8,100,000 |
| Convertible seven per cents.....                                |             | 380,681     | 2,931,800   | 3,000,000   | 3,000,000   | 3,000,000   |
| Debts of former companies.....                                  | 1,861,223   | 1,263,030   | 1,214,258   | 1,052,962   | 880,753     | 657,682     |
| Bonds for funding debts of other companies.....                 |             |             |             | 331,000     | 399,000     | 1,256,000   |
| Bonds for railroad stock purchased under the consolidation..... | 817,000     | 817,000     | 817,000     | 812,000     | 807,000     | 785,000     |
| Bonds for real estate.....                                      |             | 218,000     | 230,000     | 221,000     | 204,000     | 200,000     |
| Bonds to Buffalo & N. Falls Railr'd                             |             | 110,800     | 110,800     | 103,100     | 93,500      | 93,000      |
| Funded debt of Buffalo & Niagara Falls Railroad Company.....    |             | 55,000      | 55,000      | 55,000      | 55,000      | 46,000      |
| Bonds to telegraph company.....                                 |             |             | 10,000      | 10,000      | 10,000      | 10,000      |
| Bonds and mortgages.....  |             | 208,109     | 199,983     | 286,235     | 265,657     | 254,956     |
| Debts of former companies paid and again funded.....            |             |             |             | 508,853     | 656,062     | 2,133       |
| Total amount of funded debt....                                 | 11,564,033  | 11,797,120  | 14,111,942  | 14,802,751  | 14,631,573  | 14,404,767  |
| Amount of stock outstanding....                                 | 22,213,983  | 23,067,415  | 24,154,860  | 24,136,660  | 24,136,660  | 24,182,400  |
| Total.....  | 33,778,016  | 34,864,535  | 38,266,842  | 38,939,411  | 38,768,233  | 38,587,167  |
| Cost of road and equipment....                                  | 22,044,529  | 25,907,374  | 28,523,918  | 29,786,372  | 30,515,815  | 30,732,517  |

OPERATIONS OF THE MASSACHUSETTS AND NEW YORK RAILWAYS COMPARED.

The comparative results of the operation of the railways of Massachusetts and of New York, for the year 1858, stand as follows:—

|  | Massachusetts. | New York.     |
|--|----------------|---------------|
| Number of railways tabulated.....                        | 41             | 22            |
| Miles of road and branches.....                          | 1,379.9        | 2,699.7       |
| Miles of double track and sidings.....                   | 473.4          | 925.0         |
| Gross cost.....  | \$62,178,535   | \$119,474,843 |
| Cost per mile of road.....                               | 46,504         | 44,255        |
| Gross receipts.....                                      | 8,596,703 00   | 18,627,205 74 |
| Gross expenses.....                                      | 4,813,944 00   | 11,813,557 27 |
| Net income.....  | 3,782,759 00   | 6,813,648 48  |
| Net income per cent on cost.....                         | 6.8            | 5.7           |
| Total miles run.....                                     | 5,454,641      | 11,530,322    |
| Receipts per mile run, cents.....                        | 157.9          | 161.6         |
| Expenses per mile run, cents.....                        | 88 0           | 102.5         |
| Net income per mile run, cents.....                      | 69.0           | 59.1          |
| Per cent of expense to income.....                       | 56             | 63            |
| Gross receipts per mile of road.....                     | 6,229 49       | 6,898 96      |
| Opening expense per mile of road.....                    | 3,488 36       | 4,375 40      |
| Net income per mile of road.....                         | 2,741 13       | 2,523 56      |
| Number of passengers carried.....                        | 8,443,789      | 11,206,125    |
| Number carried one mile.....                             | 168,787,421    | 372,455,955   |
| Tons of freight carried.....                             | 3,174,909      | 3,446,015     |
| Tons carried one mile.....                               | 107,303,461    | 320,142,709   |
| Cost of fuel per mile run, cents.....                    | 15.10          | 14.07         |
| Engine repairs per mile run, cents.....                  | 6.80           | 8.10          |
| Car repairs per mile run, cents.....                     | 6.40           | 9.00          |
| Passengers carried per mile run by passenger trains..... | 2.72           | 1.83          |
| Tons carried per mile run by freight trains.....         | 1.49           | 0.64          |
| Miles run per mile of road.....                          | 3,953          | 4,270         |

Thus, although the railways of New York run more miles per mile of road, they net less than do the Massachusetts roads; and the reason appears from the two-fold cause—that the Massachusetts roads do more work per mile run, (*i. e.*, transport more paying load per mile run,) and that the expenses in the working departments generally are less—as seen by the fuel, engine, and car accounts above.

READING RAILROAD.

The following interesting figures in relation to the Reading Railroad are from the official authorities:—

|  |              |
|--|--------------|
| Cost of the Reading Railroad, main stem.....             | \$19,262,720 |
| Cost of the Lebanon Valley and Willow-street branch..... | 4,519,170    |
| Actual cost of road, &c., &c.....                        | \$23,771,910 |
| Sinking Fund, &c.....                                    | 232,728      |
| Capital stock.....                                       | \$11,737,041 |
| Bonded debt.....   | 11,679,500   |
| Mortgages, &c., on real estate.....                      | 516,450      |
| Total.....   | \$23,932,991 |

AVERAGE DURING LAST SIX YEARS, INCLUDING LEBANON VALLEY.

|   |             |
|---|-------------|
| Average stock during last six years.....                | \$9,564,010 |
| “ bonded and all other debts.....                       | 9,711,818   |
| “ gross receipts.....                                   | 3,369,613   |
| “ expenses.....   | 1,578,646   |
| “ net receipts.....                                     | 1,790,967   |
| “ interest on debts.....                                | 582,709     |
| “ dividend fund, (equal to 12½ per cent on stock,)..... | 1,208,967   |
| “ tonnage.....  | 2,422,874   |

Length, including branches and sidings, 320 miles single track : cost, \$75,138 per mile ; average load up of empty cars, 258 tons ; down, loaded, 758 tons ; deadweight, about 33 per cent. The work is now connected with the Catawissa, Williamsport, and Lake Erie Road—500 miles lateral road in the region ; the Dauphin and Susquehanna Railroad ; the East Pennsylvania Reading—to New York 125 miles ; the Lebanon Valley, and all the roads running north, south, and west. It has now a capacity for 4,000,000 tons coal, which, as its connections will hereafter pay its expenses, if reduced to one dollar per ton, the net receipts will pay over 25 per cent on the stock.

#### RAILROAD LANDS FOR MICHIGAN.

Certified copies of approved lists of lands granted to the State of Michigan for railroad purposes, under act of 3d June, 1856, were transmitted to the Governor of said State from the General Land-office, viz. :—

|   |            |
|---|------------|
| Grand Rapids and Indiana Railroad, (6 mile limits,).....acres                                     | 239,891.00 |
| Grand Rapids and Indiana Railroad, (15 mile limits,).....   | 84,020.93  |
| Flint and Pere Marquette Railroad, Ionia, (15 mile limits,).....                                  | 167,885.21 |
| Flint and Pere Marquette Railroad, East Saginaw, (15 mile limits,)..                              | 22,662.66  |
| Flint and Pere Marquette and Amboy, Lansing, and Traverse Bay Railroad, where they intersect..... | 42,860.24  |
| Grand Rapids and Indiana and Flint and Pere Marquette, where they intersect.....                  | 56,390.93  |
| Making in the aggregate.....  | 613,711 07 |

#### COAL-BURNING LOCOMOTIVES.

A series of protracted experiments have been conducted on the Pennsylvania Central Railroad, at Altoona, and Mr. S. HUME McLAURIN has briefly communicated the results to the *North American Gazette*, as follows :—

Except one single machine, the experiments were made with freight engines, and with freight trains, or rather a freight train, consisting of 40 cars, loaded with coal, in the round trip from Altoona to Mifflin and back, a distance of 164 miles, the running time being 12 miles to the hour, or 10 miles, including stops. The mode of procedure was for each engine to go down to Mifflin one day and back the next ; and if, from any accident of any kind, or from bad weather, or unforeseen detention, the trip did not fairly develop the performances of the engine, it went for nothing, and the trip was repeated. This Mifflin trip, as it was called, was the great leading feature of the experiments, although it was preceded by another short one from Altoona to Gallitzen, on the mountain, a distance of 12½ miles. Now, in this trip, without presenting the details of evaporation, and the particular features of the several engines, I may state the notorious fact that our engine (the Phleger boiler,) made it with 75 bushels of Broadtop coal, and 84 of Pittsburg ; and that, with the former, there was not an engine that came nearer than 20 per cent of her, for Dimpfel's came the nearest, and she burned 87 bushels, besides extra wood, making some three bushels more.

It is true that, with Pittsburg coal, the Blue Ridge came within three or four bushels of her, but it is also true that she had not the water grate connected with the crown sheet, but an upper water deflector through which the grate passed some six inches from the crown, both leading features of Phleger's boiler. The coal really used by the several engines was as follows :—

|   |                       |
|---|-----------------------|
| Phleger's (fractions omitted).....bushels | Pittsburg coal.<br>84 |
| Blue Ridge.....                           | 87                    |
| Dimpfel's.....                            | 100                   |
| Gill & Co.'s.....                         | 104                   |
| Baldwin's.....                            | 104                   |
| Winans'.....                              | 107                   |

Of Broadtop, I think all took something more, except Dimpfel's (87,) and Phleger's (75,) as above stated. These comprised all the engines tried in the regular experiments, and we claim, what, indeed, is notorious, that the results are no criterion for a passenger train. We have now a passenger engine on the East Pennsylvania road that may be seen any day at Reading, running with 18 pounds of anthracite coal to the mile.

BUSINESS OF THE ST. MARY'S SHIP CANAL.

STATEMENT OF ARTICLES PASSING THROUGH ST. MARY'S SHIP CANAL FOR JULY, 1859.

| Quantity.               |        | Value.      | Quantity.             |                | Value.     |            |
|-------------------------|--------|-------------|-----------------------|----------------|------------|------------|
| Iron ore... tons & lbs. | 15,535 | \$93,210 51 | Powder..... tons      | 26             | \$6,500 00 |            |
| Iron, bars .....        | 422½   | 12,678 00   | Coal.....             | 372            | 2,232 00   |            |
| Iron, blooms.....       | 3      | 152 07      | Nails .....           | 235            | 1,175 00   |            |
| Flour..... bbls.        | 2,754  | 22,032 00   | Merchandise .....     | 675½           | 387,984 00 |            |
| Wheat .....             | bush.  | .....       | Lime..... bbls.       | 486            | 654 00     |            |
| Coarse grain.....       | 1,615  | 1,211 25    | Lumber..... M. feet   | 561            | 8,415 00   |            |
| Gr'nd feed. t'ns & lbs. | 62½    | 1,559 50    | Lath..... bbls.       | 3              | 90         |            |
| Beef..... bbls.         | 194    | 2,328 00    | Window glass.....     | 28             | 561 00     |            |
| Pork .....              | 318    | 5,724 00    | Hay .....             | 39½            | 592 50     |            |
| Bacon .....             | 12     | 240 00      | Horses and mules ..   | 11             | 1,375 00   |            |
| Lard .....              | 30½    | 1,220 00    | Cattle .....          | 218            | 10,900 00  |            |
| Butter .....            | 69,521 | 12,513 78   | Sheep .....           | 274            | 1,644 00   |            |
| Cheese.....             | 2,900  | 290 00      | Hogs .....            | 34             | 204 00     |            |
| Tallow.....             | 1,850  | 185 00      | Brick..... M.         | 200½           | 2,007 00   |            |
| Candles.....            | 3,940  | 591 00      | Furniture .....       | 702            | 3,150 00   |            |
| Soap... bxs. & bbls.    | 37     | 185 00      | Hides .....           | 93             | 372 00     |            |
| Apples..... bbls.       | 25     | 50 00       | Pelts & furs... bbls. | 4              | 600 00     |            |
| Dried fruit..... lbs.   | 4,500  | 810 00      | Machinery . . . . .   | 90             | 13,500 00  |            |
| Sugar .....             | 18,925 | 1,892 50    | Engines & boilers...  | 2              | 2,000 00   |            |
| Coffee .....            | 51     | 1,912 50    | Wagons & buggies .    | 25             | 2,500 00   |            |
| Tea .....               | 60     | 2,400 00    | Fish..... bbls.       | 766            | 6,894 00   |            |
| Vegetables... bush.     | 405    | 303 75      | Liquor & beer .....   | 400            | 8,000 00   |            |
| Salt .....              | bbls.  | 365         | 730 00                | Malt..... lbs. | 38,026     | 760 52     |
| Vinegar .....           | 23     | 115 00      | Shingles .....        | M.             | 24         | 96 00      |
| Tobacco .....           | lbs.   | 500         | 100 00                | Copper .....   | 1,066½     | 533,238 25 |

Total estimated value ..... \$1,107,644 03

| JULY, 1859.               |            | JULY, 1858.               |            |
|---------------------------|------------|---------------------------|------------|
| Passages of steamers..... | 22         | Passages of steamers..... | 20         |
| “ propellers.....         | 30         | “ propellers.....         | 20         |
| “ sail vessels .....      | 92         | “ sail vessels .....      | 50         |
| “ scows.....              | 3          | “ tugs.....               | 30         |
| “ tugs.....               | 72         |                           |            |
| “ raft.....               | 1          | Total.....                | 120        |
|                           |            | Aggregate tonnage.....    | 47,273     |
| Total.....                | 220        | Tolls received .....      | \$2,182 00 |
| Aggregate tonnage.....    | 74,933     |                           |            |
| Tolls received .....      | \$3,446 28 |                           |            |

RAILROAD EARNINGS.

The figures of the annexed table show conclusively why railroad stocks have declined, and to what extent:—

| Roads.                       | Receipts for the six months to August 1. |             |           | Percentage of decrease in receipts. | Price of stocks, August, 17, 1857. |       |                            |
|------------------------------|--|-------------|-----------|-------------------------------------|------------------------------------|-------|----------------------------|
|                              | 1857.                                    | 1859.       | Decrease. |                                     | 1859.                              | 1857. | Decline in price, p. cent. |
| New York Central .....       | \$3,652,342                              | \$2,735,858 | \$916,384 | 25.09                               | 71½                                | 79½   | 8                          |
| Erie.....                    | 2,664,087                                | 2,097,945   | 566,142   | 21.25                               | 5½                                 | 30½   | 25½                        |
| Michigan Central .....       | 1,345,941                                | 804,237     | 541,704   | 40.26                               | 43                                 | 81    | 38                         |
| Galena and Chicago.....      | 1,089,724                                | 571,520     | 518,204   | 47.55                               | 64½                                | 89½   | 25½                        |
| Chicago and Rock Island..... | 825,846                                  | 401,835     | 424,011   | 51.34                               | 62                                 | 91    | 29                         |
| Michigan Southern .....      | 1,149,521                                | 755,314     | 394,207   | 34.29                               | 21½                                | 63    | 41½                        |
| Cleveland and Toledo.....    | 548,064                                  | 349,194     | 198,870   | 36.28                               | 20                                 | 46    | 26                         |

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**COMMERCIAL REGULATIONS.**


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**MANUFACTURES OF WORSTED—BUTTON STUFF.**

TREASURY DEPARTMENT, August 20, 1859.

SIR :—I have examined your report, under date of the 2d instant, on the appeals of Messrs. J. W. SCHULTEN & HURD and Messrs. T. N. DALE & Co. from your assessment of duty at the rate of 19 per cent on certain goods, styled by the importers "button stuffs," as a manufacture of worsted. The appellants claim entry of the goods in question at the rate of 4 per cent under the classification in schedule H of the tariff of 1857 of "manufactures of mohair cloth, silk twist, or other manufactures of cloth, suitable for the manufacture of shoes, cut in slips or patterns of the size and shape for shoes, slippers, boots, bootees, gaiters, or buttons, exclusively, not combined with India-rubber." It appears from the samples submitted to the Department that the articles in question are manufactures of worsted, imported in the piece, 27 inches in width, with holes of the diameter of one-quarter of an inch punctured at intervals of 20 inches, and at a distance of 9 inches from either edge. Presuming that the samples submitted fairly represent the merchandise on which the duty was assessed in these cases, the Department is of opinion that your decision was correct, the fabric not being "suitable for the manufacture of shoes, cut in slips or patterns of the size and shape for shoes, slippers, boots, bootees, gaiters, or buttons, exclusively," but may, it is believed, be used for other purposes. Your decision levying a duty of 19 per cent, as a manufacture of worsted, under the classification in schedule D of "manufactures of worsted, or of which worsted shall be a component material, not otherwise provided for," is hereby affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &c., New York.

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**MANUFACTURES OF WORSTED—SLIPPER PATTERNS.**

TREASURY DEPARTMENT, September 10, 1859.

SIR :—I have examined your report on the appeal of Messrs. LALANCE & GROSJEAN, from your assessment of duty at the rate of 19 per cent, under the classification in schedule D of the tariff of 1857, of "manufactures of worsted, or of which worsted shall be a component material, not otherwise provided for," on an article described by the importers as "felt slipper patterns." The appellants claim entry of the article in question at a duty of 4 per cent, under the classification in schedule H of "manufactures of mohair cloth, silk twist, or other manufactures of cloth, suitable for the manufacture of shoes, cut in slips or patterns of the size and shape for shoes, slippers, boots, bootees, gaiters, or buttons, exclusively, not combined with India-rubber." It appears from the samples submitted, that the "patterns" are stamped or printed on cloth, and imported in pieces containing six patterns each. The fabric being worsted, in whole or in part, and not cut into separate patterns, you assessed a duty of 19 per cent, under the classification in schedule D of "manufactures of worsted, or of which worsted shall be a component material, not otherwise provided for." The terms of the law are, in the opinion of the Department, too plain and explicit to admit of any other construction. It is not a sufficient compliance with the law that the patterns are stamped or printed on the cloth. The fabric should have been "cut into slips or patterns of the size and shape for slippers," and in that form imported, in order to entitle them to entry at 4 per cent under schedule H. Your decision assessing a duty of 19 per cent under schedule D is affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &c., New York.

## DESICCATED AND COMPRESSED VEGETABLES.

TREASURY DEPARTMENT, August 30, 1859.

SIR:—I acknowledge the receipt of your report, under date of the 1st instant, on the appeal of Mr. AUGUSTE CASSIN from your assessment of a duty of 24 per cent on an article described by the importer as "desiccated and compressed vegetables" under the classification of "potatoes" in schedule C of the tariff of 1857, the appraisers reporting it as desiccated potatoes ground and compressed. The importer claims entry at a duty of 15 per cent, the article not being enumerated, he contends, in any schedule of the tariff. It appears from Mr. CASSIN's printed list of prices, that certain vegetables (including potatoes) are subjected to a process of desiccation and compression, and, being thus greatly reduced in bulk, are of easy stowage, and may be preserved for an indefinite period in all climates. They are packed in zinc boxes, and in that form imported. The Department is of opinion, after a careful examination of the case, that the article in question, by the processes to which it has been subjected, is taken out of the classification to which you referred it on the entry, and cannot, as claimed by the importer, be treated as unenumerated; but that it is provided for in schedule B of the tariff of 1857, and liable to a duty of 30 per cent under the classification of "prepared vegetables, meats, poultry, and game, sealed or enclosed in cans or otherwise." I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &amp;c., New York.

## PLATE GLASS.

TREASURY DEPARTMENT, August 31, 1859.

SIR:—I have examined your report and appeal of Messrs. HEROY, STRUTHERS & Co. in regard to the proper rate of duty to be assessed on an article known as "plate glass," a sample of which, submitted by the importers and identified by you in your report of the 19th instant, is now before me. The importers claim entry of the article, at a duty of 15 per cent, as "window glass, broad, crown, or cylinder." It is admitted that it is known as "plate," and not as "broad," "crown," or "cylinder" glass. It is not enough that the article is used, as the importers allege it is, for windows, to bring it within that classification in schedule E, which does not include all glass used for windows, but only "broad, crown, and cylinder;" and as the article in question is not shown to have been known in commerce under any one of those names when the tariff law was enacted, it cannot be held to fall within that classification. It was, in the opinion of the Department, properly subjected by you to a duty of 24 per cent under the classification in schedule C of "manufactures, articles, vessels, and wares, of glass, or of which glass shall be a component material, not otherwise provided for." I am, very respectfully,

P. CLAYTON, Acting Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &amp;c., New York.

## ITALIAN CLOTHS—ENTRY CLAIMED AS BUTTON STUFFS.

TREASURY DEPARTMENT, September 15, 1859.

SIR:—I have examined your report of the 2d ultimo, on the appeal of Messrs. GODDARD & BROTHERS from your decision assessing a duty of 19 per cent, as a manufacture of worsted, on an article described by them as "Italian cloth," imported as "button stuff." The importers claim to enter it at a duty of 4 per cent, under schedule H of the tariff of 1857, of "manufactures of mohair cloth, silk twist, or other manufactures of cloth, suitable for the manufacture of shoes, cut in slips or patterns of the size and shape for shoes, slippers, boots, bootees, gaiters, or buttons, exclusively, not combined with India-rubber." It appears from the sample submitted to the Department that the fabric is imported in the piece, punctured at intervals of about 14 inches. It is clear that it does not come within the terms of the classification in schedule H, as claimed by the im-

porters. It may be used, it is believed, for other purposes than button stuff, and it is not "cut in slips or patterns of the size and shape for buttons, exclusively." It was, in the opinion of the Department, properly subjected, by you, to duty at the rate of 19 per cent, under the classification in schedule D of "manufactures of worsted, or of which worsted shall be a component material, not otherwise provided for." I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &c, New York.

### TRAVELING RUGS—ENTRY CLAIMED AS BLANKETS.

TREASURY DEPARTMENT, September 21, 1859.

SIR:—I acknowledge the receipt of your report, under date of the 19th ultimo, on the appeal of Mr. C. F. LIVERMORE from your assessment of duties on certain merchandise alleged by them to be "blankets," and to be entitled as such to entry at the rate of 15 per cent under the classification of "blankets of all kinds," in schedule E of the tariff of 1857, but which were decided by you to be dutiable as "manufactures of wool" at the rate of 24 per cent, under the classification in schedule C of "manufactures of wool, or of which wool shall be the component material of chief value, not otherwise provided for." It appears, from the samples submitted to the Department and the papers in the case, that the articles in question are known as "traveling rugs," and that they are not "blankets" as that term has been defined by this Department on page 555 of the General Regulations of February 1, 1857; nor does it appear that they were so known and recognized at the passage of the tariff act. The Department has no doubt that the duty was properly assessed at the rate of 24 per cent. If wool is the sole material, or the material of chief value, the articles in question would become chargeable with duty at that rate under the classification in schedule C to which you referred them on the entry. If composed of other materials, inasmuch as they are prepared, sewed, and made up with the view of being worn on the person, they would become liable to the same rate of duty under the classification in schedule C of "articles worn by men, women, and children, of whatever material composed, made up, or made wholly or in part by hand." I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, &c, New York.

### NEW CHINA TARIFF.

In the *Merchants' Magazine*, volume xl., page 745, will be found the trade regulations resulting from the new treaties. We append here the new tariff as given in the *North China Herald*:—

#### IMPORTS.

These initials signify as follows:—(T) tale, (M) mace, (C) candarines, (c) cash. The tale is valued at about 6s. 8d. sterling, and contains 10 mace, 100 candarines, or 1,000 cash. The catty is about 1½ lbs.

|  | T. | M. | C. | C. |
|--|----|----|----|----|
| Agar-Agar, per hundred catties . . . . .           | 0  | 1  | 5  | 0  |
| Asafetida, per hundred catties . . . . .           | 0  | 6  | 5  | 0  |
| Beeswax, per hundred catties . . . . .             | 1  | 0  | 0  | 0  |
| Betelnut, per hundred catties . . . . .            | 0  | 1  | 5  | 0  |
| Husk, per hundred catties . . . . .                | 0  | 0  | 7  | 5  |
| Bicho-de-mar, black, per hundred catties . . . . . | 1  | 5  | 0  | 0  |
| White, per hundred catties . . . . .               | 0  | 3  | 5  | 0  |
| Birds-nests, 1st quality, per catty . . . . .      | 0  | 5  | 5  | 0  |
| 2d quality, per catty . . . . .                    | 0  | 4  | 5  | 0  |
| 3d quality, or uncleaned, per catty . . . . .      | 0  | 1  | 5  | 0  |
| Buttons, brass, per gross . . . . .                | 0  | 0  | 5  | 5  |
| Camphor, baroons, clean, per catty . . . . .       | 1  | 3  | 0  | 0  |
| Refuse, per catty . . . . .                        | 0  | 7  | 2  | 0  |

|  |             |
|--|-------------|
| Canvass and cotton duck, not exceeding 50 yds. long, per piece . . . . .   | 0 4 2 0     |
| Cardamons, superior, per hundred catties . . . . .   | 1 0 0 0     |
| Inferior, or grains of paradise, per hundred catties . . . . .   | 0 5 0 0     |
| Cinnamon, per hundred catties . . . . .  | 1 5 0 0     |
| Clocks, 5 per cent. . . . .  | ad valorem. |
| Cloves, per hundred catties . . . . .  | 0 5 0 0     |
| Mother, per hundred catties . . . . .  | 0 1 8 0     |
| Coal, foreign, per ton . . . . .   | 0 0 5 0     |
| Cochineal, per hundred catties . . . . .   | 5 0 0 0     |
| Coral, per catty . . . . .   | 0 1 0 0     |
| Cordage, Manilla, per hundred catties . . . . .  | 0 3 5 0     |
| Cornelians, per hundred stones . . . . .   | 0 3 0 0     |
| Beads, per hundred catties . . . . .   | 7 0 0 0     |
| Cotton, raw, per hundred catties . . . . .   | 0 3 5 0     |
| Cotton piece goods—grey, white, plain and twilled, exceeding 34 inches wide, and not exceeding 40 yards long, per piece . . . . .      | 0 0 8 0     |
| Exceeding 34 inches wide, & exceeding 40 yds. long, every 10 yds. . . . .  | 0 0 2 0     |
| Drills and jeans, not exceeding 30 inches wide, and not exceeding 40 yards long, per piece . . . . .                                   | 0 1 0 0     |
| Not exceeding 30 inches wide, & not exceeding 30 yds. long, per piece . . . . .  | 0 0 7 5     |
| T-cloths, not exceeding 34 inches wide, and not exceeding 48 yards long, per piece . . . . .   | 0 0 8 0     |
| Not exceeding 34 inches wide, & not exceeding 24 yds. long, per piece . . . . .  | 0 0 4 0     |
| Dyed, figured and plain, not exceeding 36 inches wide, and not exceeding 40 yards long, per piece . . . . .                            | 0 1 5 0     |
| Fancy, white brocades, and white spotted shirtings, not exceeding 36 inches wide, and not exceeding 40 yards long, per piece . . . . . | 0 1 0 0     |
| Printed, chintzes and furnitures, not exceeding 31 inches wide, and not exceeding 30 yards long, per piece . . . . .                   | 0 0 7 0     |
| Cambrics, not exceeding 46 inches wide, and not exceeding 24 yards long, per piece . . . . .   | 0 0 7 0     |
| Not exceeding 46 inches wide, & not exceeding 12 yds. long, per piece . . . . .  | 0 0 3 5     |
| Muslins, not exceeding 46 inches wide, and not exceeding 24 yards long, per piece . . . . .  | 0 0 7 5     |
| Not exceeding 46 inches wide, & not exceeding 12 yds. long, per piece . . . . .  | 0 0 3 5     |
| Damasks, not exceeding 36 inches wide, and not exceeding 40 yards long, per piece . . . . .  | 0 2 0 0     |
| Dimities or quiltings, not exceeding 40 inches wide, and not exceeding 12 yards long, per piece . . . . .                              | 0 0 6 5     |
| Ginghams, not exceeding 28 inches wide, and not exceeding 30 yards long per piece . . . . .  | 0 0 3 5     |
| Handkerchiefs, not exceeding 1 yard square, per dozen . . . . .  | 0 0 2 5     |
| Fustians, not exceeding 35 yards, per piece . . . . .  | 0 2 0 0     |
| Velveteen, not exceeding 34 yards long, per piece . . . . .  | 0 1 5 0     |
| Cotton thread, per hundred catties . . . . .   | 0 7 2 0     |
| Cotton yarn, per hundred catties . . . . .   | 0 7 0 0     |
| Cow bezoar, Indian, per catty . . . . .  | 1 5 0 0     |
| Cutch, per hundred catties . . . . .   | 0 1 8 0     |
| Elephants' teeth, whole, per hundred catties . . . . .   | 4 0 0 0     |
| Broken, per hundred catties . . . . .  | 3 0 0 0     |
| Feathers, kingfishers, peacocks, per hundred . . . . .   | 0 4 0 0     |
| Fishmaws, per hundred catties . . . . .  | 1 0 0 0     |
| Fish sk in, per hundred catties . . . . .  | 0 2 0 0     |
| Flints, per hundred catties . . . . .  | 0 0 3 0     |
| Gambier, per hundred catties . . . . .   | 0 1 5 0     |
| Gamboge, per hundred catties . . . . .   | 1 0 0 0     |
| Ginseng, American, crude, per hundred catties . . . . .  | 6 0 0 0     |
| Clarified, per hundred catties . . . . .   | 8 0 0 0     |
| Glass, window, per box of one hundred square feet . . . . .  | 0 1 5 0     |
| Glue, per hundred catties . . . . .  | 0 1 5 0     |
| Gold thread, real, per catty . . . . .   | 1 6 0 0     |
| Imitation, per catty . . . . .   | 0 0 3 0     |
| Gum, benjamin, per hundred catties . . . . .   | 0 6 0 0     |

|   |    |          |   |   |
|---|----|----------|---|---|
| Oil of, per hundred catties.....  | 0  | 6        | 0 | 0 |
| Dragon's blood, per hundred catties.....  | 0  | 4        | 5 | 0 |
| Myrrh, per hundred catties.....   | 0  | 4        | 5 | 0 |
| Olibanum, per hundred catties.....  | 0  | 4        | 5 | 0 |
| Hides, buffalo and cow, per hundred catties.....  | 0  | 5        | 0 | 0 |
| Rhinoceros, per hundred catties.....  | 0  | 4        | 2 | 0 |
| Horns, buffalo, per hundred catties.....  | 0  | 2        | 5 | 0 |
| Deer, per hundred catties.....  | 0  | 2        | 5 | 0 |
| Rhinoceros, per hundred catties.....  | 2  | 0        | 0 | 0 |
| Indigo, liquid, per hundred catties.....  | 0  | 1        | 8 | 0 |
| Isinglass, per hundred catties.....   | 0  | 6        | 5 | 0 |
| Lacquered-ware, per hundred catties.....  | 1  | 0        | 0 | 0 |
| Leather, per hundred catties.....   | 0  | 4        | 2 | 0 |
| Linen, fine, as Irish or Scotch, not exceeding 50 yards long, per piece.  | 0  | 5        | 0 | 0 |
| Linen, coarse, as linen and cotton, or silk and linen mixtures, not ex-<br>ceeding fifty yards long, per piece..... | 0  | 2        | 0 | 0 |
| Lucraban seed, per hundred catties.....   | 0  | 0        | 3 | 5 |
| Mace, per hundred catties.....  | 1  | 0        | 0 | 0 |
| Mangrove bark, per hundred catties.....   | 0  | 0        | 3 | 0 |
| Metals—copper, manufactured, as in sheets, rods, nails, per hundred<br>catties.....                                 | 1  | 5        | 0 | 0 |
| Unmanufactured, as in slabs, per hundred catties.....   | 1  | 0        | 0 | 0 |
| Yellow metal sheathing and nails, per hundred catties.....  | 0  | 9        | 0 | 0 |
| Japan, per hundred catties.....   | 0  | 6        | 0 | 0 |
| Iron, manufactured, as in sheets, rods, bars, hoops, per hundred catties  | 0  | 1        | 2 | 5 |
| Unmanufactured, as in pigs, per hundred catties.....  | 0  | 0        | 7 | 5 |
| Kentledge, per hundred catties.....   | 0  | 0        | 1 | 0 |
| Wire, per hundred catties.....  | 0  | 2        | 5 | 0 |
| Lead, in pigs, per hundred catties.....   | 0  | 2        | 5 | 0 |
| In sheets, per hundred catties.....   | 0  | 5        | 5 | 0 |
| Quicksilver, per hundred catties.....   | 2  | 0        | 0 | 0 |
| Spelter, (saleable only under regulation appended,) per hundred<br>catties.....                                     | 0  | 2        | 5 | 0 |
| Steel, per hundred catties.....   | 0  | 2        | 5 | 0 |
| Tin, per hundred catties.....   | 1  | 2        | 5 | 0 |
| Tin plates, per hundred catties.....  | 0  | 4        | 0 | 0 |
| Mother of pearl shell, per hundred catties.....   | 0  | 2        | 0 | 0 |
| Musical boxes, five per cent.....   | ad | valorem. |   |   |
| Mussels, dried, per hundred catties.....  | 0  | 2        | 0 | 0 |
| Nutmegs, per hundred catties.....   | 2  | 5        | 0 | 0 |
| Olives, unpickled, salted or pickled, per hundred catties.....  | 0  | 1        | 8 | 0 |
| Opium, per hundred catties.....   | 30 | 0        | 0 | 0 |
| Pepper, black, per hundred catties.....   | 0  | 3        | 6 | 0 |
| White, per hundred catties.....   | 0  | 5        | 0 | 0 |
| Prawns, dried, per hundred catties.....   | 0  | 3        | 6 | 0 |
| Putchuck, per hundred catties.....  | 0  | 6        | 0 | 0 |
| Rattans, per hundred catties.....   | 0  | 1        | 5 | 0 |
| Rose maloes, per hundred catties.....   | 1  | 0        | 0 | 0 |
| Salt fish, per hundred catties.....   | 0  | 1        | 8 | 0 |
| Saltpeter, (saleable only under regulation appended,) per hundred<br>catties.....                                   | 0  | 5        | 0 | 0 |
| Sandal-wood, per hundred catties.....   | 0  | 4        | 0 | 0 |
| Sapan-wood, per hundred catties.....  | 0  | 1        | 0 | 0 |
| Sea-horse teeth, per hundred catties.....   | 2  | 0        | 0 | 0 |
| Sharks' fins, black, per hundred catties.....   | 0  | 5        | 0 | 0 |
| White, per hundred catties.....   | 1  | 5        | 0 | 0 |
| Skins, per hundred.....   | 2  | 0        | 0 | 0 |
| Silver thread, real, per catty.....   | 1  | 3        | 0 | 0 |
| Imitation, per catty.....   | 0  | 0        | 3 | 0 |
| Sinews, buffalo and deer, per hundred catties.....  | 0  | 5        | 5 | 0 |
| Skins, fox, large, each.....  | 0  | 1        | 5 | 0 |

|  |    |   |   |   |
|--|----|---|---|---|
| Small, each.....   | 0  | 0 | 7 | 5 |
| Marten, each.....  | 0  | 1 | 5 | 0 |
| Sea otter, each.....   | 1  | 5 | 0 | 0 |
| Tiger and leopard, each.....   | 0  | 1 | 5 | 0 |
| Beaver, per hundred.....   | 5  | 0 | 0 | 0 |
| Doe, hare, and rabbit, per hundred.....  | 0  | 5 | 0 | 0 |
| Squirrel, per hundred.....   | 0  | 5 | 0 | 0 |
| Land otter, per hundred.....   | 2  | 0 | 0 | 0 |
| Raccoon, per hundred.....  | 2  | 0 | 0 | 0 |
| Smalts, per hundred catties.....   | 1  | 5 | 0 | 0 |
| Snuff, foreign, per hundred catties.....   | 7  | 2 | 0 | 0 |
| Sticklac, per hundred catties.....   | 0  | 3 | 0 | 0 |
| Stockfish, per hundred catties.....  | 0  | 5 | 0 | 0 |
| Sulphur and brimstone, (saleable only under regulations appended,) per hundred catties.....                        | 0  | 2 | 0 | 0 |
| Telescopes, spy and opera glasses, looking glasses, & mirrors, 5 per cent ad valorem.                              |    |   |   |   |
| Tigers' bones, per hundred catties.....  | 1  | 5 | 5 | 0 |
| Timber—masts and spars, hard wood, not exceeding forty feet, each..  | 4  | 0 | 0 | 0 |
| Masts and spars, hard wood, not exceeding sixty feet, each.....  | 6  | 0 | 0 | 0 |
| Masts and spars, hard wood, exceeding sixty feet, each.....  | 10 | 0 | 0 | 0 |
| Masts and spars, soft wood, not exceeding forty feet, each.....  | 2  | 0 | 0 | 0 |
| Masts and spars, soft wood, not exceeding sixty feet, each.....  | 4  | 5 | 0 | 0 |
| Masts and spars, soft wood, exceeding sixty feet, each.....  | 6  | 5 | 0 | 0 |
| Beams, hard wood, not exceeding 26 feet long, and under 12 inches square, each.....                                | 0  | 1 | 5 | 0 |
| Planks, hard wood, not exceeding 24 feet long, 12 inches wide, and 3 inches thick, per hundred.....                | 3  | 5 | 0 | 0 |
| Planks, hard wood, not exceeding 16 feet long, 12 inches wide, and 3 inches thick, per hundred.....                | 2  | 0 | 0 | 0 |
| Planks, soft wood, per thousand square feet.....   | 0  | 7 | 0 | 0 |
| Planks, teak, per cubic foot.....  | 0  | 0 | 3 | 5 |
| Tinder, per hundred catties.....   | 0  | 3 | 5 | 0 |
| Tortoise shell, per catty.....   | 0  | 2 | 5 | 0 |
| Broken, per catty.....   | 0  | 0 | 7 | 2 |
| Umbrellas, each.....   | 0  | 0 | 3 | 5 |
| Velvets, not exceeding thirty-four yards long, per piece.....  | 0  | 1 | 8 | 0 |
| Watches, per pair.....   | 1  | 0 | 0 | 0 |
| Emaillés a perles, per pair.....   | 4  | 5 | 0 | 0 |
| Wax, Japan, per hundred catties.....   | 0  | 6 | 5 | 0 |
| Woods—camagon, per hundred catties.....  | 0  | 0 | 3 | 0 |
| Ebony, per hundred catties.....  | 0  | 1 | 5 | 0 |
| Garro, per hundred catties.....  | 2  | 0 | 0 | 0 |
| Fragrant, per hundred catties.....   | 0  | 4 | 5 | 0 |
| Kranjee, 35 feet long, 1 foot 8 inches wide, and 1 foot thick, each..  | 0  | 8 | 0 | 0 |
| Laka, per hundred catties.....   | 0  | 1 | 4 | 5 |
| Red, per hundred catties.....  | 0  | 1 | 1 | 5 |
| Woolen manufactures, viz:—Blankets, per pair.....  | 0  | 2 | 0 | 0 |
| Broadcloth and Spanish stripes, habits, and medium cloth, fifty-one to sixty-four inches wide, per chang.....      | 0  | 1 | 2 | 0 |
| Long ells, thirty-one inches wide, per chang.....  | 0  | 0 | 4 | 5 |
| Camlets, English, thirty-one inches wide, per chang.....   | 0  | 0 | 5 | 0 |
| Camlets, Dutch, thirty-three inches wide, per chang.....   | 0  | 1 | 0 | 0 |
| Camlets, imitation and bombazettes, per chang.....   | 0  | 0 | 3 | 5 |
| Cassimeres, flannel, and narrow cloth, per chang.....  | 0  | 0 | 4 | 0 |
| Lastings, thirty-one inches wide, per chang.....   | 0  | 0 | 5 | 0 |
| Lastings, imitation and Orleans, thirty-four inches wide, per chang.   | 0  | 0 | 3 | 5 |
| Bunting, not exceeding 24 inches wide, 40 yards long, per piece....  | 0  | 2 | 0 | 0 |
| Bunting and cotton mixtures, viz:—Lusters, plain and brocaded, not exceeding thirty-one yards long, per piece..... | 0  | 2 | 0 | 0 |
| Inferior Spanish stripes, per chang.....   | 0  | 1 | 0 | 0 |
| Woolen yarn, per hundred catties.....  | 3  | 0 | 0 | 0 |

## EXPORTS.

|   | T. | M. | C. | C.         |
|---|----|----|----|------------|
| Alum, per hundred catties . . . . .   | 0  | 0  | 4  | 5          |
| Green, or copperas, per hundred catties . . . . .                                   | 0  | 1  | 0  | 0          |
| Aniseed, star, per hundred catties . . . . .  | 0  | 5  | 0  | 0          |
| Broder, per hundred catties . . . . .   | 0  | 2  | 5  | 0          |
| Oil, per hundred catties . . . . .  | 5  | 0  | 0  | 0          |
| Apricot seeds, or almonds, per hundred catties . . . . .                            | 0  | 4  | 5  | 0          |
| Arsenic, per hundred catties . . . . .  | 0  | 4  | 5  | 0          |
| Artificial flowers, per hundred catties . . . . .                                   | 1  | 5  | 0  | 0          |
| Bamboo-ware, per hundred catties . . . . .  | 0  | 7  | 5  | 0          |
| Bangles, or glass armlets, per hundred catties . . . . .                            | 0  | 5  | 0  | 0          |
| Beans and peas, (except from Newchwang and Tangchow,) per hundred catties . . . . . | 0  | 0  | 6  | 0          |
| Bean cake (except from Newchwang & Tangchow,) per hundred catties . . . . .         | 0  | 0  | 3  | 5          |
| Bone and horn ware, per hundred catties . . . . .                                   | 1  | 5  | 0  | 0          |
| Brass buttons, per hundred catties . . . . .  | 3  | 0  | 0  | 0          |
| Foil, per hundred catties . . . . .   | 1  | 5  | 0  | 0          |
| Ware, per hundred catties . . . . .   | 1  | 0  | 0  | 0          |
| Wire, per hundred catties . . . . .   | 1  | 1  | 5  | 0          |
| Camphor, per hundred catties . . . . .  | 0  | 7  | 5  | 0          |
| Canes, per thousand . . . . .   | 0  | 5  | 0  | 0          |
| Cantharides, per hundred catties . . . . .  | 2  | 0  | 0  | 0          |
| Capoor cutchery, per hundred catties . . . . .                                      | 0  | 3  | 0  | 0          |
| Carpets and druggets, per hundred . . . . .   | 3  | 5  | 0  | 0          |
| Cassia lignea, per hundred catties . . . . .  | 0  | 6  | 0  | 0          |
| Buds, per hundred catties . . . . .   | 0  | 8  | 0  | 0          |
| Twigs, per hundred catties . . . . .  | 0  | 1  | 5  | 0          |
| Oil, per hundred catties . . . . .  | 9  | 0  | 0  | 0          |
| Castor oil, per hundred catties . . . . .   | 0  | 2  | 0  | 0          |
| Chestnuts, per hundred catties . . . . .  | 0  | 1  | 0  | 0          |
| China root . . . . .  | 0  | 1  | 3  | 0          |
| China ware, fine, per hundred catties . . . . .                                     | 0  | 9  | 0  | 0          |
| Coarse, per hundred catties . . . . .   | 0  | 4  | 5  | 0          |
| Cinnabar, per hundred catties . . . . .   | 0  | 7  | 5  | 0          |
| Clothing, cotton, per hundred catties . . . . .                                     | 1  | 5  | 0  | 0          |
| Silk, per hundred catties . . . . .   | 10 | 0  | 0  | 0          |
| Coal, per hundred catties . . . . .   | 0  | 0  | 4  | 0          |
| Coir, per hundred catties . . . . .   | 0  | 1  | 0  | 0          |
| Copper ore, per hundred catties . . . . .   | 0  | 5  | 0  | C          |
| Sheathing, old, per hundred catties . . . . .                                       | 0  | 5  | 0  | 0          |
| And pewter ware, per hundred catties . . . . .                                      | 1  | 1  | 5  | 0          |
| Corals, false, per hundred catties . . . . .  | 0  | 3  | 5  | 0          |
| Cotton, raw, per hundred catties . . . . .  | 0  | 3  | 5  | 0          |
| Rags, per hundred catties . . . . .   | 0  | 0  | 4  | 5          |
| Cow Bezoir, per catty . . . . .   | 0  | 3  | 6  | 0          |
| Crackers, fireworks, per hundred catties . . . . .                                  | 0  | 5  | 0  | 0          |
| Cubebs, per hundred catties . . . . .   | 1  | 5  | 0  | 0          |
| Curiosities, antiques, five per cent. . . . .                                       |    |    |    | ad valorem |
| Dates, black, per hundred catties . . . . .   | 0  | 1  | 5  | 0          |
| Red, per hundred catties . . . . .  | 0  | 0  | 9  | 0          |
| Dye, green, per catty . . . . .   | 0  | 8  | 0  | 0          |
| Eggs, preserved, per thousand . . . . .   | 0  | 3  | 5  | 0          |
| Fans, feather, per hundred . . . . .  | 0  | 7  | 5  | 0          |
| Paper, per hundred . . . . .  | 0  | 0  | 4  | 5          |
| Palm leaf, trimmed, per thousand . . . . .  | 0  | 3  | 6  | 0          |
| Untrimmed, per thousand . . . . .   | 0  | 2  | 0  | 0          |
| Felt cuttings, per hundred catties . . . . .  | 0  | 1  | 0  | 0          |
| Caps, per hundred . . . . .   | 1  | 2  | 5  | 0          |
| Fungus, or agaric, per hundred catties . . . . .                                    | 0  | 6  | 0  | 0          |
| Galangal, per hundred catties . . . . .   | 0  | 1  | 0  | 0          |
| Garlic, per hundred catties . . . . .   | 0  | 0  | 3  | 5          |
| Ginseng, native, five per cent. . . . .   |    |    |    | ad valorem |

|  |   |   |   |   |
|--|---|---|---|---|
| Corean or Japan, 1st quality, per catty.....                             | 0 | 5 | 0 | 0 |
| Second quality, per catty.....   | 0 | 3 | 5 | 0 |
| Glass beads, per hundred catties.....                                    | 0 | 5 | 0 | 0 |
| Or vitrified ware, per hundred catties.....                              | 0 | 5 | 0 | 0 |
| Grass cloth, fine, per hundred catties.....                              | 2 | 5 | 0 | 0 |
| Coarse, per hundred catties.....   | 0 | 7 | 5 | 0 |
| Ground nuts, per hundred catties.....                                    | 0 | 1 | 0 | 0 |
| Cake, per hundred catties.....   | 0 | 0 | 3 | 0 |
| Gypsum, ground, or plaster of Paris, per hundred catties.....            | 0 | 0 | 3 | 0 |
| Hair, camels', per hundred catties.....                                  | 1 | 0 | 0 | 0 |
| Goats', per hundred catties.....   | 0 | 1 | 8 | 0 |
| Hams, per hundred catties.....   | 0 | 5 | 5 | 0 |
| Hartall, or orpiment, per hundred catties.....                           | 0 | 3 | 5 | 0 |
| Hemp, per hundred catties.....   | 0 | 3 | 5 | 0 |
| Honey, per hundred catties.....  | 0 | 9 | 0 | 0 |
| Horns, deers', young, per pair.....                                      | 0 | 9 | 0 | 0 |
| Old, per hundred catties.....  | 1 | 3 | 5 | 0 |
| India ink, per hundred catties.....                                      | 4 | 0 | 0 | 0 |
| Indigo, dry, per hundred catties.....                                    | 1 | 0 | 0 | 0 |
| Ivory ware, per catty.....   | 0 | 1 | 5 | 0 |
| Joss sticks, per hundred catties.....                                    | 0 | 2 | 0 | 0 |
| Kittysols, or paper umbrellas, per hundred.....                          | 0 | 5 | 0 | 0 |
| Lacquered ware, per hundred catties.....                                 | 1 | 0 | 0 | 0 |
| Lamp wicks, per hundred catties.....                                     | 0 | 6 | 0 | 0 |
| Lead, red, (minium,) per hundred catties.....                            | 0 | 3 | 5 | 0 |
| White (ceruse,) per hundred catties.....                                 | 0 | 3 | 5 | 0 |
| Yellow (massicot,) per hundred catties.....                              | 0 | 3 | 5 | 0 |
| Leather articles, as pouches, purses, per hundred catties.....           | 1 | 5 | 0 | 0 |
| Green, per hundred catties.....  | 1 | 8 | 0 | 0 |
| Lichees, per hundred catties.....  | 0 | 2 | 0 | 0 |
| Lily flowers, dried, per hundred catties.....                            | 0 | 2 | 7 | 0 |
| Seeds or lotus nuts, per hundred catties.....                            | 0 | 5 | 0 | 0 |
| Liquorice, per hundred catties.....                                      | 0 | 1 | 3 | 5 |
| Lung-ngan, per hundred catties.....                                      | 0 | 2 | 5 | 0 |
| Without the stone, per hundred catties.....                              | 0 | 3 | 5 | 0 |
| Manure cakes or poudrette, per hundred catties.....                      | 0 | 0 | 9 | 0 |
| Marble slabs, per hundred catties.....                                   | 0 | 2 | 0 | 0 |
| Mats of all kind, per hundred.....                                       | 0 | 2 | 0 | 0 |
| Matting, per roll of forty yards.....                                    | 0 | 2 | 0 | 0 |
| Melon seeds, per hundred catties.....                                    | 0 | 1 | 0 | 0 |
| Mother-of-pearl-ware, per catty.....                                     | 0 | 1 | 0 | 0 |
| Mushrooms, per hundred catties.....                                      | 1 | 5 | 0 | 0 |
| Musk, per catty.....   | 0 | 9 | 0 | 0 |
| Nankeen and native cotton cloths, per hundred catties.....               | 1 | 5 | 0 | 0 |
| Nutgalls, per hundred catties.....                                       | 0 | 5 | 0 | 0 |
| Oil, as bean, tea, wood, cotton, and hemp seed, per hundred catties..... | 0 | 3 | 0 | 0 |
| Oiled paper, per hundred catties.....                                    | 0 | 4 | 5 | 0 |
| Olive seed, per hundred catties.....                                     | 0 | 3 | 0 | 0 |
| Oyster shells, sea shells, per hundred catties.....                      | 0 | 0 | 9 | 0 |
| Paint, green, per hundred catties.....                                   | 0 | 4 | 5 | 0 |
| Palampore, or cotton bedquilts, per hundred.....                         | 2 | 7 | 5 | 0 |
| Paper, first quality, per hundred catties.....                           | 0 | 7 | 0 | 0 |
| Second quality, per hundred catties.....                                 | 0 | 4 | 0 | 0 |
| Pearls, false, per hundred catties.....                                  | 2 | 0 | 0 | 0 |
| Peel, orange, per hundred catties.....                                   | 0 | 3 | 0 | 0 |
| Pumelo, first quality, per hundred catties.....                          | 0 | 4 | 5 | 0 |
| Second quality, per hundred catties.....                                 | 0 | 1 | 5 | 0 |
| Peppermint leaf, per hundred catties.....                                | 0 | 1 | 0 | 0 |
| Oil, per hundred catties.....  | 3 | 5 | 0 | 0 |
| Pictures and paintings, each.....  | 0 | 1 | 0 | 0 |
| On pith or rice paper, per hundred.....                                  | 0 | 1 | 0 | 0 |
| Pottery, earthenware, per hundred catties.....                           | 0 | 0 | 5 | 0 |
| Preserves, comfits and sweetmeats, per hundred catties.....              | 0 | 5 | 0 | 0 |

|   |    |   |   |   |
|---|----|---|---|---|
| Rattans, split, per hundred catties .....   | 0  | 2 | 5 | 0 |
| Rattan-ware, per hundred catties.....   | 0  | 3 | 0 | 0 |
| Rhubarb, per hundred catties.....   | 1  | 2 | 5 | 0 |
| Rice or paddy, wheat, millet, and other grains, per hundred catties...  | 0  | 1 | 0 | 0 |
| Rugs of hair or skin, each.....   | 0  | 0 | 9 | 0 |
| Shamshoe, per hundred catties .....   | 0  | 1 | 5 | 0 |
| Sandalwood-ware, per catty.....   | 0  | 1 | 0 | 0 |
| Seaweed, per hundred catties .....  | 0  | 1 | 5 | 0 |
| Sesamum seed, per hundred catties .....   | 0  | 1 | 3 | 5 |
| Shoes and boots, leather or satin, per hundred pair .....   | 3  | 0 | 0 | 0 |
| Straw, per hundred pair.....  | 0  | 1 | 8 | 0 |
| Silk, raw and thrown, per hundred catties.....  | 10 | 0 | 0 | 0 |
| Yellow, from Szechuen, per hundred catties.....   | 7  | 0 | 0 | 0 |
| Reeled, from Dupions, per hundred catties .....   | 5  | 0 | 0 | 0 |
| Wild raw, per hundred catties.....  | 2  | 5 | 0 | 0 |
| Refuse, per hundred catties.....  | 1  | 0 | 0 | 0 |
| Cocoons, per hundred catties.....   | 3  | 0 | 0 | 0 |
| Floss, Canton, per hundred catties .....  | 4  | 3 | 0 | 0 |
| From other provinces, per hundred catties.....  | 10 | 0 | 0 | 0 |
| Ribbons and thread, per hundred catties .....   | 10 | 0 | 0 | 0 |
| Piece goods—poongees, shawls, scarfs, crape, satin, gauze, velvet,<br>and embroidered goods, per hundred catties..... | 12 | 0 | 0 | 0 |
| Szechuen and shantung, per hundred catties .....  | 4  | 5 | 0 | 0 |
| Tassels, per hundred catties.....   | 10 | 0 | 0 | 0 |
| Caps, per hundred.....  | 0  | 9 | 0 | 0 |
| And cotton mixtures, per hundred catties.....   | 5  | 5 | 0 | 0 |
| Silver and gold ware, per hundred catties.....  | 10 | 0 | 0 | 0 |
| Snuff, per hundred catties .....  | 0  | 8 | 0 | 0 |
| Soy, per hundred catties.....   | 0  | 4 | 0 | 0 |
| Straw braid, per hundred catties.....   | 0  | 7 | 0 | 0 |
| Sugar, brown, per hundred catties.....  | 0  | 1 | 2 | 0 |
| White, per hundred catties.....   | 0  | 2 | 0 | 0 |
| Candy, per hundred catties.....   | 0  | 2 | 5 | 0 |
| Tallow, animal, per hundred catties.....  | 0  | 2 | 0 | 0 |
| Vegetable, per hundred catties .....  | 0  | 3 | 0 | 0 |
| Tea, per hundred catties.....   | 2  | 5 | 0 | 0 |
| Tin foil, per hundred catties .....   | 1  | 2 | 5 | 0 |
| Tobacco, prepared, per hundred catties .....  | 0  | 4 | 5 | 0 |
| Leaf, per hundred catties.....  | 0  | 1 | 5 | 0 |
| Tortoise shell-ware, per catty.....   | 0  | 2 | 0 | 0 |
| Trunks, leather, per hundred catties .....  | 1  | 5 | 0 | 0 |
| Turmeric, per hundred catties .....   | 0  | 1 | 0 | 0 |
| Twine, hemp, Canton, per hundred catties.....   | 0  | 1 | 5 | 0 |
| Soochow, per hundred catties.....   | 0  | 5 | 0 | 0 |
| Turnips, salted, per hundred catties .....  | 0  | 1 | 8 | 0 |
| Varnish, or crude lacquer, per hundred catties .....  | 0  | 5 | 0 | 0 |
| Vermicelli, per hundred catties.....  | 0  | 1 | 8 | 0 |
| Vermillion, per hundred catties.....  | 2  | 5 | 0 | 0 |
| Wax, white or insect, per hundred catties.....  | 1  | 5 | 0 | 0 |
| Wood, piles, poles, and joists, each.....   | 0  | 0 | 3 | 0 |
| Ware, per hundred catties .....   | 1  | 1 | 5 | 0 |
| Wool, per hundred catties.....  | 0  | 3 | 5 | 0 |

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#### IMPORTANT COMMERCIAL CHANGE IN HAYTI.

It is known to our commercial readers that, next to Brazil, Hayti is the largest coffee-producing country, from which our markets are supplied with that article. The total imports of coffee into the United States in 1857 amounted to 240,243,684 pounds, at a value of \$22,386,879, of which we imported from Brazil 197,224,922 pounds, at a value of \$17,981,424, and from Hayti 14,869,500 pounds, valued at \$1,530,414, the remainder being distributed in smaller quantities through twenty-two other coffee-producing countries. The corresponding proportions in 1858 were:—Total importation 188,937,111 pounds, valued at

\$18,341,081; from Brazil 148,919,145 pounds, at a value of \$14,236,547; and from Hayti 15,037,686 pounds, valued at \$1,608,661, the remainder as in the preceding year. The above figures show that while there was a large decrease both in the total imports in 1858 as compared with 1857, and in the quantities imported from Brazil, the imports from Hayti show an increase of nearly one million of pounds the same period. The great drawback hitherto existing against the still further increase of the coffee trade of Hayti (for this is one, and about the only one, of the branches of Haytien industry that have survived the reign of philanthropy,) was the export duty of one-fifth in kind—“*du cinquieme*”—heretofore levied on the article for the benefit of the emperor's treasury. The change to which we desire to call the attention of those engaged in this branch of Haytien trade is the abolition of this odious impost, and the substitution of a uniform export duty of one-and-three-fourth piasters (\$1 75) per 100 pounds. Besides relieving the article of a heavy tax and substituting a much lighter one, this reform will effectually put an end to the constantly-recurring complaints of exporters of false measurement and other devices by which the government officials have invariably managed to tamper with the “scales of justice” in assigning to the government its “*cinquieme*” proportion.

We may look for a large increase in our importations of coffee during the next fiscal year, not only as the result of this liberal measure on the part of the new government of Hayti, but as the legitimate effect of the reduction to an almost nominal duty on American flour in Brazil, brought about by the judicious but persistent efforts of the present administration.

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## JOURNAL OF MINING, MANUFACTURES, AND ART.

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### THE DIFFERENT KINDS OF LEATHER.

**PROCESS OF FORMATION.** The skins of various animals, in their fresh state, are flexible, tough, and elastic, but in drying they become hard and horny. The art of restoring the supple qualities to skins and rendering them durable, appears to have been discovered at a very early period, and the word leather, from the Saxon lith, lithe, or lither, indicates the quality of suppleness. Leather is formed by the chemical union of the cutis or true skin of an animal with an astringent vegetable principle known as tannin, or tannic acid. Leather may, however, be prepared by impregnating the skin with alum, oil, or grease. In the animal hide or skin, the outer part, which is covered with hair or wool, is called the epidermis, or cuticle, below which is the reticulated tissue; and then, in contact with the flesh, is the dermis, or true skin, which is the only part which admits of being tanned, and varies in thickness in different parts. When the tannin, which is soluble in water, is applied to the hides of animals from which the hair, epidermis, and any fleshy or fatty parts adhering to them are removed, and which hides then consist wholly of gellatin, also soluble in water, these two soluble substances so unite chemically as to form the wholly insoluble substance called leather. Of the ox-hides which are converted into leather, those supplied by bulls are thicker, stronger, and coarser in the grain than those of cows, while the hides of bullocks are intermediate between those of the bull and the cow. Such leather is employed for the soles of boots and shoes, for many parts of saddlery and harness, for making leather trunks, buckets, hose for fire-engines, pump-valves, &c.

**CONVERTING HIDES INTO HARD LEATHER.** The process necessary to convert hides into the thick hard leather used for the soles of boots and shoes is as follows:—The horns are removed from the hides, and the latter are scraped, steeped,

and sweated, and the hair removed. The hides are then immersed for a few days in a liquid which opens the pores and fits them for the action of the tanning ingredients.

In the old method of tanning, which is not yet entirely abandoned, the hides and powdered bark were laid in alternate layers in the tan-pit, which was then filled with water to the brim. After some months the pit was emptied and re-filled with fresh bark and water, and this process was repeated whenever the strength of the bark was exhausted. In this way the time required for impregnating the hides varied, according to their thickness and other circumstances, from one to four years. The process has been expedited by the use of a concentrated solution of bark instead of mere layers of bark in water. The variations of practice among different tanners extend to the substances used as an astringent, as well as to the manner of applying it.

**VARIOUS MATERIALS USED.** Ground oak bark, which was formerly the only material in common use, and is still the most general, produces good leather of a light fawn color. Valonia, of which considerable quantities are used by tanners, produces leather of great solidity and weight, the color of which is inclined to gray, and which is more impervious to water than that made with oak bark. Catechu, or terra-japonica, produces leather of a dark reddish fawn color, which is light, spongy, and pervious to water in a high degree. Another substance which has been used of late years is a kind of bean-pod called divi-divi. These substances are used either individually or in various combinations, and they are prepared with plain water or with ooze, with hot water or with cold, according to the judgment of the tanner. In whichever way the tanning is effected, the hide is subjected to the action of solutions, increasing progressively in strength until it is so perfectly penetrated that when cut through it presents a uniform brown color, any appearance of a light streak in the middle of its thickness being an indication of imperfect tanning. When the process is complete the hides are hung up and allowed to dry slowly, and while they are drying they are compressed by heating or rubbing, or by passing them between rollers, to give them firmness and density.

Of the thin skins prepared for ornamental purposes many are tanned with a substance called sumac, prepared from the well-known plant of that name. After a preparatory cleansing, &c., the skins are sewed up into the form of a bag, with the grain or hair side outwards; they are nearly filled with a solution of the sumac, inflated with air, the aperture tied up, and the bags then thrown into a cistern of hot sumac liquor. Being thus acted on, within and without, the skins are soon impregnated with the sumac. The bags are then opened, the liquor removed, and the skins washed, dried, dyed, and wrinkled by pressure with a grooved instrument.

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#### A NEW WHITE COLOR.

The brilliancy and whiteness of the finest white lead is but dim when compared with paint in sulphate of baryta. This color possesses the advantage of remaining unaltered under the influence of emanations of sulphureted hydrogen; it also enables painters to execute dim or lustrous white paintings at a saving of about two-thirds the present cost. For the sake of economy and sanitary amelioration, it would be desirable to see it employed in military buildings, in barracks, schools public monuments, and in the most humble dwellings.

TANNERIES IN THE STATE OF NEW YORK, 1835 AND 1855.

| Counties.         | 1835. |               | 1855.                 |     |               |                     |
|-------------------|-------|---------------|-----------------------|-----|---------------|---------------------|
|                   | No.   | Raw material. | Leather manufactured. | No. | Raw material. | Leather manufact'd. |
| Albany.....       | 27    | \$99,867      | \$106,017             | 10  | \$69,411      | \$126,000           |
| Alleghany.....    | 33    | 13,772        | 24,819                | 17  | 54,075        | 100,147             |
| Broome.....       | 20    | 10,054        | 17,264                | 20  | 170,159       | 467,808             |
| Cattaraugus..     | 19    | 5,693         | 11,116                | 15  | 74,217        | 95,324              |
| Cayuga.....       | 31    | 69,161        | 114,038               | 18  | 46,806        | 78,585              |
| Chautauque.....   | 46    | 28,010        | 49,322                | 25  | 53,214        | 90,524              |
| Chemung.....      | ..    | .....         | .....                 | 11  | 63,355        | 92,362              |
| Chenango.....     | 36    | 36,687        | 79,515                | 17  | 81,591        | 121,702             |
| Clinton.....      | 22    | 12,912        | 25,029                | 13  | 28,421        | 55,485              |
| Columbia.....     | 13    | 31,573        | 47,827                | 8   | 21,189        | 48,308              |
| Cortland.....     | 19    | 13,335        | 25,062                | 13  | 15,573        | 24,783              |
| Delaware.....     | 35    | 121,288       | 191,731               | 24  | 448,269       | 654,333             |
| Duchess.....      | 26    | 46,235        | 74,364                | 8   | 48,780        | 61,720              |
| Erie.....         | 38    | 83,873        | 140,792               | 34  | 587,009       | 820,613             |
| Essex.....        | 16    | 12,255        | 22,750                | 10  | 75,125        | 123,081             |
| Franklin.....     | 12    | 6,086         | 11,772                | 6   | 26,311        | 41,660              |
| Fulton.....       | ..    | .....         | .....                 | 25  | 253,530       | 373,705             |
| Genesee.....      | 40    | 35,111        | 65,611                | 9   | 16,693        | 28,744              |
| Greene.....       | 32    | 636,907       | 989,951               | 9   | 45,536        | 126,296             |
| Hamilton.....     | ..    | .....         | .....                 | 3   | 158,750       | 183,222             |
| Herkimer.....     | 52    | 118,260       | 161,362               | 21  | 392,959       | 613,218             |
| Jefferson.....    | 36    | 59,314        | 84,108                | 25  | 122,038       | 184,171             |
| Kings.....        | 3     | 79,353        | 143,380               | 4   | 18,588        | 20,776              |
| Lewis.....        | 19    | 11,311        | 18,530                | 15  | 115,125       | 146,702             |
| Livingston.....   | 20    | 30,774        | 51,759                | 7   | 27,354        | 45,614              |
| Madison.....      | 33    | 47,008        | 74,167                | 22  | 142,096       | 176,250             |
| Monroe.....       | 22    | 137,509       | 52,050                | 15  | 188,220       | 193,787             |
| Montgomery.....   | 62    | 86,436        | 167,001               | 17  | 78,907        | 97,280              |
| New York.....     | 5     | 23,855        | 55,260                | 14  | 440,627       | 808,810             |
| Niagara.....      | 6     | 12,400        | 25,955                | 4   | 34,904        | 70,050              |
| Oneida.....       | 65    | 173,681       | 253,102               | 38  | 432,336       | 623,232             |
| Onondaga.....     | 54    | 48,031        | 82,373                | 19  | 50,743        | 118,412             |
| Ontario.....      | 23    | 24,335        | 42,916                | 5   | 21,911        | 18,515              |
| Orange.....       | 34    | 91,238        | 142,235               | 12  | 126,233       | 196,668             |
| Orleans.....      | 11    | 56,564        | 122,978               | 10  | 30,845        | 110,045             |
| Oswego.....       | 28    | 81,196        | 114,151               | 38  | 408,343       | 620,050             |
| Otsego.....       | 48    | 86,965        | 145,103               | 26  | 123,066       | 185,374             |
| Putnam.....       | 5     | 12,800        | 23,200                | 2   | 7,464         | 10,700              |
| Queens.....       | 3     | 6,450         | 10,100                | 2   | 1,500         | 3,000               |
| Rensselaer.....   | 27    | 80,303        | 144,320               | 13  | 181,085       | 234,825             |
| Richmond.....     | 1     | 1,000         | 2,000                 | ..  | .....         | .....               |
| Rockland.....     | 6     | 10,150        | 14,053                | 2   | 4,068         | 6,800               |
| St. Lawrence..... | 25    | 24,005        | 40,719                | 25  | 35,643        | 86,385              |
| Saratoga.....     | 43    | 39,443        | 59,149                | 9   | 132,600       | 243,000             |
| Schenectady.....  | 9     | 24,005        | 41,912                | 1   | 19,361        | 20,665              |
| Schoharie.....    | 45    | 192,758       | 292,240               | 17  | 156,966       | 319,022             |
| Schuyler.....     | ..    | .....         | .....                 | 13  | 26,339        | 38,370              |
| Seneca.....       | 16    | 28,400        | 52,450                | 5   | 13,524        | 24,982              |
| Steuben.....      | 32    | 16,361        | 32,320                | 19  | 36,837        | 58,249              |
| Suffolk.....      | 15    | 8,770         | 16,500                | 4   | 15,106        | 18,002              |
| Sullivan.....     | 21    | 216,034       | 359,344               | 39  | 1,627,751     | 2,087,986           |
| Tioga.....        | 17    | 16,952        | 27,950                | 12  | 166,050       | 269,920             |
| Tompkins.....     | 31    | 45,900        | 73,675                | 14  | 64,450        | 454,540             |
| Ulster.....       | 35    | 269,642       | 449,194               | 30  | 934,675       | 1,607,593           |
| Warren.....       | 10    | 50,257        | 63,426                | 14  | 571,977       | 1,042,340           |
| Washington.....   | 36    | 35,747        | 69,252                | 13  | 20,153        | 35,195              |
| Wayne.....        | 20    | 25,910        | 44,330                | 14  | 39,365        | 61,100              |
| Westchester.....  | 18    | 21,484        | 41,788                | 9   | 380,760       | 1,016,588           |
| Wyoming.....      | ..    | .....         | .....                 | 16  | 44,436        | 76,075              |
| Yates.....        | 11    | 6,172         | 10,295                | 5   | 8,624         | 16,250              |
| Total.....        | 1,412 | 3,563,592     | 5,598,626             | 863 | 9,502,993     | 15,671,143          |

## THE EMERY TRADE.

The London *Mining Journal* remarks :—We have heard that it is the intention of the government of His Hellenic Majesty to throw open the trade in emery stone produced in the kingdom of Greece, and bring it into competition with that raised from the mines of Scalanova, in Turkey. This is a suicidal act on the part of the Greek government, and highly detrimental to their own interests, inasmuch as the Levant Mining Company, who possess enormous stocks of this article, amounting to upwards of 7,000 tons, will immediately effect sales, as appears by an intimation given by them to the trade, in which they state that circumstances having occurred which renders it highly probable that the company may determine upon bringing into the market their whole stock of emery, the directors think it due to their customers to give them the earliest notice of the contemplated step, and to assure them that, so far as the matter may be within the directors' control, no reduction of price shall be made until a sufficient time has elapsed to allow of the stock now in the hands of the trade being worked off.

If the Greek government should throw open the commerce in emery, it will bring the price down so low that parties purchasing the stone from them will find a considerable difficulty in releasing it ; and the ministry of the Hellenic kingdom would do well to pause before they adopt measures which can result in no benefit to themselves, but from whence a great detriment may arise to all parties.

The directors of the Levant Mining Company announce their intention of convening a general meeting of the shareholders so soon as they have sufficient data to enable them to recommend the course to be adopted hereafter as regards the operations of the company.

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 PHOTOGRAPHY APPLIED TO THE ORNAMENTING OF SILK.

M. PERSOZ, professor of chemistry in the Conservatoire des Arts et Metiers of Paris, has just published a most interesting discovery of his, by which photography may be applied to the ornamenting of silk stuffs. The bichromate of potash is a substance commonly used in photography, being extremely sensitive to light. If a piece of silk stuff impregnated with this salt be exposed to the rays of light penetrating through the fissures of the window blinds in a close room, the points where the stuff has received these rays of light will assume a peculiar reddish tint. Now, suppose a piece of metal or of strong paper to be cut out after a given pattern, and to be laid upon a piece of silk prepared as before ; if exposed to the sun, or, better still, to simple daylight, the pattern will be produced in a few instants. The pale red which the parts acted upon by the light assume is so permanent that nothing can destroy it ; nay, it will fix other colors, such as madder, campeachy, &c., just like a mordant, and in that case it will modify the color of those substances in absorbing it. The experiment may be varied as follows :—Let a fern leaf be laid upon a piece of prepared silk, and kept flat upon it by a piece of glass ; then that part of the silk which is protected by the leaf will retain its original color, while all the rest will receive the impression of light, as above described, forming the ground on which the figure of the leaf will appear in white, gray, or whatever other color the silk may have had before the operation. The richest patterns may thus be obtained on plain silks, and at a comparatively small expense.

## MOLDING PARAFFINE CANDLES.

If paraffine is run into molds and heated in the usual way for making candles like those of wax, it becomes cloudy, mottled on the surface, and full of cracks and indentations. An improved method of rendering paraffine candles smooth on the surface and semi-pellucid in appearance, was patented on the 8th of February last. The invention consists in first heating the molds to  $212^{\circ}$  Fah., then pouring in melted paraffine at this temperature into them, then dipping them into cold water at about  $34^{\circ}$ , in which they are kept for seven minutes. After this they are placed in a chamber containing cool air (varying from  $32^{\circ}$  to  $40^{\circ}$ ) until they are quite cold, when they are removed in the usual way from the molds, which are of the trip-matrix kind. It is when the paraffine is passing from the liquid to the solid state, that it is liable to become cloudy and full of fissures. The cooling of it quickly in the mold by cold water prevents the cracks and indentations being formed on the surface, and the cooling of it gradually afterwards in the air-chamber renders the candle beautiful and clear in appearance, free from cracks and mottled blemishes.

## MANUFACTURE OF THE OTTO OF ROSES.

The following is an interesting article on the manufacture of this celebrated perfume, by Dr. J. LAWRENCE SMITH, Professor of Chemistry in the University of Louisville, Kentucky, and written for the *American Journal of Pharmacy* :—

Seeing an article in the May number of the *Journal*, on the otto of roses, it brought to my recollection some neglected notes made during my residence in Turkey, on the culture of the rose and the extraction of its oil, at Kisanlik, in the Balkan Mountains.

The region where the rose is cultivated is a valley in the Balkan Mountains, in which is situated the city of Kisanlik, about 60 miles northwest of Adrianople, in latitude  $42^{\circ} 40'$ . It is only within 14 or 15 years that the cultivation of the rose has taken its present development in that region, although, for a number of years, the otto has been made there in limited quantity, especially for royal presents. The surface of the country is that of an extensive plain, shut in by elevated ridges, and here the rose is cultivated by the farmers, who sell the roses to the distillers residing in Kisanlik, seldom or never distilling them on their farms. The rose cultivated is of one kind, (a full red rose,) that was doubtless introduced into this region many years ago, and selected for its great fragrance and peculiar adaptation to the distillation of the oil. Its cultivation is attended with but little trouble. The bushes are allowed to grow from four to six feet high, although sometimes much higher.

The roses are gathered during the months of May and June, six weeks being the term usually occupied in getting the crop; the yield is, on an average, about one-and-a-half pounds of rose leaves to a bushel, the roses being collected with the calyx. They are gathered half expanded, and at the dawn of day, and not unfrequently before daylight; they cannot be kept advantageously more than a day before being put into the still. If obliged to do so, they must be turned over frequently, as otherwise they will ferment, heat, and the otto will be lost.

The roses are placed in copper stills of about 30 gallons capacity, in proportion of 60 pounds of rose leaves to 15 gallons of water, and the still immediately heated. The oil is in the first portion of the water which comes over, which is collected in several large bottles; this water is now placed in a second still, and about one-fifth of it distilled, on which all the oil will float. The oil is taken off the surface with a little spoon, and placed in an appropriate vessel. All the water distilled in both the first and second operation is sent into the market as rose-water; the water remaining in the still with the leaves is strained off, and added to a fresh portion of the leaves, in the proportion already mentioned.

The quantity of rose leaves required to produce one metical (one-and-a-half drachms) of the oil varies from 30 to 60 pounds, according to the nature of the weather. If the roses open during wet weather, and flower slowly, the yield is at its maximum; if, however, the weather is hot, and the bush flowers vigorously, the yield diminishes, the rose itself is paler, and, if not picked at an early stage, yields almost nothing. There is a green wax that comes off the calyx (attaching itself to the fingers of those collecting) that also yields an oil by distillation.

The annual product of otto of roses in this region is from 28,000 to 30,000 ounces, although so largely is it adulterated, that the amount of oil exported is upwards of 70,000 ounces. The material employed for adulteration is the oil of a species of geranium (very probably the *Pelargonium Roseum*) grown in Arabia, in the neighborhood of Mecca, and taken to Kisanlik for the purpose of adulterating the otto of roses; this geranium oil has the odor of the rose mixed with that of the lemon. In fact, it is a common thing, both in Europe and this country, to find this geranium oil in market, called otto of roses, sometimes mixed with a little spermaceti and benzoic acid. On one occasion, a merchant at Constantinople told me that he sent large quantities of oil of geranium to parties in New York, who informed him, through his agents in Smyrna, that it sold very readily in this country as otto of roses, and that the difference was not appreciated. It is almost impossible to obtain the oil of roses pure; the distiller hardly gets his oil together in the evening before he commences to elongate it by a little geranium oil; if it be only five per cent, he must put that in. Such small additions as that would be made only by *very conscientious traders*; 50 to 200 per cent are far more commonly added. And, should the otto happen to sojourn a little while at Constantinople, it would increase still farther in weight and bulk. In bazaars of that city, three or four grades of the otto can be bought. Of course, they are simply different degrees of adulteration.

The exact cost of manufacturing the pure otto of roses at Kisanlik, may be estimated by referring to the following figures of an actual experiment made under my direction:—

|                                      |          |
|--------------------------------------|----------|
| 10,000 pounds fresh rose leaves..... | \$140 00 |
| Paid for use of still.....           | 6 25     |
| Paid for labor and fuel.....         | 16 50    |
|                                      | -----    |
| Total .....                          | \$162 75 |

The yield was 36 ounces, thus costing \$4 52 per ounce to the producer.

This fragrant oil is made in other parts of the world by processes differing, doubtlessly, from the one described; also, from a different rose. The one used in Tripoli is white, having but few petals; the rose grown in the southern portion of France, bordering on Italy, yields hardly a trace of oil by distillation, although only one-half a degree further north than Kisanlik; the rose leaves there being used directly to impart their odor to perfuming soaps or distilled water.

As regards the manner of testing the purity of the oil, sulphuric acids and other tests are of no value. The odor is the best test, and that can only be applied by experts where the otto is made.

#### CONDENSING AND GASING SMOKE.

A provisional specification relating to some improvements in condensing and gasing smoke, applicable also to propelling ships and other purposes, was recently filed by Messrs. PASCOE and THOMAS, of Chacewater, England. The invention consists in drawing the air and smoke from any given distance to any given point, passing it through the machine, turning it into gas or water; if into water they intend to use it as manure. In propelling ships they take the water from the bow of the vessel, pass it through the machine, and discharge it at the stern, in as large a column as may be required for any purpose, which column will act as a fulcrum by which they can gain speed.

## PRECIPITATION OF ONE METAL BY ANOTHER.

This process is largely employed on a manufacturing scale. At the mines of Freiberg, metallic silver is obtained by agitating chloride of silver with scrap-iron. The iron enters into combination with the chlorine, and turns out the silver. At the royal mint, silver is obtained by immersing plates of copper in a solution of sulphate of silver. At the Cornish mines, considerable quantities of copper are annually obtained by immersing pieces of iron in solutions of copper. These processes are performed in the wet way. As an example of the dry way, we may adduce the metal antimony, which is made commercially by fusing sulphide of antimony with scrap-iron. The iron turns out the antimony and unites with the sulphur. Similarly the metals aluminum and magnesium are prepared by fusing their respective chlorides with metallic sodium; the sodium unites with the chlorine, and turns out the aluminum or magnesium. To obtain metals by this process of substitution, it is ordinarily necessary that the metal used to expel another must be more basylous than the metal expelled; hence it is that sodium is required for the production of magnesium. With the exception of potassium, which is much more expensive, sodium is the most basylous of the metals; it even serves to displace the quasi metallic grouping of hydrogen and nitrogen, known as ammonium. Amalgam of sodium, introduced into a solution of chloride of ammonium, forms chlorade of sodium and amalgam of ammonium. But these most highly basylous metals, potassium and sodium, afford remarkable exceptions to the law that basylous metals replace less basylous metals. Thus, although when sodium is heated with hydrate of iron, the sodium expels the iron, as might be anticipated, yet when hydrate of sodium and iron borings are heated together, a reverse action takes place, and the iron turns out the sodium, as in GAY LUSSAC'S process for the production of that metal. This reciprocity of results is only an extreme instance of a tolerably general law. In a similar manner, though mercury displaces silver from argentic nitrate, yet silver displaces mercury from mercurious nitrate. Though copper displaces silver from argentic sulphate, yet silver displaces copper from cupric sulphate. Though cadmium displaces copper from cupric chloride, yet copper displaces cadmium from cadmic chloride, etc.

## STAINING AND POLISHING MARBLE.

The modern processes for treating marble are probably equal, if not superior, to anything practiced, by the most skillful artists, in the marble of the ancient schools. In staining this material, the principal colors used are red, blue, and yellow. The red and yellow may be prepared by reducing gamboge, or dragon's blood, to a powder, and grinding them separately in a glass vessel, with spirits of wine. The strong tincture, thus extracted, may be laid on the marble with a pencil, producing the finest traces, and penetrating deeply when the stone is heated. The blue is imparted by a watery solution of the drug known to dyers as Canary Turnsol. The marks are traced with a pencil, and strike deeply into the stone; the outline must be circumscribed with wax, or the color will spread. A beautiful shade is produced, which is not likely to fade. The polishing process pursued by marble workers is commenced with the use of sharp sand, which is worked until the surface becomes perfectly flat. Three applications of fine sand follow each other successively, and then of emery and tripoli, and the last polish is given by tin putty. The polishing rubbers are coarse linen cloths, or bagging, wedged tightly into an iron planing tool. Water is used freely.

## THE MINERAL WEALTH OF GREAT BRITAIN FOR 1858.

We are happy, says the London *Mining Journal*, in being able to present an accurate return of the metalliferous and mineralogical wealth of the United Kingdom for 1858—the usual annual statistics compiled by Mr. ROBERT HUNT, F. G. S., being now completed. The return is remarkably favorable as compared with the preceding year; the value of the metals, metalliferous minerals, and coal being thirty-one millions and a quarter in 1858, against twenty five millions in 1857. Subjoined is the general summary of mineral productions:—

| Minerals.                    | Tons.      | Value.      |
|------------------------------|------------|-------------|
| Tin.....                     | 10,618     | £671,057    |
| Copper.....                  | 226,852    | 1,336,535   |
| Lead.....                    | 95,855     | 1,370,726   |
| Zinc.....                    | 11,556     | 36,199      |
| Pyrites.....                 | 100,263    | 77,123      |
| Arsenic.....                 | 555        | 860         |
| Nickel.....                  | 4          | 188         |
| Uranium.....                 | .....      | 21          |
| Manganese.....               | 1,400      | 2,800       |
| Gossau, &c.....              | .....      | 1,221       |
| Iron ore.....                | 8,040,959  | 2,570,701   |
| Coal.....                    | 65,008,649 | 16,252,162  |
| Total value of minerals..... |            | £22,319,599 |

## METALS.

|                    |           |            |
|--------------------|-----------|------------|
| Tin..... tons      | 6,920     | £823,480   |
| Copper.....        | 14,456    | 1,562,693  |
| Lead.....          | 68,303    | 1,489,005  |
| Silver..... ounces | 569,345   | 156,569    |
| Zinc..... tons     | 6,900     | 174,225    |
| Iron.....          | 3,456,064 | 10,713,798 |

|                                                                       |             |
|-----------------------------------------------------------------------|-------------|
| Total value of metals obtained from British ores.....                 | £14,919,770 |
| Estimated market value of other minerals and metals.....              | 95,000      |
| Coal.....                                                             | 16,212,162  |
| Total value of metals, metalliferous minerals & coal produced in 1858 | £31,266,932 |

## A NEW POWER.

A letter from Paris says that a new motive power has been discovered, which, upon experiment, has been found to be entirely successful, and has created a great sensation. The discovery has been made by a young workman named JACOB, a turner in copper, and was the result of an accident. While seeking to increase the power of his turning lathe, a new means of power was suddenly revealed to him, whereby he has been able alone, without assistance, to construct a machine which increases two hundred fold the labor of one man, and may be increased to an unlimited extent. The inventor, who has hitherto worked at Escarbotta, has been, of course, sent for to Paris, and he has already nearly completed a machine applicable to every species of industry. If success should attend the experiment—for which, it is understood, one of the great industrial capitalists furnishes the money—the discovery will put an end to all steam power and every other expensive action, and the result is waited for with the greatest anxiety in the manufacturing world. Already have the proprietors of the spinning works at Schaffhausen been induced to go to Paris in order to hear the first news of the success or failure of the trial.

## STATISTICS OF AGRICULTURE, &amp;c.

## SOURCES OF FERTILITY IN SOIL.

LIEBIG, in his chemical researches, says :—" If we calculate, from the result of ash-analysis, the quantity of phosphoric acid required by a wheat crop, including grain and straw, we find the wheat demands more abundant supplies of phosphoric acid than any other plant. Wheat consumes phosphoric acid in greater quantities during the growth of the seed than at any other period ; and this is the time when practical men believe the soil to suffer the greatest exhaustion. Plants in general derive their carbon and nitrogen from the atmosphere ; carbon in the form of carbonic acid, nitrogen in the form of ammonia ; from water (and ammonia) they receive hydrogen ; and sulphur from sulphuric acid."

BOURDRIMONT mentions the existence of interstitial currents in arable soils, and the influence they exert on agriculture. He states, " that there is a natural process at work by which liquid currents rise to the surface, and thus bring up materials that help either to maintain its fertility or modify its character." Many phenomena of agriculture and vegetation have at different times been observed which, hitherto inexplicable, are readily explained on this theory ; such, for example, as the improvement that takes place in fallows ; and there is reason to believe that these currents materially influence the rotation of crops.

Take the masterly views of SCHLIEDEN, in Germany. He asserts that " the goodness of the soil depends on its inorganic constituents ; so far, at least, as they are soluble in water, or through continued action of carbonic acid, and the more abundant and various these solutions, the more fertile is the ground."

The amazing yield of Indian corn in Mexico, from two to six hundred fold, is something which, with all our skill, we cannot accomplish, and is a fact in favor of the argument, " that in no case do the organic substances contained in the soil perform any direct parts of the nutrition of plants."

All chemists are agreed as to the source from which the oxygen and hydrogen of plants are derived, the principal of which is water. All of them agree that the carbon of vegetables is derived principally from the air, partially from the soil. It becomes evident, then, from the most conclusive proofs, that *humus*, in the form in which it exists in soils, does not yield the smallest nourishment to plants. The excellent advantages derived from the experiments of talented and industrious men, who have directed every effort to aid practical agriculture, justly entitle them to golden praise from mankind. LIEBIG has the merit of having been the first who laid before the public some views as to the source of the constituents of plants. He remarks :—" How does it happen that wheat does not flourish on sandy soil, and that a (calx or) calcareous soil is unsuitable for its growth, unless it is mixed with a large quantity of clay ? It is because these soils do not contain alkalies and certain other ingredients in a sufficient quantity ; and, therefore, the growth of the wheat is arrested, even though all other substances should be present in abundance."

In some soils, there may be too much straw-making food, but not enough for the maturing of the grain. Again, the absence of the necessary moisture in the soil will cut off the supplies of food to plants. But an excess of it may cause

available food, wanting for the development of the grains, to be appropriated to the straw. In very wet seasons, especially in the absence of underdrains, where there is much straw-making food and a deficiency of phosphates, the latter are taken up by the stalks and leaves, to the loss of the grain; hence, some soils may yield less grain in a wet season, but more straw, than they would do in a dryer one, other things being equal.

“ Grain is carried to the cities, and the substances in the soil that made it are removed, far away from the original source, and the soil is robbed of it, and but a small portion of their elements are sent to the soil from whence they were taken.” In nature’s economy nothing is lost; but when man displaces things, he should put them back again in their own places. The wheat-grower should return to his lands in the shape of fertilizers the same elements which he has taken, or he will soon find the soil exhausted, so that he cannot produce the same grain. In many of our best wheat-growing places in the West the lands are so much exhausted that wheat crops do not pay for their labor and expense of growing. The common opinion hitherto prevalent, and still held by some, that the soil of the West cannot be exhausted, is, therefore, a great mistake.

In our cultivation of wheat we have exhausted the soil of so much of the elements that produce it that maize is fast taking the place of wheat, especially in the prairie districts, where the ground is less protected by the snow in winter than in others. In Canada, where the winter is severe, the ground being covered by snow, the wheat does not suffer as that sown in more changeable climates. It is found by experience that in a climate where there is little snow the land needs to be fertilized and plowed deep, in order to give the roots a strong hold in the soil. Fertilization will cause a vigorous growth, and the roots of plants in well-prepared soils strike deep, and hold fast. This increases the growth of the plant, and augments the quantity and quality of the crops.

#### ~~~~~ DRAINING IN HOLLAND.

In 1839, the Dutch States-General decreed the drainage of the Haarlemmer meer, and voted eight millions of florins for that purpose, to which two millions more were subsequently added, making the total sum of £834,000.

The Haarlemmer meer forms part of the great drainage district of Rhymland, which has an area of 305,014 English acres; prior to 1848, this area was occupied by 56,609 acres of meers and water-courses, nearly all in communication with each other, forming what is called the *boezem*, or catch-water basin of the district; the surface of the water being maintained at the lowest level of natural sluicage, by sluices at Katwyk into the North Sea, and at Sparndam and Halfweg into the Y, or the southern end of the Zuyder Zee.

Above the *boezem* are 75,357 acres drained into it by natural level; and at depths from 2 feet 6 inches to 4 feet *below* it are 170 polders, covering an area of 135,850 acres; and 37,198 acres, divided into 28 polders, which were formerly meers, but are now drained, and whose beds are on an average 14 feet below the level of the *boezem*.

The surplus rain and infiltration waters from the 173,008 acres of polder-land are lifted into the *boezem* by the united action of 261 large wind-mills, with an average force of 1,500 horse-power.

The drainage of the Haarlemmer meer, which forms part of the boezem or basin, will deduct 45,230 acres from its area, and reduce it to 11,379 acres, or one-fifth part of its former size; whilst the land surface drained into it will be increased from 229,657 to 293,735 acres.

The average level of the boezem is 10 inches below the ordinary low water, and 27 inches below high water mark in the Y or Zuyder Zee; and 7 inches above low water, and 57 inches below ordinary high water, in the North Sea.

The bed of the Haarem Lake is 14 feet below the winter level of the boezem; and when drained, the maximum lift will be 15 feet 6 inches to 17 feet, according to the state of the wind, which raises or depresses the surface of the water in the canals very considerably.

The water contents of the Haarlemmer meer to be pumped out, including the additional quantity arising from the surplus rain and infiltration during the draining, are estimated at 800,000,000 cubic metres or tons.

The greatest quantity of monthly drainage when the meer is pumped out is estimated at 26,000,000 tons, and the annual average surplus of rain-water, &c., at 54,000,000 tons, to be lifted, on an average, 16 feet high.

The Dutch engineers were generally in favor of wind-mills, or combination of wind-mills and steam-engines, for pumping out the meer; but in 1841, the late King, WILLIAM II., by the advice of a commission, decreed that steam-engines only shall be employed for the purpose; and in 1842, at the suggestion of two English engineers, Mr. ARTHUR DEAN and Mr. JOSEPH GIBBS, it was determined to erect, and they were directed to prepare the designs, for three steam-engines, upon the high-pressure, expansive, condensing principle, of the ordinary force of 350 horse-power each, but capable of being worked on emergencies up to 500 horse-power.

The consumption of fuel was limited to  $2\frac{1}{2}$  pounds of coal per horse-power per hour.

The three engines were named the Leeghwater, Cruquius, and Lynden, after three celebrated men who had at different periods proposed plans for draining the Haarlemmer meer.

The Leeghwater was the first erected, to work eleven pumps of 63 inches diameter, with 10 feet stroke in pumps and steam cylinders; and the Cruquius and Lynden, were afterwards constructed, to work eight pumps each of 37 inch diameter, and with 10 feet stroke; each engine is calculated to lift 66 cubic metres or tons of water per stroke.

Each engine has two steam cylinders, placed concentrically, the one within the other, the outer of 12 feet diameter, and the inner one of 7 feet diameter; both are secured to one bottom, and covered by one cover, but the inner cylinder does not touch the cover within  $1\frac{1}{2}$  inch; there are two pistons, 26 inches deep, the compartments of which are fitted with cast iron plates; the outer piston is annular, and has a packing on both sides; beneath this annular piston a constant vacuum is maintained when working; the two pistons are connected by five piston rods to a great cross-head or cap, the whole mass weighing about 85 tons, and by eight connecting rods, the cap pistons are suspended from the inner ends of eight cast-iron balance-beams, to the outer ends of which are hung the eight pump-pistons; the action of the engines is therefore very simple,

the steam being applied under the inner piston, lifts both the pistons, the great cross-head, and inner ends of pump balance-beams simultaneously, and the pump-pistons descend at the same time; by a hydraulic apparatus attached to the great cross-head, the dead-weight of the pistons, &c., is arrested at the point to which it has been thrown up by the steam, and time is given for the valves of the pump-pistons to close before the down-stroke of the steam pistons is made; then, the equilibrium-valve being opened, the hydraulic apparatus is liberated at the same moment, and the steam passing from beneath the small piston, above both pistons, the pressure on both sides of the small one is equalized, whilst nearly two-thirds of the steam acts upon the annular piston against a vacuum, and in aid of the dead-weight helps to make the down-stroke in the steam cylinder, and the up-stroke in the pumps. The use of the two cylinders enables the engine-man, by judiciously altering the expansion in the small cylinder, to command his work at all times, without stopping the engine to take out, or put in, dead-weight, as would be necessary for a single-acting one-cylinder engine, where dead-weight only is used for lifting the water. It has frequently occurred that the load of an engine has been added to or diminished by 10 or 12 tons in the course of half an hour, by the action of gales of wind on the surface of the meer and boezem. Each engine has two air-pumps of 40 inch diameter, and 5 feet stroke. The steam is cut off in the small cylinder at from one-fourth to two-thirds of the stroke, according to the load; and after expanding through the remainder of the stroke, it is still further expanded in the large cylinder.

The anticipated economy in consumption of fuel has been realized; when working with the net power of 350 horses, the average consumption is  $2\frac{1}{2}$  pounds of best Welsh coals, or 75 millions duty with 94 pounds of coal, and on a late trial, the Cruquius and Lynden engines were found to do a duty of 87 millions.

#### SUGAR CROP OF LOUISIANA, 1858-59.

We are indebted to Mr. CHAMPOMIER for a copy of his valuable annual statement of the sugar crop of Louisiana, and avail ourselves of his permission to present the following result of his investigations:—

| PARISHES.                 |              |                                  |             |
|---------------------------|--------------|----------------------------------|-------------|
| Rapides.....              | hhds. 17,133 | Jefferson.....                   | hhds. 3,143 |
| Avozelles.....            | 6,413        | Orleans and St. Bernard.....     | 6,566       |
| West Feliciana.....       | 6,471        | Plaquemines.....                 | 12,432      |
| Pointe Coupee.....        | 18,213       | Assumption, Bayou Lafourche..... | 32,725      |
| East Feliciana.....       | 1,570        | Lafourche Interior.....          | 8,866       |
| West Baton Rouge.....     | 21,683       | Terrebonne.....                  | 22,815      |
| East Baton Rouge.....     | 12,255       | St. Mary, Attakapas.....         | 44,634      |
| Iberville.....            | 38,876       | St. Martin, Attakapas.....       | 13,548      |
| Ascension.....            | 28,444       | Vermillion, Lafayette.....       | 862         |
| St. James.....            | 27,302       | Lafayette.....                   | 1,286       |
| St. John the Baptist..... | 11,271       | St. Landry, Opelousas.....       | 7,388       |
| St. Charles.....          | 9,146        | Cistern bottoms.....             | 9,252       |
| Total crop.....           |              |                                  | 362,296     |
| Crop of 1857-58.....      |              |                                  | 279,697     |
| Increase.....             |              |                                  | 82,599      |

The product of molasses is also estimated at 24,887,760 gallons, against 19,578,790 last year.

PERUVIAN GUANO.

TABLE OF DEPOSITS—SOUTHERN SECTION.

|                                 |           |                                   |           |
|---------------------------------|-----------|-----------------------------------|-----------|
| Chipana, lat. 21° 22' S....tons | 280,692   | Pabellon de Pica, lat. 20° 57' S. | 2,975,000 |
| Huanillas, lat. 21° 18' S.....  | 1,912,505 | Puerto Ingles, lat. 20° 46' S..   | 1,292,510 |
| Punta de Lobos, lat. 21° 6' S.. | 1,460,790 |                                   |           |
| Total.....                      |           |                                   | 7,921,407 |

CENTRAL SECTION—CHINCHA ISLANDS.

|                                          |      |            |
|------------------------------------------|------|------------|
| North Island, } .....                    | tons | 7,600,000  |
| Middle Island, } Latitude 13° 32' S..... |      | 6,450,000  |
| South Island, } .....                    |      | 4,200,000  |
| Total.....                               |      | 18,250,000 |

NORTHERN SECTION.

|                                   |         |                                |            |
|-----------------------------------|---------|--------------------------------|------------|
| Lobos de Tiera, lat. 5° 7' S.tons | 477,858 | Guanape, lat. 8° 31' S....tons | 79,800     |
| Lobos de Fuera, lat 7° 3' S...    | 265,743 | Ferrol, lat 9° 7' S.....       | 30,700     |
| Total.....                        |         |                                | 854,101    |
| Grand total.....                  |         |                                | 27,026,508 |

ANALYSIS OF GUANO.

| Elements.                         | —Chincha Guano.— |       | —Lobos Guano.— |       |       |
|-----------------------------------|------------------|-------|----------------|-------|-------|
|                                   | A.               | B.    | C.             | D.    | E.    |
| Water.....                        | 15.73            | 9.30  | 12.50          | 16.50 | 13.35 |
| Organic matt'r & am'oniacal salts | 53.16            | 57.80 | 22.00          | 23.50 | 36.65 |
| Phosphates .....                  | 23.48            | 23.05 | 36.90          | 41.23 | 11.76 |
| Alkaline salts .....              | 7.97             | 9.60  | 12.25          | 16.27 | 36.74 |
| Sand.....                         | 1.66             | 0.75  | 12.35          | 2.50  | 1.50  |
| Proportion of ammonia.....        | 17.00            | 18.87 | 4.26           | 4.35  | 6.42  |

IMPORTED INTO THE UNITED STATES ACCORDING TO THE UNITED STATES TREASURY REPORTS.

|           |           |           |         |
|-----------|-----------|-----------|---------|
| 1845..... | 1852..... | 39,567    |         |
| 1846..... | 1853..... | 25,852    |         |
| 1847..... | 1854..... | 163,662   |         |
| 1848..... | 869       | 1855..... | 155,046 |
| 1849..... | 17,347    | 1856..... | 39,078  |
| 1850..... | 5,750     | 1857..... | 64,559  |
| 1851..... | 20,059    | 1858..... | 54,057  |

TOBACCO CULTURE.

The culture of tobacco is extending a good deal in this section, and the interest seems to be on the increase.

The two leading objects to be kept in view in the culture of tobacco, are the same as those mentioned in connection with the culture of corn. 1st. All weeds and grass must be kept down; and 2d. The ground must be kept mellow and well aired. The culture should be commenced as soon after planting as possible, and kept up constantly until the plants are too large for its continuance. Within a week or two after planting, the soil on the surface of the hills may become crusted, especially in clay soils; also, grass and weeds may begin to make their first appearance. In either case the hoe should be applied to scrape down the surfaces of the hills. A clean loose surface will thus be formed around the plants. This should be followed by a deep plowing, which should be made so close to the rows as to cut down a considerable portion of the hills, the mold being thrown out into the spaces between the rows. Guano, or a mixture of guano and salt, should then be applied. By a subsequent plowing within a week or two, the soil should be thrown up again to the rows, and the hills again dressed up with the hoe. The kind of plow used must be determined by the character and condition of the soil. To a firm soil, the coultter should be first applied to as great

a depth as possible; then the shovel, or small mold-board, for throwing the earth to and from the hills. In short, the best means should be adopted for accomplishing the two objects above mentioned.

**PRIMING AND TOPPING.** When the plant has grown to the height of two or three feet, a round bud will make its appearance in the center of the plant. This is the *flower-bud*, and is called the "button" in some parts of Virginia. At this period of growth some of the lower leaves should be pulled off so as to leave the stalk naked for five or six inches above the ground. The stripping of these lower leaves is called "priming." At the same time that the priming is done, the flower-bud is broken or nipped off with the thumb and finger. If the plant is sufficiently large, it may be topped before the flower-bud appears, by nipping out the central leaf-bud. "There is great difference of opinion as to the proper height of topping. From eight to twenty leaves are recommended—the latter for manufacturing. If the tobacco is pretty forward and the land rich at first, prime off just enough of leaves to hill up the tobacco well, and top to twelve or fourteen leaves. Continue to top to twelve leaves until 1st of August, then top to ten until the middle of August, and from that time until 1st of September top to eight, afterwards to six." If the topping were omitted, the flower-bud would soon be developed into a branching top, full of clusters of flowers, from which the seeds are afterwards produced.

**SUCKERING.** Soon after the topping is done, the auxiliary buds at the bases of the leaves begin to grow rapidly, and if let alone, form branches of the main stalk. They are called "suckers," and must be broken out as soon as they are large enough to be caught with the thumb and finger. This process has to be repeated, from time to time, as new suckers make their appearance. Meantime, the green worm will have commenced its ravages, and must be carefully picked off and destroyed, otherwise it will soon disfigure and greatly injure the crop.

The *philosophy* of priming, topping, and suckering is easily understood when we refer back to what has already been said on the physiology of plants. All parts of the plant are designed to aid in its mature growth and ultimate production of seeds. As the period approaches for maturing the seeds, nearly all the vital energy of the various organs seems to be directed towards and expended upon them. If the first flower-bud is removed, the natural vigor of the plant is not destroyed, but only diverted towards the leaves and auxiliary buds, strengthening the former, and causing the latter to spring up as suckers. But when the suckers are removed, the whole vigor of the plant is concentrated in the remaining leaves. A choice of the most perfect leaves is made by "priming off" those nearest the earth, and which not only would not themselves attain a vigorous growth, but would exclude the air and light too much from the middle leaves of the plants which are always the most vigorous. The number of leaves left in topping is determined in part by the apparent strength of the plant, and in part by the length of time it has for maturing its leaves. The more forward plants have a longer season of growth after topping, and can hence bear a greater number of leaves, while the latter ones must be topped lower.

**CUTTING.** The maturity of the plant and consequent fitness for cutting is indicated by the points and edges of the leaves curling downward—the leaf becoming thick and brittle, and its surface assuming a yellowish spotted (piebald) appearance in some varieties, and on some soils, especially new land, and a fine glossy appearance in others. At this stage the plant contains more of those ingredients which subsequently give value to it than at any period either earlier or later. It should then be cut, and not till then, unless it is becoming fired,\* or is in immediate danger from frost. The cutting consists in splitting the stalk with a sharp thin bladed knife down nearly to the lowest leaf, and then cutting it off just below this leaf. As the plants are cut they are inverted between the hills, and allowed to remain in that position a few hours, until they are sufficiently wilted to be handled without being broken. They are then collected and placed (eight or ten

\* The "Black Fire" is a disease which is often very destructive to the tobacco crop. It produces decayed spots over the leaves. A mixture of *common salt* with guano is recommended as a preventive.—*Southern Planter*, May, 1858.

together) upon sticks and hung upon scaffolds in the open air or in the tobacco barn.

CURING. The process of curing is a matter of the highest importance. On it depends, to a very great extent, the market value of the crop. It should, therefore, be attended to with great care. The modes adopted vary somewhat with the end for which the crop is designed. Tobacco for manufacturing purposes should be exposed to the air on scaffolds; and if ripe and sun-cured, it will have that sweet, aromatic flavor so peculiar to good tobacco. \* \* \* After cutting it should be carried to the scaffolds and hung, about eight plants to the stick, and closed on the scaffolds for the purpose of sweating, by which process the green color is expelled, and the tobacco becomes yellow, which is far preferable. It should then be removed to the barn, to be fully cured by firing. "If time will allow, and the weather is not threatening, I prefer housing the tobacco without scaffolding. It will yellow as well, crowded in the barn, as on the scaffold; and all danger of injury from rain is avoided, as well as the loss of some from the effects of the sun. \* \* \* It is carried from the field, crowded as closely as possible on the tiers, and permitted to remain from six to eight days, or longer, until it is yellowed sufficiently; then it should be opened, and the sticks arranged in the barn for firing. The sticks should be placed from six to eight inches apart, and may be placed a little closer in the roof than in the body of the barn."

## STATISTICS OF POPULATION, &c.

### POPULATION OF PEORIA, ILLINOIS.

Peoria was incorporated into a town in 1835. It had then scarcely more than 500 inhabitants. Its progress was gradual till 1844, when it was made a city. Since then, its population and wealth have more than doubled in every period of five years. The following table gives the population and valuation of Peoria for each year since 1844:—

|           | Population. | Valuation. |           | Population. | Valuation. |
|-----------|-------------|------------|-----------|-------------|------------|
| 1844..... | 1,610       | \$319,952  | 1852..... | 7,316       | 1,797,930  |
| 1845..... | 1,934       | 323,022    | 1853..... | 8,285       | 2,315,660  |
| 1846..... | 2,392       | 655,711    | 1854..... | 10,155      | 2,212,252  |
| 1847..... | 3,014       | 719,837    | 1855..... | 11,923      | 2,857,980  |
| 1848..... | 4,079       | 854,536    | 1856..... | 14,500      | 4,458,530  |
| 1849..... | 4,601       | 1,154,029  | 1857..... | 17,482      | 4,718,965  |
| 1850..... | 5,890       | 1,540,281  | 1858..... | 21,103      | 4,739,910  |
| 1851..... | 6,202       | 1,751,662  |           |             |            |

### PENSION STATISTICS.

We compile the following statement of the pensions paid by the United States Government from official data at the United States Pension-office:—The number of army invalid pensioners on the rolls, January 1, 1791, was 1,356; the number added up to June 30, 1846, was 5,848; to June 30, 1858, 5,964; making a total of 13,168. Of this number there were receiving pensions, June 30, 1858, 4,916. The number of army and navy pensions that have been allowed, exclusive of those for services in the revolutionary war, is over 27,000. Up to June 30, 1858, the amount that had been paid to them was \$21,836,062 53; and to revolutionary pensioners \$64,518,281 97; making a total of \$86,354,344 50 that has been paid since the organization of the present government.

PROGRESS OF POPULATION IN THE STATE OF NEW YORK.

The following table, showing the progress of population in the State of New York, has been compiled with some care from the National and State censuses, and is intended to give a complete summary of each county. The counties are arranged in their numerical order, the better to show the more populous districts of the State:—

|                   | 1790.  | 1800.  | 1810.  | 1820.   | 1825.   | 1830.   | 1835.   | 1840.   | 1845.   | 1850.   | 1855.   |
|-------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| New York.....     | 33,181 | 60,489 | 96,373 | 123,706 | 166,086 | 197,112 | 270,089 | 312,710 | 371,223 | 515,547 | 629,904 |
| Kings.....        | 4,495  | 5,740  | 8,308  | 11,187  | 14,079  | 20,535  | 32,057  | 47,613  | 78,691  | 138,882 | 216,329 |
| Erie.....         | .....  | .....  | .....  | .....   | 24,316  | 35,719  | 57,594  | 62,465  | 78,635  | 100,993 | 132,331 |
| Oneida.....       | .....  | 22,047 | 33,792 | 50,997  | 57,847  | 71,326  | 77,518  | 85,310  | 84,776  | 99,566  | 107,749 |
| Albany.....       | 75,736 | 84,043 | 94,061 | 98,116  | 102,821 | 113,247 | 124,702 | 136,593 | 148,926 | 161,729 | 175,061 |
| Monroe.....       | .....  | 7,400  | 25,987 | 41,467  | 48,485  | 58,973  | 69,098  | 84,902  | 101,911 | 130,175 | 165,590 |
| Onondaga.....     | .....  | .....  | .....  | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   |
| Westchester.....  | 24,003 | 27,428 | 30,272 | 32,638  | 33,181  | 36,456  | 38,790  | 48,656  | 47,878  | 58,263  | 80,678  |
| Rensselaer.....   | .....  | 30,442 | 36,309 | 40,153  | 44,065  | 49,424  | 55,515  | 60,259  | 62,338  | 73,663  | 79,234  |
| St. Lawrence..... | .....  | .....  | 7,885  | 16,037  | 27,595  | 36,354  | 42,047  | 56,706  | 62,354  | 68,617  | 74,977  |
| Oswego.....       | .....  | .....  | .....  | 12,374  | 17,875  | 27,119  | 38,245  | 43,619  | 48,441  | 62,198  | 69,398  |
| Ulster.....       | 29,397 | 24,855 | 26,576 | 30,334  | 32,015  | 36,550  | 39,960  | 45,822  | 49,907  | 59,384  | 67,936  |
| Jefferson.....    | .....  | .....  | 15,140 | 22,952  | 41,650  | 45,493  | 53,088  | 60,984  | 64,899  | 68,153  | 65,490  |
| Stenben.....      | .....  | .....  | 1,788  | 7,246   | 21,989  | 29,245  | 38,751  | 46,138  | 51,679  | 63,771  | 62,965  |
| Orange.....       | 18,492 | 29,345 | 34,347 | 41,213  | 41,732  | 45,266  | 45,068  | 50,739  | 52,227  | 57,145  | 60,868  |
| Dutchess.....     | 45,266 | 49,775 | 51,363 | 46,615  | 46,698  | 50,926  | 50,704  | 52,398  | 55,124  | 58,902  | 60,635  |
| Cayuga.....       | .....  | 15,871 | 29,843 | 38,987  | 42,743  | 41,948  | 49,202  | 50,338  | 49,663  | 55,458  | 58,371  |
| Chautauqua.....   | .....  | .....  | 2,381  | 12,568  | 20,640  | 34,871  | 44,869  | 47,975  | 46,548  | 50,493  | 53,820  |
| Otsego.....       | .....  | 21,636 | 38,802 | 44,856  | 47,498  | 51,972  | 50,428  | 49,628  | 50,509  | 48,638  | 49,735  |
| Saratoga.....     | .....  | 24,483 | 33,147 | 36,052  | 36,295  | 38,679  | 38,012  | 40,553  | 41,477  | 49,879  | 49,879  |
| Niagara.....      | .....  | .....  | 8,971  | 22,090  | 14,069  | 18,482  | 26,490  | 31,193  | 34,550  | 42,276  | 48,282  |
| Wayne.....        | .....  | .....  | .....  | .....   | 26,761  | 33,643  | 37,788  | 42,057  | 42,515  | 44,953  | 46,760  |
| Queens.....       | 16,014 | 16,893 | 19,836 | 21,519  | 20,831  | 22,460  | 25,180  | 30,324  | 31,840  | 36,533  | 46,266  |
| Washington.....   | 14,042 | 35,574 | 44,289 | 58,381  | 39,280  | 42,685  | 39,326  | 41,080  | 40,554  | 44,750  | 44,405  |
| Columbia.....     | 27,732 | 35,822 | 32,390 | 38,380  | 37,970  | 39,907  | 40,746  | 43,252  | 41,976  | 43,073  | 44,391  |
| Madison.....      | .....  | .....  | 25,144 | 32,268  | 35,646  | 39,038  | 41,741  | 40,008  | 40,987  | 43,072  | 43,687  |
| Allegany.....     | .....  | .....  | 1,942  | 9,330   | 18,164  | 26,276  | 35,214  | 40,975  | 40,084  | 37,508  | 42,910  |
| Ontario.....      | 1,075  | 15,218 | 42,032 | 88,267  | 87,422  | 40,388  | 40,870  | 48,501  | 42,592  | 43,929  | 42,672  |
| Clinton.....      | 1,614  | 8,514  | 8,002  | 12,070  | 14,486  | 19,344  | 20,742  | 28,157  | 31,278  | 40,407  | 42,482  |
| Suffolk.....      | 16,440 | 19,464 | 21,118 | 24,272  | 23,695  | 26,780  | 28,274  | 32,460  | 34,579  | 36,922  | 40,906  |
| Chenango.....     | .....  | .....  | 15,666 | 21,704  | 31,215  | 34,215  | 37,238  | 40,762  | 40,785  | 39,900  | 40,311  |
| Delaware.....     | .....  | 10,228 | 20,303 | 26,587  | 29,565  | 33,024  | 34,192  | 35,396  | 36,990  | 39,334  | 39,749  |
| Cattaraugus.....  | .....  | .....  | 458    | 4,090   | 8,648   | 16,724  | 24,986  | 28,872  | 30,169  | 38,950  | 39,530  |
| Herkimer.....     | 14,479 | 22,046 | 31,017 | 38,040  | 35,870  | 36,261  | 37,477  | 37,424  | 38,244  | 38,556  | 38,556  |
| Livingston.....   | .....  | .....  | .....  | .....   | 23,600  | 27,729  | 31,092  | 35,140  | 33,193  | 40,875  | 37,943  |
| Broome.....       | .....  | .....  | 8,120  | 14,843  | 13,893  | 17,579  | 20,190  | 22,338  | 25,808  | 30,660  | 36,650  |
| Schoharie.....    | .....  | 9,808  | 18,945 | 23,154  | 25,926  | 27,902  | 28,508  | 33,358  | 32,488  | 33,648  | 33,519  |
| Wyoming.....      | .....  | .....  | .....  | .....   | .....   | .....   | .....   | .....   | 27,205  | 31,081  | 32,140  |
| Tompkins.....     | .....  | .....  | 20,681 | 32,008  | 36,545  | 38,008  | 37,948  | 38,168  | 38,746  | 33,516  | 31,516  |
| Greene.....       | 12,584 | 19,536 | 22,996 | 26,229  | 29,525  | 30,173  | 30,446  | 31,957  | 33,126  | 31,187  | 31,187  |
| Genesee.....      | .....  | 12,588 | 58,098 | 40,005  | 52,147  | 58,588  | 59,567  | 58,845  | 28,488  | 31,084  | 31,084  |
| Montgomery.....   | 28,848 | 21,700 | 41,214 | 37,569  | 40,902  | 43,764  | 48,359  | 58,818  | 29,643  | 31,092  | 30,808  |
| Sullivan.....     | .....  | .....  | 6,108  | 8,900   | 10,873  | 12,364  | 13,755  | 15,629  | 18,727  | 25,088  | 29,487  |
| Essex.....        | .....  | .....  | 9,477  | 12,811  | 15,998  | 19,287  | 20,699  | 23,634  | 25,102  | 31,148  | 28,589  |
| Orleans.....      | .....  | .....  | .....  | .....   | 14,460  | 17,732  | 22,893  | 25,127  | 25,845  | 28,501  | 28,435  |
| Chemung.....      | .....  | .....  | .....  | .....   | .....   | .....   | .....   | 20,782  | 28,689  | 28,821  | 27,288  |
| Tioga.....        | .....  | 6,889  | 7,899  | 19,971  | 19,951  | 27,690  | 33,969  | 20,527  | 22,456  | 24,880  | 26,962  |
| Franklin.....     | .....  | .....  | 2,617  | 4,439   | 7,978   | 11,312  | 12,501  | 16,518  | 18,692  | 25,102  | 25,477  |
| Seneca.....       | .....  | 16,609 | 23,619 | 20,169  | 21,041  | 22,627  | 24,379  | 24,972  | 25,441  | 25,858  | 25,858  |
| Lewis.....        | .....  | .....  | 6,433  | 9,237   | 11,669  | 15,230  | 16,093  | 17,830  | 20,218  | 24,564  | 25,229  |
| Cortland.....     | .....  | .....  | 8,869  | 16,507  | 20,271  | 23,791  | 24,168  | 24,607  | 25,081  | 25,140  | 24,575  |
| Fulton.....       | .....  | .....  | .....  | .....   | .....   | .....   | .....   | 18,049  | 18,579  | 20,171  | 23,284  |
| Richmond.....     | 3,835  | 4,563  | 5,347  | 6,135   | 5,932   | 7,082   | 7,691   | 10,965  | 13,678  | 15,061  | 21,389  |
| Yates.....        | .....  | .....  | .....  | .....   | 13,214  | 19,009  | 19,796  | 20,444  | 20,777  | 20,590  | 19,882  |
| Warren.....       | .....  | .....  | .....  | 9,453   | 10,906  | 11,796  | 12,034  | 18,422  | 14,908  | 17,199  | 19,669  |
| Schenectady.....  | .....  | .....  | 10,201 | 13,081  | 12,876  | 12,347  | 16,280  | 17,387  | 16,680  | 20,054  | 19,572  |
| Rockland.....     | .....  | 6,253  | 7,758  | 8,837   | 8,016   | 9,388   | 9,696   | 11,975  | 13,741  | 16,962  | 19,511  |
| Schuyler.....     | .....  | .....  | .....  | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 18,777  |
| Putnam.....       | .....  | .....  | .....  | 11,268  | 11,866  | 12,623  | 11,551  | 12,825  | 13,258  | 14,138  | 13,934  |
| Hamilton.....     | .....  | .....  | .....  | 1,251   | *       | 1,325   | *       | 1,907   | 1,882   | 2,188   | 2,548   |

RECAPITULATION—TOTALS.

|           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|
| 1790..... | 340,120   | 1825..... | 1,614,456 | 1845..... | 2,604,495 |
| 1800..... | 588,603   | 1830..... | 1,913,131 | 1850..... | 3,097,894 |
| 1810..... | 961,888   | 1835..... | 2,174,517 | 1855..... | 3,466,212 |
| 1820..... | 1,372,812 | 1840..... | 2,428,921 |           |           |

By an attentive examination of the foregoing table, it will be observed that

\* Reported with Montgomery.



1809 to 1859. Besides the information contained in the table referred to, Mr. HUNTER has furnished us with the following earlier statistics of the white population of the State:—In 1670, white inhabitants, 150; in 1700, 5,500; in 1723, 14,000; in 1734, 7,233; in 1765, 40,000; in 1773, 65,000; in 1792, 140,178; in 1800, 196,255.

## WHITE POPULATION OF SOUTH CAROLINA FROM 1809 TO 1859, INCLUSIVE.

| Districts.                 | 1809.   | 1819.   | 1829.   | 1839.   | 1849.   | 1859.   |
|----------------------------|---------|---------|---------|---------|---------|---------|
| Abbeville.....             | 12,126  | 15,005  | 14,832  | 14,066  | 13,206  | 11,216  |
| Anderson.....              | .....   | .....   | .....   | .....   | 13,441  | 14,329  |
| All Saints.....            | 794     | 736     | 975     | 783     | .....   | .....   |
| All Saints, upper & lower  | .....   | .....   | .....   | .....   | 1,171   | 1,236   |
| Barnwell.....              | 7,646   | 8,483   | 8,719   | 10,978  | 12,256  | 12,751  |
| Chester.....               | 8,512   | 9,452   | 10,522  | 9,345   | 10,164  | 7,375   |
| Chesterfield.....          | 3,601   | 4,368   | 5,139   | 5,413   | 6,840   | 7,644   |
| Christ Church.....         | 506     | 412     | 464     | 386     | 346     | 1,003   |
| Claremont.....             | 4,982   | 6,119   | 5,824   | 5,583   | .....   | .....   |
| Clarendon.....             | 2,720   | 2,900   | 3,146   | 3,333   | .....   | 4,282   |
| Darlington.....            | 5,924   | 6,694   | 6,386   | 6,029   | 8,586   | 10,166  |
| Edgefield.....             | 15,666  | 14,942  | 14,056  | 15,060  | 16,256  | 15,434  |
| Fairfield.....             | 8,856   | 9,314   | 9,470   | 9,152   | 7,164   | 7,327   |
| Greenville.....            | 10,748  | 9,472   | 11,456  | 12,586  | 13,569  | 16,842  |
| Horry or Kingston.....     | 2,346   | 2,767   | 2,945   | 3,145   | 4,249   | 5,727   |
| Kershaw.....               | 4,885   | 5,240   | 4,922   | 3,947   | 4,947   | 5,508   |
| Lancaster.....             | 5,293   | 5,520   | 5,659   | 5,509   | 5,691   | 6,473   |
| Laurens.....               | 11,068  | 12,971  | 13,701  | 12,382  | 12,025  | 10,650  |
| Lexington.....             | 4,061   | 4,299   | 5,211   | 5,846   | 7,399   | 8,726   |
| Marion.....                | 6,303   | 6,080   | 6,938   | 8,296   | 9,897   | 11,456  |
| Marlborough.....           | 3,648   | 3,502   | 3,763   | 4,118   | 5,004   | 5,160   |
| Newberry.....              | 8,960   | 9,993   | 10,082  | 8,286   | 8,822   | 7,021   |
| Orange.....                | 4,173   | 4,252   | 4,946   | 5,276   | 6,075   | 5,843   |
| Pendleton.....             | 19,936  | 20,364  | 23,738  | 24,330  | .....   | .....   |
| Pickens.....               | .....   | .....   | .....   | .....   | 12,788  | 15,110  |
| Prince William.....        | 1,564   | 1,281   | 1,614   | 1,336   | 1,766   | *       |
| Prince George Winyaw..     | 1,574   | 1,671   | 1,821   | 2,014   | 2,084   | 2,754   |
| Richland.....              | 3,482   | 4,760   | 5,654   | 5,773   | 6,830   | 7,148   |
| Spartanburg.....           | 11,890  | 12,855  | 16,228  | 17,847  | 17,905  | 19,173  |
| Sumter.....                | .....   | .....   | .....   | .....   | 9,518   | 6,329   |
| St. Andrew's.....          | 428     | 305     | 301     | 350     | 379     | 424     |
| St. Bartholomew's.....     | 2,953   | 3,079   | 3,322   | 3,465   | 4,462   | 5,519   |
| St. George Dorchester..    | 1,687   | 1,470   | 1,373   | 1,603   | 1,866   | 2,366   |
| St. James Goose Creek..    | 1,176   | 1,151   | 1,108   | 1,292   | 1,901   | 1,894   |
| St. James Santee.....      | 364     | 411     | 392     | 283     | 354     | 489     |
| St. John's Berkeley.....   | 840     | 617     | 527     | 812     | 1,008   | 1,175   |
| St. John's Coleton.....    | 617     | 438     | 533     | 679     | 712     | 638     |
| St. Helena.....            | 948     | 787     | 1,000   | 1,121   | 1,078   | 1,272   |
| St. Luke's.....            | 923     | 838     | 919     | 1,074   | 1,201   | 1,481   |
| St. Matthew's.....         | 2,316   | 2,001   | 2,170   | 2,116   | 2,052   | 1,969   |
| St. Paul's.....            | 752     | 537     | 664     | 777     | 917     | 1,037   |
| St. Peter's.....           | 1,858   | 1,525   | 1,763   | 1,874   | 2,067   | 1,963   |
| St. Philip & St. Michael.. | 11,391  | 13,834  | 13,177  | 15,661  | 18,872  | 30,368  |
| St. Stephen's.....         | 410     | 440     | 511     | 390     | 581     | 716     |
| St. Thomas & St. Dennis.   | 219     | 212     | 189     | 207     | 251     | *       |
| Union.....                 | 8,262   | 9,776   | 11,047  | 10,873  | 9,936   | 8,462   |
| Williamsburg.....          | 2,227   | 2,941   | 2,663   | 2,687   | 3,599   | 5,029   |
| York.....                  | 8,877   | 8,016   | 10,988  | 11,173  | 11,160  | 12,626  |
| Total.....                 | 217,482 | 231,828 | 250,943 | 257,117 | 280,585 | 304,112 |

\* No return.

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**MERCANTILE MISCELLANIES.**

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**OBITUARY—THOMAS TOOKE.**

The death, last year, of THOMAS TOOKE, Esq., in his 85th year, called forth much sympathy from the commercial and financial world. For forty years the name of Mr. TOOKE has been prominent as that of a guide and teacher in some of the more important of those controversies which relate to the application of the higher economical laws and principles to purposes of practical legislation.

He was the elder son of the Rev. WILLIAM TOOKE, author of the "History of Russia," "Life of Catherine II.," and many other works, and brother to WILLIAM TOOKE, the editor of "Churchill." Mr. THOMAS TOOKE was born 29th February, 1774, in St. Petersburg, where his father resided eighteen years as chaplain of the English Factory, having been for three previous years chaplain of the English Church at Cronstadt.

Mr. TOOKE leaves behind him only one son; and it was the death, in December last, of his second son, Mr. THOMAS TOOKE, Jr., after a few days' illness, which hastened his own end.

Entering early in life into active mercantile pursuits as partner in one of the largest houses engaged in the Russian trade, Mr. TOOKE laid the foundation of that accurate and surprising knowledge of detail which afterwards became so useful and so conspicuous, when at a mature age he was led to apply himself to the investigation of general causes.

When the war was at an end, and the necessity arose for resuming cash payments, it was the prevalent and easy fashion to explain all anomalies of currency and commerce by praising or blaming the circulation of inconvertible bank-notes. It was at that period that Mr. TOOKE's name became first conspicuous. In his evidence before Parliament in 1819 and 1821, there was given, almost for the first time, an example of how much may be accomplished by the patient efforts of a sagacious and trained mind to the elucidation of economical phenomena of the most complex character. The views which had been orally expressed in these examinations were reduced into greater system in the "Thoughts and Details on High and Low Prices"—the first edition of which appeared in 1823—and the second edition in the summer of 1824.

This work was the foundation of the subsequent and greater work, which, under the title of the "History of Prices" from 1792 downwards, secured for Mr. TOOKE a place in the first rank of living economists. The first two volumes of the "History of Prices" appeared in 1838; the third and fourth in 1840 and 1847; and the two closing volumes, the joint labor of Mr. TOOKE and of his friend and pupil, Mr. NEWMARCH, were published so recently as March in last year.

It is well known that the famous document quoted as the merchants' petition, of 1820, in favor of free trade, was written by Mr. TOOKE, and was brought before the Legislature almost wholly by his influence and exertions; and it is certain that from the time of the presentation of that petition may be dated the origin of those practical discussions and reforms, which have at length rendered

this country the greatest warehouse and market of the world, because here free trade has become a principle in our laws and sentiments.

Mr. TOOKE was an active participator in the inquiries and legislation connected with the social reforms of the last five-and-twenty years. He took a leading part in the factory workers' commission, and he was the chief of the commission for investigating the difficult subject of the employment of children.

In 1821 he projected and founded a select society for the advancement of his favorite science, and the Political Economy Club still exists vigorous and flourishing. But forty years ago the science of ADAM SMITH stood but in poor estimation; and it may serve, perhaps, to mark a sensible advancement, to point out that in 1821 it was not without difficulty that a small society could be formed for the promotion of a branch of inquiry so heterodox and exceptional as political economy was then considered to be.

The Royal Society admitted Mr. TOOKE a fellow on the evidence of his first work. The French Academy more recently elected him a corresponding member. For a long period he presided as governor over the oldest and largest of our insurance offices—the Royal Exchange Assurance Corporation—and for a period almost as long over the St. Katherine Dock Company; and throughout both of these great establishments the day of Mr. TOOKE's funeral was markedly observed.

Eminently endowed by nature with an intellect observant, sagacious, and patient, aided by a judgment remarkable for clearness and solidity, and pursuing truth with a fervent singleness of purpose, he was enabled to extend the boundaries of positive knowledge in directions where success was a public good of no mean order; and working with materials apparently so common as the ordinary experience of a merchant, he drew from them profound economical laws for the guidance of philosophers and legislators.

#### ADULTERATION OF GROCERIES IN ENGLAND.

It is not the grocer alone whom competition has urged to adopt the tricky plan of selling one article at a loss, or at an unremunerative profit, in order that he may inveigle customers into buying other articles beyond their market value, or in a fraudulent compounded state. The public like "bargains," and usually pay for the pleasure of having a "bargain," as well as for the commodity they purchase under such a name. In one sense this might seem right, but it is obviously a demoralizing system, which places the fair dealer and fair purchaser on disadvantageous terms as compared with those who will stick at nothing for a real or apparent gain.

A few statistics of the grocery trade will at once show the evils of the present system, and the enormous temptations to fraud which it holds out. In order to show the extent of the trade and the relative proportion of the various articles, we may cite the following quantities entered for home consumption in the year ending 5th January, 1855:—

|                       | Pounds.       | Per pound. | Value.      |         |
|-----------------------|---------------|------------|-------------|---------|
| Tea.....              | 61,970,347    | 4s.        | £12,394,069 | 8s. 0d. |
| Coffee.....           | 47,470,970    | 1 2d.      | 2,185,806   | 11 8    |
| Sugar, unrefined..... | 906,803,872   | } 5        | 19,608,582  | 6 8     |
| Sugar refined.....    | 34,408,080    |            |             |         |
| Cocoa.....            | 4,563,782     | 1          | 228,189     | 2 0     |
| Spices.....           | 4,716,920     | 1 4        | 314,461     | 6 8     |
| Fruits, (dried).....  | 139,797,616   | 7          | 4,077,430   | 9 4     |
|                       | 1,189,731,587 | av. 7½     | 38,808,539  | 4 4     |

The prices quoted above are those charged to consumers averaging the different qualities; and the aggregate, as will be seen, shows that the national grocery bill comes to nearly thirty-nine millions sterling, which is certainly an enormous sum; but as the population of these isles exceeds 27,000,000, it is plain that if John Bull could afford it, he might be a larger customer to the grocer, with great advantage to the comfort of his very numerous family. This large quantity of grocery is dispensed by about 30,000 tradesmen, and the following statement will show the weight and money value of the sugar as compared with the other articles:—Sugar is 79 per cent, or nearly four-fifths of the whole. It stands to tea as 15 to 1; that is to say, 15 pounds of sugar were entered for home consumption in the year referred to, for every 1 pound of tea. To coffee it stands as 25 to 1; to cocoa, as 206 to 1; to spices, as near 200 to 1; and to fruit, as 6½ to 1; this very large comparative consumption of fruit having been the result of a reduction of the duties. In money value, sugar is 50½ per cent of the whole. To tea it stands as £1 12s. to £1, and it reaches nearly nine times the value of coffee. Now, if we take the ordinary business of a grocer, including those in country towns, and without reckoning other miscellaneous articles that he may sell, add to those mentioned above, soap, candles, rice, and tobacco; we shall find that every £100 of his sales will contain the following portions of different commodities, upon which we will suppose him to realize the average profit of 10 per cent with the customary loss upon sugar, which he sells by way of advertisement and not in fair trade:—

|                                          |                                |            |
|------------------------------------------|--------------------------------|------------|
| Soap, candles, fruit, rice, and tobacco. | £32 10s. at 10 per cent profit | £3 5s. 0d. |
| Sugar.....                               | 35 0 at 2½ per cent loss       | 0 17 6     |
|                                          |                                | <hr/>      |
|                                          |                                | £2 7 6     |
| Tea, coffee, cocoa, and spices.....      | 32 10 at 23 per cent profit    | 7 12 6     |
|                                          | <hr/>                          | <hr/>      |
|                                          | £100 0                         | £10 0 0    |

Thus, merely to clear 10 per cent profit on his sales, he must get an average of 23 per cent on tea, coffee, cocoa, and spices, and as the houses who avoid sugar and puff the profitable articles, are contented with 15 per cent profit, the general grocer stands at a great disadvantage with respect to them. If he is a very scrupulous man he jogs on as well as he can; his business expenses amount from 6 to 7½ per cent upon his returns, and with the help of good family customers, he may get a living in a small way. A sale of fancy biscuits and other fancy articles and Italian warehouse goods will do much for him in the way of profit, but if he has not much of this, he must cheat in order to keep out of the *Gazette*. The public like white pepper, so he can mix any sort of white dust with that. As long as cocoa tastes pretty well, his customers are not particular as to the quantity of flour, fat, and other cheap ingredients it contains; and if the chicory mixture is cleverly compounded it tastes pretty strong with a wonderful small quantity of coffee in it. And then the sugar is to be dealt with somehow. For example, if the neighborhood is a poor one, the great sale will be in quarter pounds, and by making each one a quarter of an ounce short weight, he runs little chance of detection, none of punishment for fraud, and saves himself 4s. per cwt., which is not a bad profit. Then he can buy potato starch for 24s. a cwt., or about half the value of decent sugar, and by mixing ten per cent of it with the sugar, it will make a difference to him of between three and four hundred pounds a year, if he sells three tons a week. Sometimes this adulteration is carried on to the extent of twenty per cent, and then the gain amounts to a large sum. We have before us a specimen of this mixture, of a good color and fine grain, which would pass muster with the admirers of cheap goods, and a sharp-dealing housekeeper would, after seeing it in the windows of a cheat, rate her own grocer soundly if he did not serve her as well. We might give many more illustrations of the tricks of the trade, but what we have said will show that they must be played at as long as the cheap sugar system is kept up.

## ADULTERATIONS IN FOOD AND DRUGS.

At a Pharmaceutical Convention in session at Boston, a committee appointed last year to consider this subject of adulterations have made an exceedingly able, interesting, and valuable report, which is published in the *Traveller*. They give a most formidable list of adulterations which are known in the trade, and manfully acknowledge it to be their high duty to purge their profession of the disgrace which their dishonest brethren bring upon it. They mention the following as some of the articles of food which are most commonly "doctored" by manufacturing grocers:—

Colored Confectionery—adulterated with emerald or schules green, arsenite of copper.

Beer—with *coccus indica*, and *nux vomica*.

Pickles and Bottled Fruits—with verdigris and sulphate copper.

Custard Powders—with chromate of lead.

Tea and Stuffs—with the same.

Cayenne and Curry Powder—with red oxide of lead.

Sugar Confectionery—with gamboge, orpiment, or sulphuret of arsenic, and chloride of copper.

Flour and Bread—with hydrated sulphate of lime, plaster of Paris, and alum.

Vinegar—with sulphuric acid.

Sugar—with sand and plaster of Paris.

Milk—with chalk, sheep's brains, ground tumeric.

Arrow Root—with ground rice.

Chocolate—with rice, flour, potato starch, gum tragacanth, cinnabar, bals. Peru, red ox, mercury, red lead, carbonate of lime, and the red ochres to bring up the color.

Mustard—with ground tumeric, to give it a brilliant color.

Butter—with potato starch, mutton tallow, carbonate lead, and sugar of lead.

Tapioca, it appears, is often nothing but potato starch. An article was exhibited which had been brought into the market as yeast powder, but it had to be withdrawn because it destroyed the tin cans in which it was sold. The stomachs which received it must have fared well. Dr. JACKSON of Boston testified that spices and blistering flies are, in one place, ground in the same mill.

A long catalogue of drugs is furnished, which have this year been taken from shops, and which are adulterated in every conceivable way. Five different methods of treating the Para Balsam Copaiva are enumerated. Cream of Tartar, which is so largely used, both as a medicine and an ingredient of food, is a favorite article for adulteration. The report says:—

Cream of Tartar is adulterated with tartrate of lime, chalk, finely powdered with marble, sulphate of lime, sand, nitrate of potassa, alum, sulphate of soda and potassa, chloride of potassium. It has been found to contain, as impurities, iron, copper, lead, and arsenic.

The addition of starch, arrow root, and other amylaceous substances, are well known; and the specimen under examination is only remarkable from the fact that it contains 63.33 per cent of farinaceous substances as adulteration. This was sold as *pure* Cream Tartar.

The opium, which is offered for sale, often contains a large percentage of biscuit or of gum tragacanth. East India rhubarb, worth ninety cents a pound, is ground up and sold for "true Turkey," at \$4 50 a pound.

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 THE BOOK TRADE.
 

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- 1.—*The Logic of Political Economy, and other Papers.* By THOMAS DE QUINCEY, author of "Confessions of an English Opium Eater," &c., &c. 12mo., pp. 387. Boston: Ticknor & Field. Also for sale by D. Appleton & Co., New York.

The most prominent portion of this last volume of De Quincey's writings appears to be a critical review of the opinions and doctrines held by both Adam Smith and Ricardo on that very absorbing and misty subject, Political Economy; or, the Measure of Value; although accompanying it will be found a well written biographical sketch of the life of Milton, as well as a history of the Suliotes of Greece, ending with a bit of romance in the legends of the "Fatal Marksman," and the Incognito, or Count Fitz Hum. As to Political Economy, notwithstanding all that has been written on the subject, and all the broad and nice distinctions which have been made, and notwithstanding all the fleeting and fluctuating edifices which have each in turn been built up, all so antithetically arranged by the different expounders, only to crumble away, as it were, under the very breath that had created them, it seems as a science to have made but little progress, and the measure of value has yet to assume the definitive form of Aaron's Rod, and still retains that subtil quality, varying in the same object with every change in its relations, and with the condition of all other objects with which its subject is connected, and with every change in the circumstances of the individual or community whose wants or inclinations create it. In reviewing the different theories presented by the various High Priests of the science, we are always reminded of the Hard Shell Baptist's definition of the word *Metaphysics*. He said he did not exactly know the meaning of the term, but could illustrate it. When two persons were employed in discussing a subject, and both become so deeply engaged, and so much beyond their depth as not to know what they were talking about, that was *Metaphysics*. We would not imply by this that we are heretical on the subject, but believe, with De Quincey, that the great drawback to the advancement of the science lies not in any material defect in facts, (except as to the single question of money,) but in the laxity of some amongst the distinctions which are elementary to the science. De Quincey labors hard in this treatise to thoroughly establish some of these distinctions, and his book will be found of general interest.

- 2.—*The New American Cyclopaedia.* A Popular Dictionary of General Knowledge. Edited by GEORGE RIPLEY & CHARLES A. DANA. Volume vii., royal 8vo., pp. 785. New York: D. Appleton & Co.

This new Cyclopaedia still progresses, and will be completed in about eight more volumes. It is eminently a practical work, possessing great value, and having a distinctive character of its own, doing away as it does with whatever is sectarian, and giving an original dress to those articles which have already been treated of in other works. In history, giving not merely a catalogue of barren dates, but a copious narrative, under their appropriate heads, of the principal events in the annals of the world. Biography, also, not of the gifted dead, but of the distinguished living, written by personal acquaintance or special research. In the present volume, among the many articles calculated to attract attention, and to lend additional value to the work, will be found both a historical and statistical notice of England, embracing some fifty-three pages, taking into view her civil and religious government, her language, literature, &c., &c.; likewise of France. Also a legal explanation in regard to executions, followed by a commercial view of bills of exchange; while in Biography, we have such names as Fox, Franklin, Everett, and a score of others. Taken as a whole, this work, when complete, will exhibit the greatest mass of interesting subjects ever grouped in any series from the American press, and is deserving of the most extensive patronage.

- 3.—*Almost a Heroine*. By the author of "Charles Anchester," "Counterparts," &c., &c. 12mo., pp. 399. Boston: Ticknor & Field.

We regret that the limited time we are enabled to devote to the Book Trade precludes us from giving as elaborate a notice of what appears to us to be a most sprightly tale, inasmuch, too, as in books of this sort titles have become as little characteristic of their contents as are men's surnames of their own inevitable proclivities. From the hasty glance we have been able to bestow, it appears to be a vivid picture of English life, not told in that strain—a little fancy mingled with an abundance of *lead*—for which many of our own fiction writers have become so remarkable, but a vivid glow of reality illuminating every page, just like the expression one sometimes, and only at times, meets with, in the expressive lineaments of a stranger; not that habitual weariness which serves plainly enough to *express the want*, though we may never have seen the face before, but that light which, had we ever become familiar with, it were sad and dark to miss, denoting at once that the tenement is occupied and excited by *human interest*, and is all life and sunshine. This we know to be the peculiar features of this little volume, of which we have not as yet read three consecutive pages, but which we have no fears that those who have read, or the thousands who will peruse it, can gainsay.

- 4.—*The Normal Methods of Teaching, and Entertaining Dialogues*. Both Designed for the Use of Young Students, in Schools and Academies. New York: A. S. Barnes & Burr.

As school-book publishers, this firm have acquired an extended reputation. The first of these volumes consists of a general and nice classification that each subject holds in the grand circle of the sciences, such as orthography, grammar, geography, arithmetic, and elocution, including the outlines, technicalities, explanations, demonstrations, &c., introductory and peculiar to each branch, that a more systematic and useful presentation of the principles involved may be arrived at, than has hitherto been available under the old system. While the purpose in the latter volume has been to furnish something both entertaining and instructive, which, while it engrosses the mind of the youthful reader, by carrying him along, as it were, through pleasant walks, thereby luring him from idleness and the influences of the street, greatly assists him in the acquisition of knowledge and appreciation of character, as well as to cultivate an easy and natural style of elocution. This series of school-books is unexceptionable, and among the very best books which can be put into the hands of youth, both in the school-room and out.

- 5.—*Leaves from an Actor's Note Book; with Reminiscences and Chit-Chat of the Green-room and the Stage, in England and America*. By GEORGE VANDENHOFF. 12mo., pp. 346. New York: D. Appleton & Co.

To all who have a *penchant* for the mimic scene, or a taste for sentimental tragedy, this is a right *merrie* book, and as exciting to the nerves as sleigh bells on a frosty morning, filled up as it is with the choice "droppings" of the green-room, and the soul-inspiring couplets of Shakspeare. It is remarkable how true the ghost of that old gentleman is to his votaries, or those on whom his mantle has fallen, supplying, as he never fails to do, those who venerate him with the very fittest language for their impassioned thoughts. It is no trouble for a disciple like Vandenhoff to write. With what teeming visions he rekindles the "light of other days," when all, even to the Lord Edwards and Honorable Horatios, did honors to the buskin. As we said before, to the lovers of the drama this will prove a very acceptable book, from its many salient points, and the strong emphasis given to everything throughout the whole narrative; included in which are criticisms on Kean, Kemble, McCready, Ellen Tree, Mrs. Siddons, and a score of others; together with many choice fragments, which serve, as it were, as a sort of epitome to each of their several lives.