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HUNT'S
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AND

COMMERCIAL REVIEW.

SEPTEMBER, 1860.

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

OR, INTRODUCTION TO A MORE COMPREHENSIVE SYSTEM.

PART VIII.

THE INTELLECTUAL NIGHT OR DARK AGE OF EUROPE BRIEFLY REMARKED UPON, AND ITS FIVE DISTINGUISHING FEATURES—THE DAWN OF MODERN SCIENCE GLANCED AT—THE COMMONLY SUPPOSED INFLUENCE OF LORD BACON ON THE CAUSE OF SCIENCE CRITICALLY CONSIDERED—HIS SYSTEM OF PHILOSOPHY CRITICALLY EXAMINED—DESCARTES AND LEIBNITZ BRIEFLY NOTICED, AS THE GREAT REPRESENTATIVE MEN OF FRANCE AND GERMANY, AND, TO SOME EXTENT, OF THE AGE, THOUGH LESS SO THAN BACON—DISTINGUISHING CHARACTERISTICS OF THE PRESENT AGE—THE NECESSITY HENCEFORTH OF RENDERING OUR REVIEW MORE STRICTLY CRITICAL, AS IT HAS BEEN HITHERTO MORE PECULIARLY HISTORICAL, AND OF ADOPTING THE SYNTHETIC INSTEAD OF THE ANALYTIC METHOD OF CONSIDERING THE SOCIOLOGICAL IDEAS PASSING UNDER OUR REVIEW.

THE intellectual night which overspread Europe from the latter part of the *fifth* to that of the *fifteenth* century was not one of utter darkness. The reflected sunshine of former science threw a dim and solemn light, resembling *twilight*, and which may be assimilated to the protracted twilight of the northern latitudes, (if indeed it may not properly be compared to *moonlight*,) over the darkened landscape of European society, by which considerable attainments were made in architectural science, though chiefly in the departments of church building and castle building, and in other sciences which appertain to a state of society considerably elevated above that of rude or simple barbarism.

For in the intellectual night, to which mankind are liable, and in which they seem often to remain for a considerable period, without the fact being made apparent to common observation—as a native of the torrid zone might pass through a summer night in the arctic regions, without

* 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.

realizing that it was night—the functions of the intellect are not by any means suspended, not any more so than are those of the natural world, by the terrestrial night to which it is subject; although the functions of nature in both cases—the *physical* in the one, and the *psychological* in the other—are performed with much less vigor and healthful manifestations during the period of night.

Nor was this intellectual night of Europe unrelieved by such transient and partial illuminations as often relieve the darkness of the terrestrial night. Intellectual lights of uncommon magnitude, like splendid meteors, (if indeed they may not more properly be compared to blazing comets,) among the brightest of which may be named Charlemagne, Alfred the Great, Abelard, Aquinas, and Roger Bacon, gleamed occasionally across the benighted sky, causing partial and transient illuminations, though diffusing no steady light amidst the general darkness. During the same period, the light shed from the far North, by the poets and historians of Iceland, then considerably in advance of other European countries, has been beautifully compared to the Aurora Borealis of their native skies,* diversifying the gloom of the European night. During the same period, also, the lingering civilization of Greece, then concentrated around Constantinople, and which may be assimilated to a huge *lamp*, fed by the *oil* of a former science, cast a pale and sickly light, in the region of the southwest, though penetrating but a little way into the surrounding and general gloom.

During this period of European history, which has been sometimes designated as the "Middle Age," and sometimes as the "Dark Age," there were five prominent influences, or causes, powerfully operating upon the condition of European society, and which have chiefly engaged the attention of those who have treated this portion of general history, either as mere historians, or as critical inquirers into the *anatomy* of human society—the Feudal System, the Spirit of Chivalry, the Crusades, the Ecclesiastical Authority of the Romish Church, and the Scholastic Philosophy. Neither of these influences, however, need detain us long, in this place, and simply because the ideas which they *prominently* suggest in relation to the philosophy of society are not of sufficient importance to demand particular consideration, in our Review, which, in the more peculiarly *historical* portion of it, on which we are now engaged, does not aim to notice any other ideas in Sociology than those which have been either *theoretically announced*, or else *practically and prominently illustrated* by actual occurrences or institutions, in former times, and before the present age, in which sociological ideas have assumed so much definiteness and form, in a theoretical point of view, as to admit of a more systematical and strictly *critical* examination.

It is true, that from a critical and searching examination of these influences, or indeed any one of them, in relation to their remote, as well as their immediate bearings on the condition of society, we might deduce many highly important principles in Sociology. For as Burke has justly remarked, "every theme branches off into infinity;" and, as Carlyle, a more profound thinker even than Burke, though a far less accurate and precise one, has said much to the same point, "all objects are as windows,

* See Sir George Mackenzie's Travels in Iceland, in 1809; also, American Review, vol iv., p. 286, October No. of 1812.

through which the philosophic eye looks into Infinitude itself;”* both of which remarks are in accordance with our own fundamental observation, that “all sciences are but the different spires of the same common temple whose foundation is all knowledge.”† A profound inquiry, therefore, into the bearings of any one of the influences in question would readily enough lead us into all the *infinitudes* of social philosophy. But this would be, as it were, preaching a sermon of very great significance from altogether too inconsiderable a *text*, whereas the very aim of the present undertaking, of this REVIEW, HISTORICAL AND CRITICAL, OF THE DIFFERENT SYSTEMS OF SOCIAL PHILOSOPHY, is to *condense* what has been already stated at large, to compress sermons into texts, volumes into paragraphs, and to *express*, as it were, in a literal sense, the very *marrow*, or *most interior essence*, of all that is valuable, either in the speculation or practice of former times, and of the various races of men, in relation to the philosophy and science of human society.

In regard to the Scholastic Philosophy of “the Dark Age,” after making due allowance for the remark of Hallam, that “Few, very few, for a hundred years past, have broken the repose of the immense works of the schoolmen,”‡ and for the consequently limited information which the present age may be supposed to have in regard to their philosophy, we may venture, pretty safely, to assert, that it is eminently unworthy of any special consideration. This philosophy appears to have been mainly concerned in the unprofitable attempt to compass the most incomprehensible of all knowledge to man, and which must, most probably, ever remain “a sealed book” to him, knowledge of the essential nature of God, or what we may venture to style the *metaphysics of theology*, and that too by the most false system of philosophizing. In the language of Tennemann, in regard to this Scholastic Philosophy, “The human mind thus endeavored at once, without any substantial knowledge or previous discipline, to grapple with the greatest of all questions, the Nature of the Divinity, and by a course, the reverse of that pursued by Grecian philosophy, beginning with this great principle, sought, in its descent, to embrace the circle of all acquired knowledge.”§ In short, these scholastic philosophers, in common with a great many others, though these more especially than any others, adopted, in their search after truth, the preposterous mode of proceeding, or attempting to proceed, *from the unknown to the known*, instead of the very reverse, which is undoubtedly the only true mode of philosophizing, in every department of knowledge, that of proceeding *from the known to the unknown*. It should be superfluous to remark that such a mode of philosophizing, especially when applied to such objects as were mainly aimed at by the Scholastic Philosophy, must ever prove barren of useful results.

In regard to the Ecclesiastical Authority of the Romish Church, during “the Dark Age,” nothing special need be said in this review. That it was adapted to the times, without which it could not well have flourished, that it exerted in the main a salutary influence during those times,

* See Carlyle's *Sartor Resartus*, book I., chap. 11. The writer is not able to refer to the work, speech, or essay of Burke, in which the idea cited in the text was used by him.

† See Part i. of this Review, in October No. of *Merchants' Magazine*, for 1859.

‡ See Middle Ages, chap. ix., part ii.

§ See Tenneman's *Manual of the History of Philosophy*, as translated by Arthur Johnson and revised J. R. Morell, section 239.

and more potential than had ever been exerted before, or has been since, on human society, by any form of *theocracy*, and that it was, nevertheless, substantially the same kind of authority to which mankind in the earlier and ruder stages of society are generally prone to pay homage, are propositions which should be too generally recognized to need comment here.

In regard to the Crusades, very much might be said, of great and rare interest to the social philosopher, as well as to the mere critical inquirer into European history. But that which might thus be said is hardly suggested with sufficient prominence to be dwelt upon here, consistently with the scope of this review, as already indicated.

The Crusades not only illustrate, like the wars of the Saracens, the power of the religious sentiment, or of religious enthusiasm, on the general movements of society, but they illustrate the *generalizing and systematizing influence* which Christianity had already begun to exert on Europe—uniting all its different nationalities in a common enterprise. They illustrate also the influence of *external causes* on the development and growth of society, bringing Europeans into contact with foreign nations of Asiatic origin, and with nations much more advanced in civilization, at that time, than themselves, the beneficial effects of which on their manners and customs were manifestly displayed. They illustrate also a much more general fact, the *close and intimate analogy between social and individual organism*, intimating the general fact that social, as well as individual, life requires more vigorous exercise in youth, than in mature age, consistently with which fact, it may be observed that no human society, so far as history informs us, has ever yet attained to any considerable growth, or eminence in the family of nations, which did not, during its youth, have to sustain, in some form or other, desperate wars with other nations. The Crusades, in short, were, to Europe in general, what the Trojan war was to Greece, the Carthaginian and other early wars to Rome, the Tartar invasion to Russia, and the desperate struggles with the Danes and afterwards with the Normans were to the Saxons of Britain.

The important effects of the Crusades on European society are observable, *externally*, in the general improvement of manners and customs consequent thereupon, and, *internally*, in important changes in the *anatomical structure* of the society. For anything like an adequate delineation of these *internal* effects of the Crusades on Europe, reference must here be made to those justly renowned inquirers into the anatomy of European history, Hallam, in his "Middle Ages," and Guizot, in his "History of Civilization in Europe." One effect only will here be particularized—a *great abatement of the nuisance of predatory lordly barons*, whose prerogatives and privileges were absorbed by the *central lord*, or king, on one hand, and by the communities of mechanics and artificers, on the other. On this point the language of Guizot, in reference to the Crusades, cannot easily be condensed or improved: "It has been shown in what manner they had reduced a great number of feudal proprietors to the necessity of selling their fiefs to the king, or to sell their privileges to the communities, in order to raise money for the Crusades."*

The Spirit of Chivalry, highly interesting and remarkable feature in

* See Guizot's General History of Civilization in Europe, lecture viii., p. 208.

human history as it is, need not detain us long. It may be disposed of with the remark, that it was Christianity taking the form adapted to the then existing state of society in Europe—Christianity applied to war, and a war-scourged state of society, or, at least, that it was the highly wrought spirit of a naturally brave and noble race of people elevated, softened, and refined by the spirit of Christianity, and aroused to the necessity of extraordinary efforts to redress extraordinary grievances. In no similarly unsettled and habitually war-scourged state of society was such a noble spirit ever exhibited by mankind. Nor can it reasonably be doubted that the rude warriors of Europe, during that age, were indebted, for much of that noble *spirit of chivalry* which has rendered them illustrious, to the beneficent influence of Christianity, on which having already dwelt at some length* in a former article, it would be unnecessary repetition to dilate again in this.

It may indeed be said, that true courage is nearly always *chivalrous*, magnanimous; but it is never so much so as when chastened and refined by the religion of Christ, as when imbued with Christian principles, as when it has been *baptized*, as it were, not with water, but with the genuine spirit of Christianity.

If the justly renowned chivalry and magnanimity of the Saracen warriors of the same age should be urged against the view here presented, as to the influence of Christian ideas in begetting the *Chivalrous spirit*, it is to be replied that the Saracens themselves were *quasi* Christians, being imbued with the Mohammedan religion, which, as we have before had occasion to remark, may be regarded as a kind of *spurious* Christianity, † embodying many of its noblest principles, and that the Saracens of that age had the advantages of a much more advanced stage of civilization than that of the Europeans, to illustrate and embellish their chivalry.

The Feudal System, so often the theme of loose and superficial remark, not only in common conversation, but in essays, historical treatises, and even in works of more scientific pretension, may rather afford us occasion here to criticise the prevailing misapprehension as to its essential character, than for any particularly noteworthy observation which it suggests in relation to the philosophy of society.

The idea has prevailed hitherto, almost universally, notwithstanding some faint disapprovals of it, by eminent authority, that the Feudal System was, in some sense or other, an essentially different arrangement of society from any that had existed before or has existed since, that it was a *peculiar institution*, and that it was one of the prominent *causes* of the disturbed and distracted state of society which existed in Europe during the greater part of the Middle Age. The truth is, on the contrary, that the Feudal System was essentially, and to all intents and purposes, simply that kind of political arrangement which has always existed, and must always exist, to a greater or less extent, in such a rude, unsettled, and warlike state of society as then existed in Europe, and it was the *effect* rather than the *cause* of the existing condition of European society. Nay, in a larger sense, we might venture to say it was, *essentially*, pretty much the same arrangement of society that now exists in Europe, and in America, the real difference between the two states of society being in

* See sixth No. of this Review, in May No. of *Merchants' Magazine*.

† See seventh No. of this Review, in July No. of *Merchants' Magazine*.

the different *modes* in which the activities of the social arrangement were manifested.

It seems to be commonly imagined, and so it is expressly laid down, by the superficial law writers,* that the distinctive peculiarity of the Feudal System was in respect to landed tenures, and consisted in this, that *all lands were held of some superior, and only upon certain conditions*; most commonly those of military service—the barons holding directly of the king, or “lord paramount,” on such conditions, and the vassals holding of the barons, on similar conditions. But in what essential or substantial respect did this species of landed tenure differ from that which is generically termed *allodial*, as contradistinguished from *feudal*, and which now generally prevails in Europe, and universally in the United States of America? Is not land everywhere, in these countries, and, in short, universally throughout civilized society, held by individuals, *of some superior*, as recognized by law, for example of the State, primarily, and, in a multitude of instances, of some individual landlord, secondarily? Is not land, universally throughout civilized society, held, moreover, *upon conditions*—upon the condition that *the taxes be paid*, and, to a very great extent also, upon the further condition, that *the rent be paid*? Or is it supposed that the nature of landed tenure is essentially varied by the fact, that the condition on which land is held, as under the Feudal System, is, for the most part, military service; that, in short, the rent is to be paid in shields and lances, or in so many “horse, foot, and dragoons?” What real or essential difference does it make whether the *rent* to be paid for land, whether to the State, through its tax gatherer, or to the landlord, through his bailiff, be so many lances, so many raccoon skins, or so many dollars in cash? Is not the real difference between these several cases rather in the *different conditions of society*, which render *lances* a paramount commodity of exchange in the one case, *raccoon skins* in the other, and *cash* in the other?—thus again verifying the great fundamental truth so often before remarked upon in this review, (substantially, if not in so many words,) and which we shall find repeatedly *cropping out* in Sociology, like the fundamental granite of geology, that *it is the condition of society which determines and gives form and direction to the political arrangements of the society, rather than those political arrangements which determine or give form and direction to the condition of the society.*

Hallam, in his remarks on the Feudal System, has recognized, to some

* See Coke, Blackstone, Kent, *et id omne genus* of superficialists in Social Philosophy—a remark not intended to disparage these justly renowned names, in respect to their contributions to mere jurisprudence. But how extremely superficial is the influence of the mere jurist on the condition of society and how equally superficial are the ideas of such, for the most part, in respect to the philosophy of society. Kent, for example, in his remarks on Feudal Tenures, stumbled on the truth in question, in one place, where it *projected above the surface*, but he had not the discernment to recognize it. He says, in the very commencement of his remarks on this topic, “some writers have supposed that the sources of feuds were not confined to the Northern Gothic nations who overturned the Western Empire of the Romans, and that an image of feudal policy had been discovered in almost every age and quarter of the globe.” See Kent’s Commentaries on Law, vol. iii., p. 489, third Am. ed., and authorities cited in note thereto, which abundantly sustain this opinion, which precisely coincides with that expressed in our own text. Yet Kent, like a host of others, ignores the opinion, and passes very lightly over it. In fact, Chancellor Kent seems to have been a man who *staggered* under the vast weight of his learning, and tumbled to the right and left, not infrequently, with confused and devious steps. He does not appear to have possessed that *herculean* frame of mind which can move forward, unencumbered and unimpeded, by the most prodigious load of knowledge—steadied and rendered more direct in his motion, rather than unsettled by its weight. The learning of Chancellor Kent has often served to obscure rather than to illustrate his native talent—a remark not exclusively applicable, by any means, to that highly meritorious jurist and scholar.

extent, the truth of the observations here made, although with rather too timid hesitancy, and without that decisiveness and boldness of enunciation which should characterize one who is thoroughly master of the idea. He says, "If the view that I have taken of those dark ages is correct, the state of anarchy which we usually term feudal, was the natural result of a vast and barbarous empire feebly administered, and the cause rather than the effect of the general establishment of feudal tenures."*

One other remark on the Feudal System it is proper here to make, as having a direct and important bearing on the philosophy of society. The two principal kinds of feudal tenure, tenure by *knight service*, and *socage* tenure, were distinguished from each other, chiefly by this circumstance, that the services incident to the former were *uncertain*, while those incident to the latter were definite and certain. Now it was precisely this former species of tenure—that by knight service—which was essentially *uncertain* as to its requirements, that was universally held to be by far the more oppressive and injurious, so that when, in the 12th year of Charles II., a statute was passed abolishing tenure by knight service, and converting all landed tenure into "free and common socage," with some modifications of the tenure in socage, the feudal system, or all that has been commonly held to be peculiarly injurious in that system, was considered virtually abolished in England. This great prominent fact, concerning the Feudal System, it must be obvious, is a powerful corroboration of the fundamental remark made in the foregoing part of this review, *that the essential nature of the immediate evils of all bad government is UNCERTAINTY.*† We find that so soon as the previously uncertain conditions on which lands were held, for the most part, under the Feudal System, became stable, fixed, and *certain*, the evils of that system vanished.

The intellectual night of Europe was however far spent before the Feudal System had released its hold on the land, or the Scholastic Philosophy its hold on the mind of Europeans; and streaks of the morning had reddened the intellectual horizon before the Spirit of Chivalry had quite subsided, or the Ecclesiastical Authority of the Romish Church, which still brooded, like a nightmare, over the mind of Europe, had been sensibly abated, although the stirring clamor of the Crusades had then completely died away. And if this intellectual night was long and dreary, it was undoubtedly the precursor of a *SPLENDID DAY*. "The morning star of religious reformation" shone brightly over the isles of Britain in the 14th century. The gladdening beams of returning day, discernible in the revival of ancient learning, and a wide spread spirit of inquiry, lighted up the horizon toward the latter part of the 15th, and in the commencement of the 16th century the sun of civilization, after a protracted night of *ten centuries*, rose once more on Europe, and ushered in a *DAY*, destined beyond doubt to be one of far greater splendor and far more important achievement, than either of the preceding days of human enlightenment.

It has been long customary to compute the dawn of modern science from Sir Francis Bacon, and to attribute its most distinguished achievements mainly to the influence exerted by his extraordinary mind on the

* See Hallam's Middle Ages, chap. ii., part ii. of the chapter.

† See Part vii.

philosophy of the age. The former of these ideas is undoubtedly erroneous, and the latter has been greatly exaggerated.

The printing press had been invented, America had been discovered, Copernicus had promulgated his theory of the solar system, and Luther had triumphantly preached the doctrines of religious reformation, before Bacon appeared upon the stage of existence, the last and latest of which events had transpired fully a century before the *Novum Organum*, the greatest of the works of Bacon, was published in 1620.* Moreover, Galileo and Kempler, both contemporaries of Bacon, though somewhat younger men, had both promulgated their celebrated ideas in astronomy before the *Novum Organum* appeared.

Nay, Bernard Telesius, an Italian, who may not inaptly be styled the Bacon of Italy, who was born in 1508 and died in 1588, had, nearly a half century in advance of Bacon, attempted a reformation in philosophy very similar to that attempted by Bacon, seeking, like him, to ground knowledge on experience, or perception through *induction*, and attacking the system of Aristotle on the very ground on which Bacon attacked it, that it laid down as principles mere *abstractions*, and not real *existences*—*abstractu et non entia*.† It is manifestly erroneous, therefore, to compute the *dawn* of modern science, or even the *SUNRISE* of the present *DAY* of human enlightenment, from the time of Sir Francis Bacon, although it may be very just to say that *the real business of the day* fairly commenced with him.

Were it important to the purposes of this review to fix the time when the present day of human enlightenment may be regarded as having begun, we need have little hesitation in saying, that it began with the religious reformation inaugurated by Luther, early in the 16th century, when the minds of men became, in some degree, generally *illuminated* with the idea of their own individuality, and rights of independence, as sentient and rational beings. We might venture, moreover, to designate, as the very moment of *SUNRISE* to the present civilization, that ever-memorable occasion, the 10th of December, 1520, when Luther, before a great concourse of people, at the Elster gate of Wittenburg, indignantly burnt the Pope's fire decree, while "Wittenburg looked on with shoutings," and "the whole world was looking on." It is therefore with peculiar felicity that Carlyle, some of whose words, in reference to this event, we have borrowed, in the foregoing sentence, says, in relation to the shout which arose on that occasion, "it was the shout of the awakening nations."‡ Loftier intellects had, indeed, before this, caught the rays of the rising sun, but then, for the first time, it may be said, the sun-

* This statement, that the triumphant preaching of the doctrines of religious reformation, by Luther, was later than the promulgation of the theory of Copernicus, concerning the solar system, may appear liable to censure, as an historical error, since Luther may be said to have virtually triumphed when he burnt the Pope's fire decree, before the Elster gate of Wittenburg, in 1520, whereas the treatise *Du orbium celestium revolutionibus* of Copernicus was not completed until 1530, ten years later, nor published until 1543. But it appears that Copernicus had conceived and developed his ideas on astronomy as far back as 1507, although he had not as yet verified them sufficiently by mathematical calculations. In our text it is assumed that his ideas were *promulgated*, from the moment they were formed and developed, and the work of preparing them for publication, through the printing press, was begun. In this, we do but follow the maxim of the court of chancery, that "what is to be done is to be considered as done," from the time when it is legally directed to be done.

† See Tenneman's Manual of the History of Philosophy, translated by Johnson and revised by Morell, sections 298 and 316.

‡ See Carlyle on Heroes, p. 119.

light descended upon the eyelids of the multitude, and they recognized it with a shout.

As to the influence exerted by Bacon on the achievements of modern science, it does not appear to have been so marked or important as appears to be commonly supposed, nor is there any good reason to believe that it has been very much greater than that of other transcendent minds, whose contributions to philosophy have been far less bruited, mainly because they did not, like those of Bacon, have the destiny to appear at a time when the attention of mankind was but little distracted by multiplicity of authors, and when their ideas might well present the appearance of novelty—a circumstance not to be lightly regarded in attempting an estimate of the influence exerted by the philosophical writings of Bacon; since it is obvious, that, amid a crowd of authors, one of great merit is less likely to be recognized, than when he stands up, alone, like Pompey's pillar amid the solitudes of the modern Alexandria, and since the melody even of the swan is apt to go unheeded, if she be doomed to sing when every goose is cackling. The philosophical writings of Bacon have had the fortune to obtain *pre-eminence* in reputation, rather than to have merited it—another testimony to the truth of the poet's line,

"One Cæsar lives, a thousand are forgot,"

—a reflection which should curb the ambition of men to reign as *kings*, either in statesmanship, or fundamental philosophy, since it shows that few, if any, are really more gifted than a thousand of their fellows, and that, moreover, it is very uncertain whether the merit which they really possess, of deserving to be regarded as *one of a thousand*, will ever be recognized.

The merits of Bacon, as a leader in philosophy, were undoubtedly very great. But he is indebted largely for his *pre-eminent* reputation, to the *point of time* at which he appeared, and to the *place* which he occupies in the grand column of advancing humanity. He owes it largely to the fact that he belongs to the vanguard of modern philosophy—that he stands in the front rank of that grand army of scientific explorers and conquerors, who seem to be marching forward to the conquest of the universe, and the mastery of its grandest mysteries—to the fact that he stands foremost, or among the foremost, in that long and brilliant retinue of intellectual giants, whose prodigious strength and wonderful achievements might well lead an enthusiast to imagine that we are approaching the reign of *gods*, or at least of *demigods*, rather than men, in the intellectual sphere of earth.

For this, merit must be accorded to Bacon, that he was among the foremost, and most prominent among the foremost, of these giants. It is true that Columbus, Copernicus, and Luther were slightly in advance of him on the field of action. But their aims and achievements, though highly important, were far more circumscribed. Columbus aimed merely at an extension of knowledge in Geography, Copernicus in Astronomy, and Luther in respect to the more interior and occult relations of man to Deity, or what is commonly called religion. But Bacon, to use his own terse and sententious language, *took all knowledge for his province*.* He was, moreover, the first of all philosophers who seems to have done so,

* See Bacon's letter to his uncle, Lord Burleigh—also Macaulay's Essays, article on Lord Bacon.

or at least to have done so from deliberate design, and with a clear conception of the fitness and propriety, as well as the vastness, of such an undertaking.

It is true that earlier philosophers, and particularly those of Greece, had attempted to compass the bounds of all knowledge, as in all ages there seems to have been a desire, on the part of all true philosophers, to grasp *the all*—the *to pan* of the Greeks. Accordingly, we find Plato and Aristotle, though more particularly the latter, tugging at all the then known sciences—Aristotle having treated not only of Ethics and Politics, but also Physics, Metaphysics, and Logic—which last, Logic, or the science of the formal processes of the mind in reasoning, he treated with distinguished success. But neither Plato, nor Aristotle, nor any other philosopher before the time of Bacon, seems to have had a clear conception of the idea, that *all knowledge* has an intimate relationship, and a vital connection of parts, which give it a homogeneousness and entirety of nature—that, in short, the *tree of knowledge* is one and indivisible. It was Bacon who first distinctly announced, that “the distributions and partitions of knowledge are like the branches of a tree, that meet in a stem, which hath a dimension and quantity of entireness and continuance;”* and who laid it down as a rule, “that all partitions of knowledge be accepted rather for lines and veins, than for sections and separations, and that the continuance and entireness of knowledge be preserved.”†

Bacon may be regarded as the first philosopher who gave distinct utterance to this great and eminently valuable idea, *of the necessity of attempting to grasp all knowledge as a whole*, even when considering any one of its parts, an idea which has been subsequently developed, much more prominently, in the grand conceptions of Swedenborg, Fourier, Comte, Humboldt, Schelling, and other German philosophers, who, like Schelling, have regarded the universe, and perhaps more properly, from the *metaphysical* or *subjective* stand point, rather than from the *physical* and *objective*, from which Bacon almost exclusively regarded it, although these German metaphysicians have been altogether too much immersed in the mere *conceptions* of reason, as was Bacon too much immersed in the mere *perceptions* of sense.

Bacon was the first philosopher who, with deliberate design, made this vast effort to compass all knowledge, who strove to sustain, like the fabled Atlas of antiquity, the world of knowledge, the universe of thought, upon his shoulders. What, though, in attempting to shoulder the universe, he tugged at it with only one shoulder, the shoulder of Induction, which is undoubtedly the right shoulder. Philosophers before had been tugging at it with the other shoulder, almost exclusively—the shoulder of Deduction. It was something, and of no small consequence, to shift the effort from the left to the right shoulder, the more especially as the consequence has been to bring both shoulders into service.

Much has been said as to the merits of the Inductive or Experimental system of Philosophy, recommended and elaborated by Bacon, in his *Novum Organum*, and many writers have expressed themselves, in relation thereto, as if they supposed that to Bacon was due the credit of having invented that method or process of reasoning. The truth should,

* See *Advancement of Learning*, as published in 1605, book ii., p. 93, of London edition, of 1824.

† Same, p. 114.

however, be obvious enough, that neither Bacon nor any one else ever invented the process of *inductive*, any more than of *deductive* reasoning—both processes being as natural to the human mind, as the process of respiration to the body, by one of which the mind *breathes in*, as it were, and by the other *breathes out* ideas, as by the double process of respiration the body *inhales* and *exhales* air. Every system of Philosophy, moreover, it should be obvious enough, comprehends, to some extent, both the inductive and deductive methods of reasoning, that is, ascends from particulars to generals, as well as descends from generals to particulars; for a system of mere induction, without any *synthesis* or generalization, would be the most barren *empiricism*, while one of mere generalization, without any previous induction, or subsequent testing of the generalization or *hypothesis*, by experiment, would be the most empty *dogmatism*.

Nay, moreover, it should be obvious enough, that, "there is," as Morell has remarked, in his history of Modern Philosophy, "a logic of *induction*, as well as of *deduction*, having rational axioms at its foundation, and that, without these axioms, or the truths which they embody, being in the mind, the outward observation, whereon they, (the sensationists like Bacon) so firmly rely, would be altogether nugatory";* and that, therefore, the difference between the *inductive* mode of reasoning, which Bacon is erroneously supposed to have invented, and the *deductive*, which had, before his time, been much more generally employed, is not essentially or really so great as is commonly imagined.

What, then, did Bacon really accomplish for the cause of science and philosophy, that he should have acquired such great celebrity, as a leader in Philosophy, and that he should have been so commonly regarded as "the Father of the Inductive Philosophy"? If the author of this review is right, in regarding all sciences as but the different *members* of the same common *body*; nay, if Bacon himself was right, in regarding them as but the different *branches* of the same common *stem* or *trunk*, then this inquiry is not out of place in a "Review, Historical and Critical, of the Different Systems of Social Philosophy." For in such an inquiry, we shall be but considering the condition of the body or trunk of general philosophy, before proceeding to examine that of its separate members or branches, or rather, we shall be but considering what has been done by modern philosophers, for the body or trunk of general philosophy, before proceeding to inquire what has been done by them for that particular member or branch of the common body or trunk, which is specifically the subject of the present undertaking.

What Bacon has accomplished for science and philosophy, may be summed up in one sentence. He enlarged the conceptions of philosophers in general, by his comprehensive, all-embracing plan of regarding the sciences, and has thereby enlarged and invigorated the general body of Philosophy; he illustrated, with an overwhelming force, the importance of a more enlarged *induction* of facts and observations, as a basis of generalization or scientific conclusion, than had before been adopted; and he exerted a powerful influence in turning philosophic attention from the *contemplative* pursuits, to which it had been, before, altogether too much addicted, to the *active*, from the theoretical to the practical, from the speculative to the actual, from the internal to the external, from the mere

* See J. D. Morell's History of Modern Philosophy, chap. iv., sec. i., sub-sec. C., p. 321.

conceptions of reason to the perceptions of sense—in short, from the too purely spiritual to the material.

This much Bacon has accomplished for science and philosophy, and but little if any more. It is evident, however, that it was something more than this which he aimed to accomplish, and which he flattered himself with the idea that he had accomplished. He aimed at conferring a specific benefit, as well as exerting a general influence, on Philosophy. He aimed at furnishing it with *a new method for acquiring knowledge* of extraordinary virtues—the Inductive method; and he has, moreover, acquired the reputation of having effected what he aimed at, though he has not merited it. For not only is there nothing specifically new, in the Inductive method of reasoning, recommended by Bacon, (as we have already remarked,) but there is no specific virtue in that method of investigating truth, no *talismanic power* that it possesses, as Bacon seems to have imagined, which could insure us against error in our conclusions. Indeed, the history of Lord Bacon, as a philosopher, affords another and striking illustration of the truth, that men often aim at one end and attain another, either essentially different, or else more or less comprehensive than that at which they aimed. And this remark naturally leads us to inquire, with somewhat more particularity, what it was, then, Bacon aimed to accomplish, and what it was that he actually accomplished for the cause of Philosophy?

Of all the manifold writings of Lord Bacon, not excepting his masterly essays, in which his peculiar genius is really more conspicuous than in any other, the greatest, though not the most unexceptionable, are undoubtedly those which he aimed to make the greatest, and which he evidently regarded as the great business of his life, those which he has comprehended under the august title of the “Magna Instauration,” or “Grand Instauration,” in which, essaying to set aside or disregard all previously acquired knowledge, or supposed knowledge, nay, to pull down the whole structure of the sciences, as they then stood, he proposed to set mankind to work to obtain knowledge upon a *new method*, and to reconstruct the whole edifice of science, upon a *new and more reliable basis*. This great undertaking Bacon divided into *six parts*, which, like other great undertakers, he never completed, having been overtaken by death, the great destroyer of all the vaulting aspirations of man, before he had completed more than the first three parts of his great design. These three parts of the “Grand Instauration,” which Bacon actually completed, were, *first*, the “Advancement of Learning”—first published, in English, in 1605, divided into *two books*, and subsequently published in Latin, under the title of “De Augmentis,” somewhat enlarged in body, and divided into *nine books*—*second*, the “Novum Organum,” first published in 1520, in Latin, and divided into *two books*, and *third*, the “Sylva Silvarum,” literally, “Leaves of the Woods,” or less literally and poetically, “Phenomena of the Universe,” a miscellaneous collection of facts, without order, and of no great value. It is in the first of these works, the “Advancement of Learning,” that Bacon makes the classification of the sciences, which has already come under our review, in the present undertaking.* It is in the second, or the *Novum Organum*, that he develops, more particularly, the Inductive method, with which his name has been

* See part ii. of this review, in November number of *Merchants' Magazine*, for 1859.

so intimately associated, and which it is now proposed to subject to a brief review. To develop and establish this Inductive method, was evidently the grand aim of Bacon's philosophical writings. In seeking to carry out this cherished aim, while he rendered signal services to the cause of philosophy, though incidentally, rather than directly, he was betrayed, by that overweening importance which men are so apt to attach to their own cherished ideas, into great errors—errors, which, had not the good sense of the age corrected, or refused to imitate them, would have led philosophy into almost as unprofitable a method of inquiry, though of an opposite character, as that from which it was his aim to divert it. In short, Bacon enjoined a far too rigid adherence to induction or experiment, and he vastly overestimated its efficacy, as a method of acquiring knowledge.

I. *Bacon enjoined a too rigid adherence to induction and experiment.* There is no necessity for dwelling so long on experiment, as he recommended, in order to arrive at new facts or principles. It is sufficient to withhold assent to any conclusion, or theory, until it has been verified by experiment. Had philosophers adhered strictly to the directions of Lord Bacon, as to the true method for seeking to obtain knowledge, the human mind would have continued, almost as entirely, to *mark time* merely, instead of making a *foreward march*, in modern, as in ancient times.

By shutting up the mind, as Bacon recommended, against all theory or generalization, until there has been a long series of experiments and sub-experiments, we deprive ourselves of many rare and valuable opportunities for enlarging the boundaries of our knowledge. By so doing, we deprive ourselves of the advantages to be derived from those moments of sudden inspiration, of transient illumination, when, by an immediate revelation from the great source of intelligence, it is permitted us to see, or when, by a spontaneous flash of intelligence, the mind gives itself light to see, clearly, into the surrounding darkness of the unknown. *It was precisely in one of those moments of sudden inspiration, or transient illumination, as common report informs us,* that Newton discovered the great law of universal gravitation, which completed the grand and brilliant series of modern discoveries in Astronomy. It was not by following out the rigid and elaborate system of induction, recommended by Bacon, that he made the discovery; nor was it by such a tardy and awkward process that Copernicus, Kepler, and Gallileo made theirs. In a moment, in the twinkling of an eye, as Newton lay there, in the orchard, the revelation came upon him, the great thought flashed upon his mind, *that the same law, which caused the apple to fall, extended throughout the universe, and sustains the planets in their spheres,* and starting up, like Archimides of old, he mentally exclaimed, "*eureka,*" and set himself at once to work, to ascertain whether the idea was sustained by the known facts of planetary motion, whether the *revelation from above* was in accordance with the *revelation from below*, the conception of reason with the perception of sense, the deduction with the induction. Had Newton acted strictly upon Baconian principles, he might be still experimenting upon the grand problems of Astronomy, (had life been permitted him so long.)

* Brewster, in his Life of Newton, throws some doubt upon the apple story. There is little reason to doubt, however, that the story is substantially, if not literally, true.

with but little prospect, perhaps, of a solution; nor is it easy to say, at how tardy and snail-like a pace scientific discovery would have progressed, under a strict adherence, universally, to those principles.

Bacon has, indeed, furnished us with a practical illustration, how little fitted he was, with the aid of his cherished method of philosophizing, for the work of specifically advancing the sciences, and how, in his vast general plans for the "Advancement of Learning," he contributed, in some particulars, to its retardation. For in the very work of his, styled, "The Advancement of Learning," we find him, in allusion to the now familiar idea, which had been then but recently demonstrated by Galileo, and defended by Gilbert, *that the earth revolves on its axis*, stigmatizing it as "the extravagant idea of the diurnal motion of the earth, an opinion which we can demonstrate to be most false."*

This rejection of the truth, as to the diurnal motion of the earth, may be regarded as the legitimate fruit of rigid Baconianism. In short, Bacon dwelt altogether too much on outward observation. He did not duly consider that knowledge comes *from above* as well as *from below*, *from within* as well as *from without*, from the *internal* as well as the *external* world, and that the intuitions of reason, not less than the reports of the senses, often reveal to us important truths, which we may very safely accept, subject to revisal and correction by subsequent examination and experiment.

II. Bacon vastly overestimated the efficacy of Induction as a method of acquiring knowledge. He seems, indeed, vainly to have imagined, that, by the rigid system of experimenting in quest of knowledge, which he prescribed, in the second book of the *Novum Organum*, he had invented a sort of *rule* or *compass*, which would equalize all minds, in their capacities, to acquire new knowledge, and destroy those different degrees of sagacity, which nature, in her eternal constitution of things, has prescribed for different minds, and which make the philosopher differ from the dunce.† He does not seem to have duly considered, what we have before remarked,‡ that there is a logic of induction, as well as of deduction, and that unless the process of this logic be rightly performed, nay, unless the fundamental propositions on which it is grounded be correct, it may lead us just as far from the truth as the logic of deduction, which he labored so habitually, in all his philosophical writings, to depreciate.

Nay, Bacon does not seem to have discerned, what should have been apparent to an intellect so gifted as his, that the *inductive method* had not been neglected by philosophers before his time, so much because they did not recognize its value, as because their attention was mainly directed to pursuits to which the deductive method of reasoning was better adapted—to abstract speculation rather than to practical inquiry; a fact, which Macaulay, in his criticism on the life and character of Lord Bacon, has not failed to point out with his usual felicity and force §

Having said this much, as to what it was that Bacon aimed to accomplish, and the errors into which he was led in the prosecution of that

* See Advancement of Learning, enlarged edition, book iii., ch. iv. It is a little singular, that Macaulay, in his somewhat searching and severe review of Bacon's life and character, does not notice this great mistake of his lordship. But Macaulay, though very severe upon Bacon, as a politician and man of integrity, was rather too deferential to him, as a philosopher—possibly because Macaulay was better qualified to judge of Bacon the politician, than of Bacon the philosopher.

† See *Novum Organum*, book I., aphorism 122; also preface to same work.

‡ See *ante*, page 285, of this article.

§ See Macaulay's Essays, article on Bacon—also *Edinburg Review* for 1887.

aim—errors which consisted mainly in the exaggerated and too exclusive importance which he attached to intrinsically valuable ideas—it remains that we should notice, somewhat more particularly than we have as yet done, what it was that he really accomplished for philosophy.

In addition to what we have already said on this point,* or as amendatory thereto, it may be said, that while Bacon failed to accomplish the specific end at which he aimed, of furnishing a new method for acquiring knowledge, of special and extraordinary virtues, he effected a general end, of vast importance to Philosophy, by calling attention, generally, to a hitherto too much neglected method of inquiry—the Inductive method. It is not any specific work that Bacon achieved for science, or philosophy, that merits commendation, but rather a general influence which he exerted on the spirit of philosophy—a new general habit of philosophical inquiry, which he promoted and encouraged, and which he may be said to have permanently established. While he did not invent the Inductive method, he developed it into a prominence which it had never before attained. He fixed and established it so firmly in philosophical regard, that there is no danger that it will ever again be generally or extensively disregarded. In short, in the fashionable parlance of the day, Bacon may be said to have *crystalized* the Inductive method. As the previously unfixed and floating carbon of the mineral kingdom was, during the *carboniferous* period of geological history, crystalized and condensed into the vast coal deposits, which have remained ever since, and will remain for ages yet, to warm and vivify the inhabitants of earth, so the great mind of Bacon crystalized and condensed the previously floating and unsettled ideas of the intellectual kingdom, respecting the Inductive method of acquiring knowledge, into that great depository of his largest thoughts, the *Novum Organum*, where they will remain, for ages to come, a vast *mine* of thought and suggestion to subsequent philosophers.

Nor is it so much in exhibiting the specific utility of the Inductive method that the great merit of Bacon's greatest work, the *Novum Organum*, is conspicuous, as in exhibiting the importance, in general, of disabusing the mind of hastily formed notions, or *idols*, as he (or rather his translator into English) has styled them,† and submitting it patiently to observation, with a view to its taking in the *real form* of things. In other words, the most distinguishing merit of the work consists in its injunctions as to the importance of striving patiently and laboriously to *interpret* nature, rather than, by anticipation, to guess at her meaning. His remarks on the various species of *idols*, or false appearances, by which the human mind is infested, and which he fantastically enough, though not inaptly, styles *Idols of the Tribe*, *Idols of the Den*, *Idols of the Market*, and *Idols of the Theater*, are among the most valuable to be found in the compass of human language.‡ As intimately related to

* See *ante*, pages 285 and 286 of this article.

† The term used by Bacon, in his Latin text, is *idola*, the plural of *idolum*, which comes from the Greek *eidolon*, which signified, with the Greeks, simply an illusion, or *false appearance*, and not an image worshiped with religious reverence. It is doubtless in the former sense that *idola* was intended by Bacon, and that the English word *idol*, as translated from it, should be understood in the *Novum Organum*. So also argued Hallam, but others have thought otherwise.

‡ See *Novum Organum*, book i., aphorisms 39, 40, 41, 42, 43, 44, and 45. By *Idols of the Tribe*, Bacon means those false notions that are common to mankind in general; by *Idols of the Den*, those that are peculiar to particular individuals; by *Idols of the Market*, those which are formed from reciprocal intercourse; by *Idols of the Theater*, he means those false notions or dogmas which have been authoritatively promulgated by particular systems of philosophy.

these, and in the same connection, are thrown out certain *guards* or *cautions* to the human mind, against too hasty conclusions, and with special reference to some of its peculiar predispositions to error, and liabilities to be deceived, which are deserving of the highest consideration. These are the really valuable ideas—the truly grand features of the *Novum Organum*.

In short, the real and essential tendency of Bacon's philosophy, especially as developed in its great culminating effort, the *Novum Organum*, is towards skepticism, doubt, and the suspension of judgment; and its true motto is well expressed, in the words of the illustrious sage himself, to be found in the *Advancement of Learning*, "If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties."*

By guarding the mind so rigidly against false impressions, his philosophy inevitably has this tendency, to skepticism, which is undoubtedly the right tendency, since every true philosopher is skeptical, if he be not a positive *skeptic*, and the beginning of wisdom is to doubt. For the evils of positive error are really greater than those of a mere negation of knowledge; and it is far better to have no notions at all than to have false ones, for these false notions stand in the way of receiving true ones.

Finally, and still more in brief, the essential work of Bacon as a philosopher, consisted mainly in guarding the mind against false notions, rather than in aiding it (as he erroneously supposed he was doing upon a grand scale) to acquire true ones. It was to that extent, at least, a grand preparatory to a true and complete system of philosophy, since nothing better prepares the mind to receive truth than to clear it of error, and guard it against the intrusion of error. Moreover, his efforts have, indirectly rather than directly, contributed in no inconsiderable degree, doubtless, to the positive advancement of knowledge; for the good sense of the age has rejected his counsel to discard altogether the deductive or *dogmatical* method of inquiry, while it has accepted his instructions, to the extent of recognizing the importance of bestowing more attention on the inductive or *empirical*.

After this somewhat severe criticism on the philosophy of Bacon, it should be superfluous to remark, that the distinguished achievements of modern science are attributable, only in a very partial degree, to his exertions—that he serves rather to mark the character of the philosophy of the age than to have determined it—that he embodied, in an extraordinary degree, its leading characteristics, (as did Aristotle those of his age,) rather than moulded the age into an embodiment of his characteristics—that he was, in short, the *outgrowth* of his age, rather than his age the outgrowth of him.

That such was the true relation of Bacon to his age is abundantly proved by the fact, already adverted to, of the distinguished discoveries that had been already made before the publication of his philosophical works; and by the further fact, that many of the most distinguished contributors to science subsequently thereto, have not testified to any important suggestion that they derived from him, and do not appear to have been at all indebted to him for their ideas. For, as Brewster, in his recent *Memoirs of Sir Isaac Newton*, tells us, that truly great discov-

* See *Advancement of Learning*, book i., p. 38, of original work, and London edition of 1824.

erer in science did not, in his philosophical writings, once allude to the *Novum Organum*, nor to Lord Bacon.* All that was really valuable in the *Novum Organum*, or in the Inductive method, however, Newton attended to, most probably without having read that renowned work, or being aware what it contained, and he would no doubt have done so, just as much, had his own *Principia Mathematica* been written before as after the publication of the *Novum Organum*.

In view of these significant facts, it would surely be preposterous to assert that the present age is indebted to the philosophy of Lord Bacon for its most distinguished achievements, or its most distinguishing ideas—that Descartes or Leibnitz was the outcome of Bacon, or that the *Principia* of Newton was attributable to the *Novum Organum*.

But while Bacon is to be regarded rather as the *outgrowth* of his age than as the moulder of its character, it is to be borne in mind that, like other outgrowths, he *reacted* on the soil from which he sprang, and imparted to it no inconsiderable fertility. For, as Guizot has justly said of governments, that “they are, saving a powerful reaction, what the people make them,” so it may be said of Bacon, that, saving a powerful reaction, he was what his age made him, or, to speak with more scientific precision, what the *race* from which he sprang, and the *circumstances of the age*, made him. And as the reaction of government on the society from which it springs is powerful, so was the reaction of Bacon on his age; and his influence has rather grown than diminished with time, having been greater, probably, during the 18th and 19th centuries than during the 17th, when it was first communicated.

By having embodied to so great an extent, and with such extraordinary power, many of the great characteristic ideas of his age, Bacon seems destined to exert an influence somewhat similar to that exerted by Aristotle, who so long reigned over the intellectual kingdom of man, though not by any means so great as that exerted by the philosopher of antiquity. A striking resemblance may indeed be detected between these two distinguished characters, in the parts which they have played in the intellectual history of mankind, and in the position which they occupy in the *geographical profile*, so to speak, of humanity—looming up into lofty prominence, the one near the close of the ancient, and the other near the commencement of the modern age, and both serving as conspicuous *landmarks* to indicate the progress of the race, and by which they have, to a great extent, shaped their course.

No two minds, perhaps, scarcely excepting that of Confucius, have ever exerted a greater or more lasting influence on the direction and character of human thought than Aristotle and Bacon. From the time of Aristotle to that of Bacon, human activity, in matters of philosophical speculation, as well as of scientific endeavor, with some partial exceptions, took its direction from the former, scarcely ever venturing out of the track which he pointed out, as, since the time of Bacon, it seems destined, although to a far less extent, to take the direction mapped out by him.

Indeed, it may be said, without any very great or questionable stretch

* See Brewster's Memoirs of Newton, chap. 27, of vol. ii., pp. 403-4, of Boston edition of 1855. In this connection, the biographer of Newton makes some very just observations on the futility of Bacon's philosophy, as to its specific virtues as a method of acquiring knowledge, which fully sustain the ideas of our text. On this point, see particularly page 405 of vol. ii. of the Memoirs.

of fancy, that the progress of mankind in knowledge stopped at Aristotle, and began again at Bacon, leaving a *great chasm* of two thousand years, through which the human race groped their way in many devious wanderings, or leaving, at best, a *great level waste*, across which the race marched without making any ascent, except a partial one during the period of the great Arabian enlightenment.

This simile would be entirely unexceptionable if we might adopt the theory of those who imagine that the human race are moving forward, and steadily advancing, as across a level plain, or rather up an inclined *plane*, and that they neither move, nor are moved, in any other direction than in that forward or upward one. But the better opinion seems undoubtedly to be, that mankind are moving in a *spheroid*, or, rather, to speak with more scientific precision and completeness, the better opinion seems undoubtedly to be, that the intellectual or moral world, which is outwardly manifested in man, is, like the material, *spherical* in its motion—*all motion, indeed, seeming evidently to be spherical, moral as well as physical*—and that, in addition to its own inherent activities, it is whirled through the realms of moral space by laws of revolution which subject it to periodical visitations of day and night, or periods more or less favorable to the development of intellectual activity—these periods of day and night varying from one to twenty *centuries*, as the period of terrestrial day varies from one to twenty *hours*, or even six months, as at the poles—and that, in each returning period of day, the *flora*, or vegetation, so to speak, of the intellectual world, depends upon its peculiar intellectual adaptabilities, which are different in different periods of the intellectual world, as the geological stratifications of the terrestrial world are different in different geological epochs—a day or night in the intellectual world being considered equivalent to a geological epoch in the terrestrial.

According to this idea, Aristotle may be regarded as the most commanding and prolific elevation in the *geological stratification*, so to speak, of the intellectual world of antiquity, in which were matured, in rare excellence and great profusion, the seeds of thought peculiar to that epoch, and which were destined to prevail until a higher order of intellectual *vegetation* should be developed, to supplant or overshadow them. According to this idea, likewise, Bacon is to be regarded as the most commanding and prolific eminence in the modern *stratification* of the intellectual world, on which, the earliest sunlight of the modern day falling, the fruits and flowers of the intellectual *flora* of the modern age were first ripened into a general harvest, whence the seeds have been wafted and scattered, far and wide, over the modern world.

While we thus accord to Bacon the distinction of having been the most commanding intellect in the intellectual stratification of modern society, on which, as on some commanding eminence, the superior ideas of the present age were first ripened into a general crop, and from which they were extensively propagated and disseminated, we should form a very incorrect notion of the real measure and extent of his influence, and of the true philosophical history of the age, if we should regard him as the only such intellect. Others there were, scarcely less illustrious, to whom the like distinction is to be accorded, though somewhat later in yielding their ideas. Prominent among these are to be named Descartes and Leibnitz, the former of whom illustrated, most conspicuously, French,

and the latter German, intellect, and these three characters—Bacon, Descartes, and Leibnitz—merit the distinction of being regarded as the great representative men of the Anglo-Saxon, French, and German races respectively.

Descartes, who was the junior of Bacon by only *thirty-five* years, (having been born in 1596, while Bacon was born in 1561,) apparently without having taken any suggestion whatever from Bacon, was moved by a like desire to reform Philosophy, upon a grand, comprehensive scale, and under a like conviction of the futility of the methods of philosophizing which were, at that time, extensively cultivated, and which had hitherto generally prevailed. Like Bacon, too, he proceeded by the Inductive method,* but upon a different *plan*, or perhaps we should rather say, from a different *stand-point*. While Bacon regarded phenomena almost exclusively from the *objective* or physical stand-point, Descartes regarded them almost exclusively from the *subjective* or metaphysical. Bacon, like the commonalty of mankind, assumed, or took for granted, the reality of *sensuous* appearances, and the reliability of the testimony of the senses, for although he admitted the fallibility of the senses, yet he sought to guard them against error merely by extending the range of *sensuous* observation; Descartes, with a more truly philosophical spirit, began his search after knowledge with a profound inquiry into the qualities of the mind, or *knowing principle*, the nature of its ideas, and its faculties of cognition, starting with the famous aphorism, which has been so intimately associated with his name—*cogito ergo sum*.† Bacon proceeded upon the dogmatic plan, of taking *outward appearances* for granted; Descartes, more profoundly and wisely, proceeded upon the critical plan, of closely questioning our *internal consciousness* as to the reliability of outward appearances. Yet Descartes, not less than Bacon, proceeded upon the Inductive method, and most probably without having ever seen the *Novum Organum*, and certainly without making the slightest allusion to it in any of his philosophical writings, either in his great work, the “Principia,” first published in 1644, or in his “Meditations on Primary Philosophy,” first published in 1641, or in his “Discourse on Method,” first published in 1637—thus affording another evidence how little the age is specifically indebted to Bacon for any of the ideas he inculcated as to the Inductive method.

Descartes did not, like Bacon, write any elaborate treatise to demonstrate the importance of attending to induction or experiment, yet he attended to it quite as rigidly as was necessary,‡ directing his attention quite as closely to the simple facts of consciousness, in his endeavors to

* The writer must here deplore, in common with a multitude of others, who aspire to accurate thinking and speaking, the lamentable lack of accuracy and precision in language. He here uses the term *method* in a somewhat different sense (and a more restricted one) from that in which it has been sometimes used. For example, Tennemann, in his History of Philosophy, as translated by Johnson, uses the term *method*, or philosophical method, in the same sense in which the writer here uses *plan*. He speaks of the dogmatic method, and the critical method, of philosophizing, whereas, we should here rather term it the dogmatic or critical *plan*, or system, which might either proceed by the Inductive or Deductive *method*.

† These are the very words of Descartes, for, like the philosophers of his century, he wrote his greatest works in Latin. For the non-Latinized English reader, it may be proper to render this famous maxim of his into its English equivalent of words—“I think, therefore I am.”

‡ This remark must be understood as applicable to the general plan and method of his philosophy, rather than to his practical applications of it; for in these, like a host of other philosophers, Descartes wandered greatly from his own theoretical principles, which, indeed, it is very difficult to avoid. D’Alembert has well said of Descartes, that “he began with doubting everything, and ended with believing that he had left nothing unexplained.”

ascertain the real nature of mind, as did Bacon to the simple facts of sensuous observation, in his endeavors to ascertain the real nature of matter, or, more particularly, of *heat*, to which he specifically addressed his inquiries (by way of illustration) in his *Novum Organum*. In short, Descartes is quite as much entitled to be regarded as the father of Experimental Philosophy in metaphysics, as Bacon in physics; or, rather, as Bacon is, with some propriety, styled the "father of Experimental Philosophy," in general, so Descartes may, with equal propriety, be styled the father of Metaphysics,* in particular. For, before his time, metaphysics not only had none of the well defined characteristics of a science, which, indeed, it can scarcely claim to have now, but it scarcely possessed any of the *incipient* characteristics of a science, although, of course, metaphysical questions had been extensively discussed before; although Plato had been profoundly metaphysical, and Aristotle had written a treatise on metaphysics, or rather a treatise to which that name was attached, and from which the name took its origin.†

As science in general is indebted to Bacon for the first clear, distinct, and widely proclaimed announcement, that, if we would make any sure attainments in knowledge, we must attend to facts, *to observations in general*, so metaphysical science is indebted to Descartes for the first clear, distinct, and widely proclaimed announcement that, if we would make any sure attainments in knowledge as to the nature of soul or mind, and of *real being*, either in the realm of matter or of spirit, we must attend to the facts of consciousness, *to inward observations*.

It may be worthy of remark, moreover, that Bacon and Descartes bear very nearly the same relation to each other as do two of the most renowned philosophers of antiquity—Aristotle and Plato. Bacon may, with considerable propriety, be considered the Aristotle of the modern age, notwithstanding he more frequently assails the ideas of Aristotle than those of any other ancient philosopher; and Descartes may, with equal propriety, be considered its Plato, although there are other characters in the present age who may, with still more propriety in some important respects, be compared to Plato, without possessing, however, the same immediate relationship to its Aristotle as does Descartes—as, for example, Swedenborg and Fourier, who, in the overtowering grandeur of their conceptions, however delusive, in the vastness of their generaliza-

* The term metaphysics is here used in its largest sense, as comprehending both Psychology and Ontology, or both the doctrine of *soul* and of *real being*. Hitherto, the term has been commonly and improperly understood as a synonyme of Psychology only, although of late some have attempted, on the other hand, to restrict its meaning to Ontology, or the doctrine of *real being*, or substantial essence, as contradistinguished from *sensuous appearance*. But quite obviously Psychology and Ontology are too intimately related to admit of separation. For what can we ever know of *real being* as contradistinguished from *sensuous appearance*; nay, what can we ever know of sensuous appearance itself, except as it is revealed to us by the *soul* or *mind*? Quite evidently, Psychology is the *vestibule* to Ontology, the *door-way* by which alone we can gain admission, or rather insight, and very dim and imperfect at that, into the grand temple of real Being—seeing, through the muddy medium of our sensuous-steeped faculties, only "as through a glass, darkly."

† It is doubtless known to many, though not probably to all, that the origin of this word—"Metaphysics"—was accidental, and owing to a rather trivial circumstance. After Sylla had brought the manuscripts of Aristotle from Athens to Rome, and when Andronicus of Rhodes undertook to publish them, being somewhat at a loss what general title to give to fourteen books of the Aristotelic manuscripts, which treated of those abstruse, obscure matters, now commonly called metaphysical, he prefixed to them the title, *Ta meta ta physica*, which signifies, literally, nothing more than *matters or things after those which relate to physics*. It is uncertain whether Andronicus meant, by this title, merely to denote the place which these matters occupied in his general arrangement of the works of Aristotle, or the place which they occupy in the natural or logical inquiry of the mind after knowledge. Whatever Andronicus may have intended, posterity have adopted the latter interpretation, and, ever since, those abstruse inquiries have borne the title of *meta ta physica*, or *meta-physics*, which has been readily Anglicized into metaphysics.

tions, and the exalted purity of their rationalism, or *spiritualism*, as contradistinguished from *materialism*, much more nearly resemble Plato than does Descartes, or perhaps any other character either in modern or ancient times.

The points in which Bacon and Descartes respectively resemble Aristotle and Plato are, in fact, their proximity to each other in point of time, their pre-eminent distinction as exponents and representatives of the philosophy of their respective times, and the like general influences which they respectively imparted to the philosophy and general ideas of their respective times—Aristotle and Bacon having both imparted to their respective ages the spirit of *materialism*, with its cognate metaphysical tendency to *sensationalism*, while Plato and Descartes both deeply tinged their times with the spirit of *spirituality*, or pure *rationalism*, with its cognate metaphysical tendency to *idealism*.

It may be also worthy of remark, as a matter of curiosity, however, rather than of any practical importance, that the Aristotle and Plato of the modern age, (as we have respectively styled Bacon and Descartes,) appeared at very nearly the same distance from each other, in point of time, as did the Aristotle and Plato of antiquity, but in reverse order—the Plato of antiquity having been born 46 years before its Aristotle, or 430 years before Christ, while the Plato of modern times was born just 35 years after its Aristotle, or 1596 years after Christ.

It is important, in this connection, to remark, that, in personating the Plato of the modern age, Descartes does not answer well as the representative of his nation, or embodiment of its characteristic traits, notwithstanding we have styled him the representative man of France; for France is decidedly more Aristotelian than Platonic in its tendencies, is decidedly *material* rather than *spiritual* in its general character, and *sensational* rather than *idealistic* in its metaphysical proclivities. Descartes is, in these respects, far more properly the representative of German than French ideas, while Condillac, the disciple of Locke, and legitimate offspring of ultra-Baconianism, with his extreme sensationalism, is the true representative of France in respect to metaphysical ideas.

But in this respect Descartes well represents France, and in its perhaps most peculiarly characteristic trait, that he was intensely *exact*, intensely *mathematical*, in the order of his mind—mathematics having been, indeed, his great forte, in which he made his most specifically valuable contributions to general science.

And this brings us to notice an important discrepancy between the respective characters of the Aristotle and Plato of antiquity and of modern times. The Aristotle of antiquity was not only great in his comprehension of the principles of fundamental philosophy, but also in his application of them to particular sciences, having instaurated logic as a science, inaugurated zoology, and made valuable contributions to political science, while Plato was great, though transcendently so, only in fundamentals, failing decidedly in the details necessary to systematize any science. On the other hand, the Aristotle of modern times, (or Bacon,) though he discoursed with great ability about the fundamental principles of philosophy, miserably failed in all his attempts to make specific contributions to science, while the Plato of the modern age, (or Descartes,) not only discoursed with vast ability and profundity upon philosophy in general, but made important contributions to science in particular, hav-

ing contributed highly valuable specific ideas both in mathematics and metaphysics.

Of Leibnitz, the great representative man of the German race, and true High Priest of modern science, who was the junior of Descartes by just *half a century*, and of Bacon by *eighty-five* years, (having been born in 1646,) and who enjoyed the advantages of the philosophical writings of both Bacon and Descartes, as well as of his illustrious contemporary, (though senior by *fourteen* years,) Locke, and others, before he delivered the thoughts of his own transcendent intellect, it would be impossible to speak worthily in a transient review, like the present, of the most conspicuous magnates of the intellectual kingdom of the modern age. Yet after what we have already said of Bacon and Descartes, and of their respective affinities with Aristotle and Plato, we may find it the less difficult to do justice to Leibnitz in a few words.

We cannot well style Leibnitz either the Aristotle or the Plato of the modern age, as we have respectively styled Bacon and Descartes, for he was both combined. Whatsoever was truly great, either in Aristotle or Plato, in Bacon or Descartes, was pre-eminent in Leibnitz. In him the human intellect truly towered up. Leibnitz was indeed "Pelion on Ossa piled"—Bacon heaped on Descartes—Aristotle standing at full height on the shoulders of Plato, and looking far beyond the boundaries of the known into the realms of the unknown.

What Bacon aspired to do, and vainly strove to accomplish, Leibnitz accomplished apparently without effort—he *took all knowledge for his province*—thus verifying, to some extent, the questionable remark of Ruskin, in his recent pamphlet on Pre-Raphaelitism, that "no great intellectual thing was ever done by great effort; for a great thing can only be done by a great man, and he does it without effort."*

In mathematics, Leibnitz stood shoulder to shoulder with Newton, his great contemporary. In metaphysics, he overtopped Descartes, and dwarfed Locke. In general range of observation and scope of thought, he towered above Bacon, and threw him into shade, as some mightier Alp towers above and overshadows his lesser brother.

The most distinguishing characteristic of Leibnitz was, in fact, the universality of his genius—his wide range of observation and vast scope of thought, which fitted him pre-eminently to reign as *sovereign* in the dominions of science. Bacon aspired to this dignity, but with an order of mind not adequate to the position, and which frequently betrayed in him the marks of the *pretender*. But Leibnitz assumed the dignity as his legitimate birthright, and as "one to the manor born." Bacon, indeed, aspired to a dignity for which the *race* to which he belonged are not well qualified. It is not in *contemplative*, but *administrative*, talent that the Anglo-Saxons particularly excel. In fundamental philosophy Germany reigns over the present age—Anglo-Saxondom in the practical arts of industry, in statesmanship and war. It is to the Anglo-Saxons

* This rather pernicious, as well as questionable, remark of Ruskin, we shall not attempt here to criticise. Like many piquant epigrams, it has its points of truth, which tend to obscure, or throw into shade, its more important points of error. Doubtless, the greatest conceptions of men, whether as poets, philosophers, or inventors, come unbidden, and without effort, from the "vast deep" of the intellectual universe; but to systematize them, to bend them into shape for practical use, is generally the result of effort, often protracted and laborious. In short, though it may be true that no great intellectual thing was ever done *by* great effort, as its chief efficient cause, yet it is equally if not still more true, that no great intellectual thing of extensively practical utility was ever done *without* great effort.

that we must look for the Cromwells and Washingtons of humanity; but the Leibnizes and Humboldts come from Germany.

It was in the prolific and commanding intellect of Leibnitz that were first matured, on a large scale, those seeds of thought which have since developed and expanded into the grand conceptions of Kant, Fichte, Schelling, and Hegel. It was in Leibnitz that we find the first clearly defined phototype of Humboldt. Yet, in vastness of intellectual compass, Leibnitz far excelled Humboldt, though less of a mere scholar in philosophy, or man of detail in positive science. Humboldt reigned only in the physical kingdom of universal science—Leibnitz alike in the physical and psychological. Humboldt and Schelling must alike pay homage to Leibnitz as their rightful master. To his transcendent intellect the realms of matter and of mind alike disclosed their deepest mysteries—the deepest, indeed, that any human intellect can ever hope to fathom. Before his stupendous powers of *analysis*, the universe was resolved into its *elementary monads*, the more inert and stupid of which, before the sublime *constructiveness* of his genius, segregated into all the manifold forms of *matter*, while the more active and sensitive were developed into the thousand-fold manifestations of *mind, spirit, God*.

These three extraordinary men, Bacon, Descartes, and Leibnitz, may be regarded not only the great representative men of their respective nations, or *races*, but also of the age, or epoch of philosophy, to which they belong. These were the three great commanding and prolific eminences, in the intellectual stratification of modern society, on which the seeds of thought, peculiar to the present age, were first extensively ripened, and from which those seeds have been scattered far and wide over the modern world, which, falling upon the like congenial soil, have yielded the vast and teeming harvest of ideas which render the present age illustrious.

Of these three great representative men of the present age, (Bacon, Descartes, and Leibnitz,) it may be fairly claimed, that Bacon is, more peculiarly that either of the other two, the representative man of the age, although he was decidedly their inferior intellectually, or at least in the purely rational powers of intellect. For this distinction, indeed, Bacon is indebted to his *race*, or rather to the fact that his race, the great, rugged, stern, indomitable, practical, matter-of-fact Anglo-Saxons, have given character to the age, have so impressed their leading characteristics upon the age, as to render themselves the *great representative race* of the age; so that Bacon, by being the representative man of his race, becomes, *ipso facto*, the representative man of his age.

And this brings us to remark upon the distinguishing characteristics of the present age. This is a highly important consideration, now that we are about to enter upon the consideration of the sociological theories and systems that have been developed during the present age. For as the character of the soil determines that of its vegetation, so do the fundamental characteristics of a nation, race, or age, determine the character of its ideas, and shape the course of its destiny.

The distinguishing characteristics of the present age, or among the most prominent of them, are its greater comprehensiveness of thought than any previous age has manifested, its larger infusion of ideas, and the diversity and intrinsic superiority of its nationalities or races.

I. *As to the greater comprehensiveness of thought, which distinguishes*

the present age. This is conspicuously manifested in the aspiration of Bacon to take "all knowledge for his province;" in the vast scope of thought which has been displayed by the German metaphysicians, in their daring attempts to solve the whole problem of the universe; and in the disposition which has been extensively manifested, though chiefly among German and French philosophers, to realize the idea of Bacon, that the tree of knowledge is one and indivisible, and that "all partitions of knowledge should be accepted rather for lines and veins than for sections and separations." It should be obvious enough that this greater comprehensiveness of thought, which characterizes the present age, is highly favorable to true discovery and real progress in knowledge, since nothing is more conducive to correctness of thought than comprehensiveness of thought.

II. *As to the larger infusion of ideas, which distinguishes the present age.* This is discernible in the Inductive method of inquiry, which has been extensively infused into modern reasonings, in addition to the Deductive, (and upon which we have already dwelt at sufficient length,) and in the introduction of the religious element, or *the idea of a Divine right*, which has mingled, to a very important extent, in modern discussions, especially those of a sociological bearing. This is indeed one of the most distinctive characteristics of the present age—the large infusion of *the idea of right* in the general current of its thoughts. In no respect, perhaps, will the discerning student of the distinguishing characteristics of different ages of human development, discover a more marked or more important and fundamental difference between ancient and modern times, than in this. It is true that, in all ages of the world, the idea of *right*, as contradistinguished from mere expediency, and from the mere arbitrary caprice of superior power, has been recognized to some extent; but that recognition has been feeble in former times, and in a great measure restricted to the philosophical portion of mankind.

The great prominence which the *idea of right* has received in the present age, may, without question, be attributed mainly to Christianity. For although the idea undoubtedly existed before the time of Christ, as did the Inductive method of reasoning before the time of Bacon, yet it was unstable, unsettled, and floated vaguely in the minds of men. In short, as Bacon *crystalized* the Inductive method, it may, with still greater force and propriety, be said that Christ has *crystalized* the idea of a Divine right in human affairs. If, indeed, this justly revered character had achieved for mankind no other good than this, his life and death would have been of incalculable benefit to the race. For whatever of truth there may be in the sublime idea of Pope, that "whatever is is right," and however true it may be that, in the higher sphere in which the gods move, and some philosophers, the distinctions between good and evil have no existence, and all things are absolutely right, yet in *this lower state* in which men live, and move, and have their being, there is, beyond all doubt, *a right*, as contradistinguished from *wrong*, and which it is of great importance to men that they should recognize and strive unceasingly to realize.

III. *As to the diversity and intrinsic superiority of the nationalities or races of the present age.* This is, of all the distinguishing characteristics of the age, beyond all question, by far the most important, as it is the most fundamental and comprehensive. It has been remarked by a late

writer, with a justness of perception which it has been rare to witness hitherto, that "all history, in its ultimate analysis, is a history, not of kings and laws, but of races."* Bearing in mind this profound and eminently just observation, we shall be the better able to appreciate the vast advantages which the present age derives from the diversity and inherent superiority of its *races*.

In the first age of philosophy and civilization, although there were three distinguished races, the Egyptian, Grecian, and Roman, yet they did not flourish together, or co-exist in the vigor of manhood, Egypt having declined before Greece attained its full development, and Greece, in like manner, before Rome. In the second age, the Arabians were the only distinguished race. But in the present, or third age of philosophy and civilization, there are three distinguished races, all flourishing together, and all enjoying, at the same time, the vigor of intellectual manhood, the Germanic, French, and Anglo-Saxon; and in addition to these predominant races, the Scandinavian and Italian. These three predominant races, the Germanic, French, and Anglo-Saxon, may be regarded as the three grand divisions of the great central column, while Scandinavia and Italy may be respectively considered as the right and left wing of humanity, as it is at present displayed, on the great field of creation, to do battle for the truth and scientific discovery.

Each one of these three predominant races, moreover, may be regarded as intrinsically superior, both intellectually and morally, to any other race that has preceded them, unless, indeed, we should except the Grecian. Nor are the Scandinavians or Italians to be despised, or lightly regarded, as contributors to the great intellectual force that is now operating in the field of science; for Scandinavia has contributed Swedenborg and Oxienstern, and Italy its Dante, Angelo, Campanella, and Macchiavelli.

Each one of these three predominant races, moreover, seems to be endowed with a peculiar genius, or order of talent, which peculiarly fits it to blend and harmonize with the other two, so as to give to all three one homogeneous, consistent, and united character, thus illustrating, in the intellectual structure of the present age, the grand *formula* upon which the universe, and every integral part of it, seems to be organized, of "Trinity in Unity." Germany is metaphysical, France mathematical, Anglo-Saxondom practical. Germany is profound, France exact, Anglo-Saxondom efficient. Germany cogitates, France experiments, Anglo-Saxondom executes. Great, earnest, deep thinking, oracular Germany utters her grand oracles, like voices from the unfathomable depths of creation; subtil, ingenious, skillful France analyzes and dissects them; grave, thoughtful, cautious Anglo-Saxondom passes judgment upon them, and decides how far they may be relied upon or turned to useful account, either in the speculative or practical sciences. In short, Germany is the great Delphic Temple of the present age, where the high priests of nature, the German philosophers, give out their obscure but deeply significant oracles; France is its great polytechnic school, with vast laboratory and experimental apparatus; while Anglo-Saxondom is the great practical, efficient *work-shop* of the age, with its sturdy mechanic-kings, trade-princes, and State-philosophers.

* See Harpers' Magazine for May, 1856, article on "The Rise of the Dutch Republic."

While remarking on the distinguished nationalities or races of the present age, allusion should not, of course, be omitted to the great Russian nation, or the Slavonic race, of which it is the great embodiment. It is difficult to determine what are the precise relations of this race to the age, the more especially as their character has not as yet been fully developed. This much, however, we may safely venture to say, that they are so essentially different from the three predominant races already noticed, as to constitute an *antagonistic force* in the sociological system of the present age, and so that, considering this triune force, of the Germanic, French, and Anglo-Saxon nationalities in its unitary character, and designating it, as we may well enough do, the great Teutonic element or force of the present age, the Slavonic race will constitute the other and opposing element or force, thus illustrating the grand *dual* principle, which, not less than the "trinity in unity" principle, seems to pervade creation, and is ever to be detected in the sociological, not less than in the physiological and astronomical, system of the universe.

The Slavonic element in modern society may be said to be related to the Teutonic, as the Roman element, in ancient society, was to the Grecian, and if this element should overrun Europe, as it threatens to do, and superimpose upon the present Teutonic *stratum* of European society a *layer* of Slavonic *material*, civilization in the present age, unless, indeed, it should be rescued from that fate by America, would experience a depression and deterioration similar to that which was occasioned by the superimposition of Roman on Grecian civilization in a former age.

It was, doubtless, with a profound appreciation of the great vital antagonism between the Teutonic and Slavonic races, that Napoleon the First, who was an eminently sagacious observer, not less than illustrious actor, made that famous remark, so often since quoted, "In a half-century, Europe will be Republican or Cossack." He would have spoken with more scientific precision, if not more philosophical profundity, though to the same result substantially, had he said—*it will be Anglo-Saxon or Cossack*. This Anglo-Saxon family, into which the whole destiny of the Teutonic race seems destined to merge, is the true antagonist of the Slavonic race. As goes the battle between these two races, so goes the character of civilization, the cause of science, and the general destiny of humanity for many centuries to come.

With these very general remarks on the different nationalities or races now most prominently developed on the surface of human society, we must take leave of the more peculiarly *historical* method which we have hitherto followed in our review. In contemplating the vast field upon which we are now about to enter, of modern ideas, theories, and speculations in Sociology, it would be preposterous to attempt to consider them in detail, or with any special reference to the historical order of their development, or with any other than very slight regard for the persons to whom they may be attributable. We must, in short, totally abandon the *analytical* method, and adopt the *synthetical*. Instead of considering different nations or races in detail, with a view to extracting their peculiar ideas in Sociology, as we have hitherto done, we must henceforth seize upon the ideas, without any regard to the time, or place, or manner of their development, in doing which we shall strictly conform to the order of synthetical classification which we have heretofore laid

down,* and in which we have regarded all sociological theories, or ideas, as belonging either to the Political, Politico-economical, or Malthusian schools. Our review, which has been heretofore more peculiarly HISTORICAL, becomes henceforth more peculiarly CRITICAL.

Art. II.—VALUATION OF LIFE INSURANCE POLICIES.

NUMBER V.

To determine the true value of a life policy, we must have correct rates of mortality for every age of life. The nearest approximation to this is to be obtained by an average of the best tables. In making this average we shall exclude all the early tables that were founded on deaths only, because the hypothesis of a stationary population, or one increasing in geometrical progression, by which the numbers of the living were obtained, is too uncertain and unreliable for the determination of this essential element in the rate of mortality.

We must also exclude all those places where the mortality is known to be excessive because of climate, local peculiarities, or antiquity of observations. Our offices do not insure at their regular premiums south of the thirty-fifth degree of latitude, and as this corresponds to the forty-fifth in Europe, following the isothermal lines, we shall exclude Italy, Austria, and the south of France from our average. The depressing effects of cold do not seem as important as the malarious influences of heat. England has a lower mortality than France, and even in Norway the chances of living are as good as in Hanover or Prussia.

It is generally believed there has been a great improvement in the value of human life since the seventeenth century, but as the lowest mortality of any of our tables is in the Carlisle, where the observations were made about 1780, we must not confine our inquiries to the present century. The tables of Mr. Finlaison seem to show that some improvement has taken place between his earliest and latest observations, as appears by the following comparison:—

Rate of mortality at the age of	20.	30.	40.	50.	Average.
Tontine, from 1698 to 1788, (1,002 persons)...	.0169	.0212	.0230	.0301	.0237
From 1745 to 1826, (2,552 lives, 156 still living)	.0073	.0130	.0136	.0187	.0132
From 1773 to 1826, (3,557 lives, 1,564 still living)	.0106	.0110	.0119	.0145	.0120
From 1789 to 1826, (3,518 lives, 2,203 still living)	.0109	.0101	.0121	.0150	.0120
Farr's English, 1838 to 1844 .....	.084	.0100	.0127	.0166	.0119
English registration, 1845 to 1854.....	.086	.0102	.0133	.0192	.0128

This comparison seems to show some improvement since the first half of the eighteenth century, but none in the last hundred years. The observations in Sweden indicate a change in the mortality since 1750, but if the returns be analyzed, it will be seen that the whole improvement is in early life, which does not affect the business of a life company. In Dr. Price's observations, which extended from 1754 to 1775, the ratio of the living to the dying was 1 in 35; in Milne's, from 1775 to 1795, it was 1 in 37; in Farr's, from 1795 to 1815, it was 1 in 37; and from 1815 to

* See No. ii. of this review, in November number of *Merchants' Magazine* for 1859.

1835 it was 1 in 42. But if the children be excluded, these differences disappear. Here is the comparison:—

	1754-75.	1775-95.	1795-1815.	1815-35.
Average population over 15.....	1,510,602	1,904,153	1,622,650	1,813,244
Average deaths over 15.....	32,866	38,065	26,958	37,951
Ratio; one death in.....	46	50	44	48
Average population between 20 and 50	929,687	1,184,190	986,572	1,108,151
Average deaths between 20 and 50....	11,505	13,821	12,126	12,713
Ratio, or one death in.....	81	86	81	87

These returns show no change from the last century to the present, for in the forty-one years from 1754 to 1795 the deaths were 1 in 48, while from 1795 to 1815 they were 1 in 46, taking the whole population over 15. If the numbers between the ages of 20 and 50 be considered, the ratio for the first period is 1 in 84, and for the second, 1 in 84.

It would seem, therefore, objectionable to introduce any observations before 1750, but since that time no restriction appears to be necessary.

We have given in the last number the mortality for Carlisle. This being a large town, has been thought to be well suited to give the average mortality for an insurance company. In the larger cities the chance of dying is greater; in the country districts smaller; so that this affords a fair average for the whole country. The liabilities to mistakes and errors are supposed also to be smaller than for a whole nation. But in an old country, where the government is strong and respected, if a system of registration is carefully devised, and continued for a long period, the returns for a whole nation would deserve more confidence than for a single city. The wide extent of country, and the long continuance of the observations, increase the probability of a fair average.

We shall introduce into our average the observations of Sweden, Norway, Prussia, Hanover, Saxony, and England, with much confidence in our results. Of these the greatest weight should be given to England, because so many of our people are sprung from this stock, and race is supposed to have some influence on longevity. The Swedish observations seem, however, to be well suited for obtaining a reliable table of mortality. The country is not so far north as to be injuriously affected by cold; it is free from the malarious diseases of southern latitudes; it is inhabited principally by a rural population, with only one considerable city; the people are industrious, religious, and intelligent; the census is taken frequently, and the reports for each province scrutinized most carefully for errors; the returns of the deaths have been kept up for more than a hundred years; they have been made with great care and labor; the population is large; they have been exposed to every variety of seasons, of epidemics, of war and peace, of famine and abundance; surely such returns are entitled to much confidence.

The expectation of life in Milne's Swedish table is, however, nearly two years less than at Carlisle from 15 to 50, and continues below it to the end of life. It is more than a year below Dr. Farr's. The Swedish table of Dr. Price is still lower. But this is no good reason for excluding these observations, for we do not know beforehand whether the American mortality will conform most to the English or the Swedish experience. The probabilities are, that the deaths here will be greater than in either country. But whether this is true or not, the Swedish observations deserve much esteem by our life offices, and we shall not hesitate to allow

them considerable weight in our average. Dr. Price's is so old, and so near the limit where we have thought proper to exclude the observations, that we shall allow it less weight than the others, but we shall not feel at liberty to exclude it entirely.

In column second at the end of this article is Dr. Price's Swedish table, and in the third column is the adjusted rate of mortality. The influence of adjustment is very slight, as the large numbers observed and the quinquennial intervals of ages of the living and the dying have prevented any serious anomalies.

In column fourth is Mr. Milne's Swedish table, and in the next column its adjusted mortality. Both adjustments are made in the same way, by taking the geometrical mean of five successive rates as the true amount for each age.

In the next two columns are the rates of mortality for the next two periods of twenty years, obtained from the observations published by Dr. Farr in the sixth volume of the registrar general's reports. The mode of construction which we have adopted is that proposed by Dr. Farr, but in adjusting we have taken the mean of seven consecutive rates of mortality instead of five, because the observations being given for every five years, the adjustment by fives was not so satisfactory.

The next table we will introduce (column eighth,) is founded on the observations in Norway, published by Dr. Farr in the same volume of his reports. These were officially communicated, and seem to be made with care. They extend from 1800 to 1840, but the ages of the living are only given for the last census in 1840. The table we have constructed is, therefore, only for the last ten years, from 1830 to 1840. The mode of construction we have employed is the same we have used for the Carlisle observations, which, though more laborious, is more reliable than any of the methods proposed. The actual number of the living at each age being approximately obtained, the rates of mortality that will give the observed deaths for these numbers of the living are more likely to be correct than the rates that give the proper number of deaths in a stationary population.

The numbers of the living and the dying being smaller than for Sweden, and for ten years only, we shall give less weight to this Norway table than to the Swedish. The rates of mortality are, however, less, and nearer to Farr's.

The next table is derived from the observations of Mr. Finlaison, actuary of the National Debt Office in Great Britain. His report to Parliament was made in 1829, and gives the particulars of the deaths and ages of the government annuitants and of the nominees under the several government tontines, beginning as early as 1693, and ending in 1826. The facts are numerous, perfectly reliable, continued through a long series of years, and very carefully collected and arranged. Mr. Finlaison's results have not, however, been very much esteemed. They differ considerably from our best tables, and contain anomalies not found elsewhere. This arises, we think, from the selection of lives which would exert a greater influence in a tontine than in an insurance office. When a policy is first issued the insurer is known to be in perfect health. His physician and the company's medical examiner, as well as the insured himself and his friend, unite in testifying to this fact. The rate of mortality at any particular age will therefore be very different among recent in-

surers and among those who have been long insured. The difference is still greater in the tontines, since many of these persons were chosen because of their vigorous health and their promise of long life. The mortality among such persons soon after admission would be very different from the average rate for persons of the same age taken at random or among the members of an insurance company. And this is sufficient to account for the irregularities in these tables. Besides, Mr. Finlaison did not use all the materials he had collected and published, but only a portion of them which he thought most worthy of confidence. His "tables of annuities, computed for the government," were founded only on "the Irish Tontine," "the Tontine of 1789," and that "of the Sinking Fund as observed to the end of the year 1822."

In the table we have inserted at the end of this article we have used all the observations of Mr. Finlaison, omitting only the first set, because founded on observations which were made before the middle of the last century; and the result is free from many of the anomalies of his tables, and every way more worthy of confidence. We have adjusted it precisely in the same manner he did for his tables. Thus, we have added together his two summaries, Nos. 8 and 15, and subtracted No. 1, comprising in our result 21,350 lives, of whom 12,275 yet survived in January, 1826. We have then obtained the ratio of the living and the dying at each age, and adjusted these ratios by taking the geometrical mean of five consecutive terms, and then of each three of these results, following precisely the same method as Mr. Finlaison. To this mean two corrections were applied to get the rate of mortality at 15, 16, etc., because it is the ratio of the living and the dying at the average age of 15, 16, etc. The rates finally obtained are to be found in column ninth at the end of this article. At the earlier ages when the influence of selection is felt, the table is quite irregular. But for the older ages, when this objection disappears, the large number of lives, the exactness and accuracy of the observations, and the absence of all withdrawals, make the figures worthy of more confidence.

We have inserted in column tenth the mean of Finlaison's two tables, but we do not think them worthy of much weight in the proposed combination.

In column eleventh is to be found Farr's Northampton, which is very different from Dr. Price's, partly because it is founded on recent observations, but mainly because it has been properly constructed from the numbers of the living and the dying. Dr. Price, with great ingenuity, supplied the numbers of the living from the ages of the dying; but his hypothesis, though better than those made by his contemporaries, was not an approximation to the truth for the younger ages. Farr's is deserving of every confidence. As it embraces the mortality for seven years, from 1838 to 1844, among a population nearly as large as Carlisle; as the facts on which it has been based have been observed with care, and the table constructed on correct principles, it is worth nearly as much as the Carlisle table.

Age.	Price's Mortality Sweden, adjust'd.	Milne's Sweden, adjust'd.	Milne's 1795-1815.	Sweden, 1815-35.	Norway, 1825-35.	Finlaison, 1745-1826.	Finlaison, male.	Finlaison, fe.	Farr's North'm.	
15..	5899	.0064	6098	.0061	.0066	.0052	.0055	.0071	.0064	.0056
16..	5862	67	6061	62	69	54	60	78	72	57
17..	5822	70	6023	65	71	56	64	86	80	59
18..	5782	73	5985	68	74	59	67	94	88	61
19..	5740	76	5945	71	77	62	69	100	96	63

Age.	Price's Mortality Sweden.	Milne's adjust d. Sweden.	Milne's adjust d. Sweden.	Sweden, 1795-1815.	Sweden, 1815-35.	Norway, 1825-35.	Finland, 1745-1825.	Finland, male, fe.	Farr's North'n.	
20..	5697	79	5903	74	80	65	71	104	101	65
21..	5650	82	5859	78	82	69	73	105	110	67
22..	5603	85	5814	81	85	73	75	106	113	68
23..	5555	88	5766	85	87	76	78	106	114	70
24..	5507	90	5717	88	89	78	81	106	114	72
25..	5457	93	5667	91	91	81	84	105	113	74
26..	5407	97	5615	94	94	83	87	105	109	76
27..	5355	100	5562	97	96	86	91	105	109	78
28..	5301	104	5508	100	99	89	94	105	109	80
29..	5246	108	5453	103	103	92	97	105	109	83
30..	5191	112	5397	106	107	95	100	106	109	86
31..	5132	117	5339	109	111	99	102	105	110	89
32..	5072	121	5281	111	115	103	103	104	111	91
33..	5010	122	5222	113	118	107	104	103	112	94
34..	4947	123	5163	114	121	111	105	103	113	97
35..	4884	123	5104	116	124	116	105	105	115	101
36..	4825	123	5045	117	127	120	106	110	117	105
37..	4767	123	4986	120	130	125	106	115	119	109
38..	4709	127	4927	125	133	130	107	120	121	113
39..	4651	134	4868	131	137	135	108	123	123	117
40..	4591	145	4805	133	142	140	110	123	124	122
41..	4526	156	4736	145	147	146	112	123	124	127
42..	4453	167	4666	150	152	152	115	123	125	132
43..	4375	175	4596	154	157	158	119	122	125	133
44..	4297	178	4526	158	163	164	123	123	126	144
45..	4219	179	4455	162	169	171	128	124	126	150
46..	4143	180	4382	166	175	177	134	127	125	157
47..	4069	185	4309	171	182	184	142	130	128	164
48..	3997	191	4236	177	189	191	149	136	131	172
49..	3924	201	4163	185	197	198	157	145	135	180
50..	3846	215	4087	193	206	206	165	155	140	188
51..	3761	229	4007	203	216	215	173	166	152	196
52..	3674	241	3925	212	228	225	182	177	161	205
53..	3584	251	3842	221	242	237	191	188	172	213
54..	3494	260	3757	231	257	250	202	198	184	220
55..	3403	271	3671	242	274	264	216	207	197	228
56..	3312	280	3584	254	295	280	231	216	210	237
57..	3220	294	3492	268	318	298	249	226	222	246
58..	3125	314	3398	286	343	317	268	239	233	258
59..	3030	333	3302	303	370	337	293	254	244	292
60..	2930	355	3204	335	399	357	318	273	250	335
61..	2822	396	3098	366	430	377	345	294	259	368
62..	2708	426	2983	400	463	398	374	316	271	452
63..	2590	451	2862	437	496	418	404	338	291	529
64..	2472	478	2736	474	530	438	434	361	314	577
65..	2354	505	2608	513	566	461	464	387	337	624
66..	2236	538	2475	557	604	490	495	421	375	670
67..	2118	574	2337	605	646	525	528	459	404	714
68..	1997	618	2195	646	692	569	561	501	433	759
69..	1873	675	2050	705	740	623	597	543	468	801
70..	1749	740	1905	760	791	686	636	582	513	842
71..	1622	820	1761	817	846	750	674	620	555	882
72..	1489	903	1618	881	902	833	717	658	595	923
73..	1354	984	1475	943	960	911	762	700	635	962
74..	1214	1061	1335	1011	1021	990	811	746	679	999
75..	1084	1129	1199	1079	1088	1072	859	796	719	1039
76..	963	1178	1070	1148	1162	1160	909	852	752	1076
77..	848	1241	947	1220	1246	1256	958	928	833	1112
78..	743	1335	831	1296	1341	1364	1026	1012	929	1142
79..	648	1449	724	1380	1443	1485	1105	1105	1021	1175
80..	558	159	624	148	157	161	120	118	112	121

Age.	Price's Sweden.	Mortality adjust'd.	Milne's Sweden.	Milne's adjust'd.	Sweden, 1795-1815.	Sweden, 1815-35.	Norway, 1825-35.	Finlaison, 1745-1826.	Finl'son, male, fe.	Farr's North'n.
81..	468	175	533	158	170	175	132	124	122	124
82..	384	193	449	171	183	189	146	130	130	129
83..	309	209	372	184	197	203	160	137	138	139
84..	244	222	304	196	212	218	175	145	150	154
85..	189	233	243	204	226	232	187	155	157	179
86..	144	240	191	209	239	244	198	170	185	212
87..	109	243	150	214	252	257	207	197	209	249
88..	82	254	119	218	261	269	220	219	235	291
89..	62	275	94	224	270	282	232	239	262	335
90..	47	314	73	235	280	294	245	252	299	375
91..	33	369	56	251	294	309	258	263	347	414
92..	21	442	42	269	309	324	270	266	375	462
93..	11	490	31	289	324	340	280	255	404	518
94..	5	600	22	332	340	359	292	241	444	615
95..	2	669	15	361	357	380	319	234	480	725
96..	1	1000	10	427	378	403	348	233	560	1000
97..	.	...	5	536	404	431	414	242	660	...
98..	.	...	3	643	436	465	575	385	825	...
99..	.	...	1	1000	533	512	667	545	875	...

Art. III.—FORGERY.

THE importance of the crime of forgery, and the confusion which it is capable of creating in the transaction of both public and private affairs, have in all time engaged the serious attention of the ministers of justice. Notwithstanding this, however, the arts of the forger have never received that attention, in an educational point of view, which the importance of the subject demands.

In the progress of civilization cupidity has very nearly attained the dignity of a science, and how to detect and how to avoid the arts of the counterfeiter has well nigh become a necessary part of commercial education.

Forgery, in law, may be defined to be the fraudulent making or alteration of any record, deed, writing, instrument, register, stamp, etc., to the prejudice of another man's rights. This broad field of operation is open to a great variety of means with the freest use of scientific principles. If we consult the records of this species of crime, we discover the arts of the forger to be contemporaneous with the advance of science. Indeed, the propagation of the truths of the science of chemistry, among all classes of society, seems not only to have facilitated the arts of the falsifier, but in some cases to have been available for obliterating the evidence of murder. The application of chemical processes in the perpetration of crime have, in some instances, demonstrated the greatest triumphs in that science; and had they been used for scientific purposes alone, they would have clothed their discoverers with imperishable honor. Photography—one of the brightest gems of modern chemistry—has achieved some of its greatest exploits in efforts to elude the "bank-note detector."

But in the adaptation of the latest truths of science, the forger never forgets the ruder methods of his art, now reduced to an unprecedented degree of perfection. The smooth erasure, the over careful preserva-

tion of important documents by the use of strengthening bands, inelegant blots, or over elegant penmanship, characterized by a great display of flourishes, are tricks of the trade as of yore; and when they are associated with scientific accomplishments, they are the more deceptive. The chemical agents most usually employed in forgery are muriatic acid, citric acid, oxalic acid, common salt, and other substances containing chlorine, and the chemicals of photography.

In view of the foregoing circumstances, the examination of suspected forgeries may be facilitated by dividing the processes into two classes, namely, physical and chemical.

I. PHYSICAL EXAMINATION.—In the physical examination of written instruments, semi-transparent spots or lines, strengthening strips or entire new backs, blots, heavy or rough lines, interlineations attested with ink of a different shade of color from that used in the main composition, or flourishes of penmanship, are all suspicious conditions. The forger, in order to hide the semi-transparency of an erasure, usually wears the paper in the line of it, by forced creasing, and then applies a strengthening strip or new back. "Worn out lines," or those which have been inserted in the place of others removed, are often mended in the same way. Torn edges or rents, as the effect, or instead of erasures, are usually repaired by patches, strips, or new backs. Various shades in the color of the ink may be the result of time only in old papers, or they may indicate the reaction of chemical agents in efforts to remove it. Irregularity in the written lines and roughness may be consequent upon a bad quality of paper, or be caused by washing the sizing out of the paper in an effort to remove the ink. Washing, also, may cause an apparent irregularity in the thickness of the paper, leaving spots, from which the sizing has been removed, more or less transparent and rough, and thus simulate or obscure other spots which have been erased. All writing paper, in the process of its preparation, is sized; that is to say, it has incorporated with it substances which hinder the penetration of ink or other fluids. When, therefore, the ink strokes are large, or spread into the texture of the paper, they indicate the tamperings of forgery. Where resin has been used for smoothing over an erased surface, the contrary effect results; the ink is but sparingly absorbed by the resin, the lines are fine and superficial, and of glossy appearance. Blots, too, may be the result of original composition in consequence of poor paper, of accidental moisture, of age, smoke, or scorching; it is important, therefore, to determine these conditions. In general, blots which are the result of badly sized paper, or of washing, are of circular shape, and present a regular fading shade of color from center to circumference. Blots, of brownish color and glossy, are usually produced by bistre or liquid-brown, and are indelible. Humidity, or moisture, which is liable to occur in papers not well cared for, or by accident, is equally liable to occur in any or every part of the paper. The destructive effects of humidity are sometimes counterfeited by the application of acetic or other strong acids, which more effectually destroy the ink by a partial or total destruction of the paper in the places to which the application is made; whereas mere moisture scarcely or not at all affects the texture of the paper, otherwise than by removing the sizing. Besides, the acids are usually applied in particular places—the usual temptation being to partially and not wholly destroy the papers subjected to this means of counterfeiting.

For the restoration of ink traces which have been made to disappear through the influence of moisture, *heat* is an available and reliable agent. A good way of applying heat for this purpose consists in placing the sheet to be examined between two sheets of tissue paper and subjecting the whole to pressure between two smooth surfaces of moderately heated iron. A still more effectual method, but requiring more care, is first to wet the papers separately in alcohol, then carefully place them as above, and apply the heated plates. A simpler, but more hazardous, plan, is to scorch the defaced document before a hot fire. Any of these measures, carefully applied, will ordinarily restore legibility to written instruments which have suffered no other damage than mere moisture. But if acetic or other strong acids have been applied, it is almost needless to state, the writing will not be restored, since their use involved a destruction of the paper, as well as the ink, in the places to which they have been applied.

II. CHEMICAL EXAMINATION.—First on the list of the means applicable under this head, may be placed *distilled water*. By it we can easily discover whether erasures have been made and partially resized, or whether the paper has been rubbed with resin. For the performance of this experiment, the paper to be examined should be smoothly spread out on glass, the water added a little at a time, and carefully observed in its effects on the paper. If the sizing has been removed by erasure or washing, the spots will be indicated by the greater readiness with which they absorb the water; while if any places have been rubbed with resin these wholly fail to absorb water, and thus become equally manifest.

M. Chevalier (Dictionnaire des Alterations et Falsifications,) relates cases where not only forged words have been substituted, but the kind of pen indicated by the impression made in writing. In one such case the point of a metallic pen with a divided beak had been used, and pressed so hard as to scratch two lines in the formation of the letters; these lines were traceable by the ready absorption of the water, which was not the case in the genuine part of the instrument. And in another case a semi-transparent spot was discovered to have been written over with a stylet, as if for the purpose of avoiding the accident which led to the discovery made in the case related; and, in this latter case, the smooth single point of the stylet had the effect of so condensing the erased paper as to render the forgery manifest from a totally opposite effect, namely, the non-absorption of water in the line of writing, while the parts immediately contiguous absorbed moisture with great facility.

By distilled water we can also determine the nature of blots, or of blanks—whether they have been caused by the use of acid or alkaline substances, for the diffusion or for the removal of the ink. For this object the water should be applied in drops to the suspected places, and allowed to remain ten or fifteen minutes, and then removed by means of a *pipette*, and subjected to the usual chemical tests for acids and alkalis. To render this test more certain, the genuine portion of the writing should also be wet with the distilled water, for the purpose of discovering the acid or alkaline nature of the ink used in the original composition. For, if an acid ink has been used upon a paper containing a carbonate—such as the carbonate of lime or chalk, which is frequently used in the dressing of paper—the acid of the ink acts upon the carbonate and forms, with it and the iron contained in the ink, a ferruginous salt. This salt, becoming dissolved by the application of the distilled water, partially

destroys the sizing of the paper, and causes the ink lines to appear semi-transparent. In the use of water for these purposes, it is necessary to repeat the experiment many times. After having moistened and examined the paper for one purpose, allow it to dry, and repeat the experiment for another.

Alcohol.—In some cases where water has failed to satisfy the mind of the scientific inquirer in regard to the suspected use of resin in combination with other substances, for the purpose of obliterating erasures, the use of alcohol has solved the problem by dissolving the resin, after which the experiments with water may be repeated and verification rendered complete. Paper moistened with alcohol for this purpose may also be subjected to a pretty good test by being placed between the eye and the light. If semi-transparent spots appear in the written lines they are probably owing to erasures; and if, upon drying, the ink is found to be feebly impressed or blurred in these places, evidence of forgery may be considered complete. And it may here be remarked that those lawyers who use pounce, if there are any such, are liable thereby to destroy their own evidence of authenticity. It is somewhere recorded of Stephen Girard that a well recommended book-keeper once sought employment of him, and among other good qualities the applicant was specially commended for his extreme neatness in making erasures, and so filling them as to leave no indications of their existence. After proving his expertness in this particular, and confidently addressing himself to the great merchant, as if sure of the place he sought, he received for reply, "If I know it, I never employ anybody who uses pounce."

Test Papers.—These are best prepared from litmus, a peculiar coloring matter obtained from *Rocella tinctoria*—Spanish orchilla—a small dry lichen, chiefly obtained from the west coast of Africa and neighboring islands. A strong solution of litmus, fit for dyeing test paper, may be made by triturating one part of litmus with six parts (by weight) of water, gradually added, and then boiling the mixture for half an hour. Unsized white paper, dipped in this solution, immediately acquires a deep purple color. And thus prepared, it should be carefully dried and kept in well closed vessels, secluded from light, ready for use. If moistened with an acid, this purple paper is immediately changed to red; if moistened with an alkali it is changed to blue. Some strips may be preserved in a reddened state by moistening the purple paper in a weak solution of acetic acid, and these, when applied to an alkaline solution, are immediately restored to their original purple color or changed to a blue—depending upon the strength of the alkali. In testing for acidity, it is useful to expose the purple paper for a few seconds to the vapor of ammonia just before applying it; this has the effect of intensifying the blueness, and rendering it more sensitive to the presence of an acid.

Ordinarily, test papers are preserved in narrow slips, but for the examination of written instruments or bank notes suspected of forgery, it is necessary to have whole sheets of test paper, or at least sheets as large as the papers to be examined; and the manner of using them is this:—Take a sheet of the purple test paper of the same size as the suspected document, moisten it with distilled water, and carefully spread it out on a sheet of white tissue paper; then lay upon it the paper to be examined, the test paper being between the tissue paper and the suspected document. Thus arranged, put the whole together between plates of glass, and subject them to pressure for about an hour; by the end of this

time the test sheet on removal will be found to vary in shades of color according to the preponderance of acids or alkalis with which it has been in contact, and thus will be indicated whether the ink of the suspected instrument has been subjected to manipulations for the purpose of removal. The presence of acids or alkalis having been thus ascertained, the document may then be submitted to a further examination by dissolving out the agent used, in the manner before directed—by adding distilled water in drops, and subsequent removal by the pipette; and the identity of the substance established by chemical analysis. In the performance of this experiment, it frequently turns out that, in consequence of the presence of acids used in the manufacture of the paper, there is a *uniform* change of color in the test. This, however, being uniform, is no detriment to the value of the test, because of the increased potency of additional acids which may have been used, the test is correspondingly affected.

There are other valuable tests depending upon the well known qualities of ink. Ordinarily, ink is a metallic preparation, having for a basis a compound formed by the action of nutgalls on the oxide of iron. This compound chemically consists of the *tannate of the protoxide of iron*, and this substance, after a time, attains its maximum degree of oxidation, and takes on the brilliant black color peculiar to well-made ink. To increase this brilliancy, mucilage, gum, or sugar is sometimes added; and for given shades of color, indigo, logwood, or sulphate of copper; but the tannate of the protoxide of iron is the essential quality of good ink. The counterfeiter, being aware of this, seeks to abrogate the ink by such means as are least liable to detection, and which will incur the least likelihood of notice to his subsequent manipulations. Foremost among these means are certain strengths of the strong acids—muriatic, acetic, and oxalic, and chlorine; a chief object being to use these substances in such a state of solution as will effectually remove ink without affecting the texture of the paper. The difficulty of accomplishing these purposes is made manifest by the *certain* tests of experimental chemistry. It should be premised, however, that notwithstanding the certain qualities of well-made ink, the acids of nutgalls, which enter into its composition, sometimes take on destructive modifications; this is particularly the case if the ink has been subjected to a freezing temperature. The oxide of iron is then set free, and assumes its natural yellow color. Ink thus spoiled should never be used for drawing up writings of importance, because it continues to fade, even after being committed to paper, and is ultimately destroyed by time alone. This alteration is more or less rapid according to the good or bad preparation of the ink in the first place, and also according to the nature of the modifying substances which have been added to it; it may also be influenced by the quality of the paper upon which it is used.

In the examination of instruments of writing suspected of forgery, we have arrived at the conclusion that the object is three-fold, namely, the detection of the forgery, the detection of the means used, and the restoration of the instrument. These purposes are made apparent by what has gone before. But it now remains to demonstrate the utility of divers substances useful for all the purposes herein comprehended. At the head of these stands *iodine*. The best way of using this is in the form of vapor, which is easily accomplished by putting a few grains of the metal into a wide-mouthed vial, and subjecting it to a moderate heat. Iodine soon

evaporates on exposure to heat, and the paper to be tested by it can be so held as to allow the vapor of the iodine to impinge upon its surface. After this the paper may be left for three or four minutes, and then carefully examined. If the surface of the paper has not been touched or operated upon by any other substance, the iodine imparts a uniform yellowish or yellow-brown color, on every part of the surface exposed to its influence. If any liquid—water, alcohol, salt water, vinegar, saliva, tears, urine, acids, or alkalis—has been applied to the surface of the paper before its exposure to the vapor of iodine, the places to which such application has been made are indicated by the varying tints of color imparted by the iodine. Places which have been rubbed with pumice are indicated by a *bistre-brown* color, and those transparencies which have been repaired by the use of paste are of a bluish-violet tint; while all spots in the paper, from which the sizing has been removed in consequence of washing, wetting with alcohol, or the use of acids, show their places by the more or less varying shades, depending upon the nature of the substance used, and the effect it may have had on the texture of the paper. The place of forgery being thus indicated by the iodine, it may afterwards be treated with the appropriate chemical tests for ascertaining the exact nature of the substance used. *Photographs* subjected to iodine vapor, and subsequently treated by a solution of the cyanide of potassium, are completely destroyed.

Forgery, by means of chlorine and its preparations, may be detected by *nitrate of silver*. For this purpose, first dissolve out the substance used, and add to it a solution of nitrate of silver; if chlorine be present in any form, there will be a dense *white precipitate* of the chloride of silver.

Gallic acid, or the recently prepared tincture of nutgalls, sulphuretted hydrogen, ammonia, and the alkaline sulphates, are all useful agents for restoring the traces of ink which have been deprived of their color by chlorine or other substances. For this purpose, the paper to be operated upon should be carefully spread out on a smooth surface, and gradually moistened by the reactive, and its changes watched for. When the surface has been well moistened with one test, it should be allowed to dry, and it may be of benefit to let several days, or even weeks, intervene, before another is used. If no traces of ink appear, another may be tried, and so on, the process being repeated many times. Traces of ink have sometimes appeared in paper so treated, at long intervals subsequent to the experiment—evidently traceable to the influence of these agents.

Next to the knowledge necessary for the detection of forgery, it is important to know by what means forgery may be rendered more difficult, and less liable to be attempted in the outset. As long ago as 1825, the Ministers of Justice in France consulted the Academy of Sciences upon the best means for the prevention of numerous disasters, both public and private, consequent upon forgery. The commission charged with the examination of the subject, proposed two methods—1st. The employment of indelible ink. 2d. Stamped paper.

1. *Indelible Ink*. This name is only appropriate to those inks which are known to be easily taken up by prepared paper, and unalterable under the influence of prolonged washings, chlorine, acids, and alkalis. A great variety of samples purporting to answer these qualities were

submitted; but two only were approved of and recommended, and these were both compounds with the *Encre de Chine*. China ink is supposed to be made of the dried salts obtained by evaporating certain sea waters of that country, mixed with gums or glue. Another kind of China ink, equally indelible, seems to be made of a peculiar kind of lamp-black, (as if obtained by the combustion of a peculiar substance,) mixed with gelatine, precipitated by ammonia, and scented with musk. These were for a time adopted by the French Government, (1831,) but their use was attended with such difficulty as to cause their early abandonment.

2. *Stamped Papers*. These were presented in great variety, containing various marks by stamp or composition, by which they might be distinguished, and purporting to be inimitable. None of these met the approval of the commission for State purposes, while several were adopted by banking houses and commercial companies. In 1848, M. Séguir informed the Academy that M. Grimpe had submitted to him a sample of bank note paper, which it was impossible to imitate, and in the same year, M. Dumas declared, in the name of the commission appointed on inks and papers of surety, that the paper presented by M. Grimpe was proof against forgery.

The manufacture of M. Grimpe's paper consists in a general vignette of both sides of the paper, with stars in relief, engraved under the microscope, and with the greatest exactitude. After adopting certain improvements suggested by M. Lemercier, the commission approved of M. Grimpe's paper, as offering the most perfect security for the purposes indicated, and it has gone into general use for banking purposes in France. In addition to this, the French Government has adopted a particular form and quality of paper for all documentary purposes, and this paper is secured by a stamp of the State as a guaranty against forgery.

Finally, as an additional security, certain substances, known as *sympathetic inks*, may be used as tests of genuineness, or for purposes of communication between persons liable to have their letters inspected. Sympathetic inks are substances employed for writing colorless lines, but susceptible of being rendered visible under the influence of heat or chemical agents. There are numerous substances of this character, and of such may be named the salts of *cobalt*, chlorine, acetates, and nitrates, mixed with one-fourth part of sea salt. These, when dissolved in water and written with, leave no visible traces upon the paper, but when the paper is slightly heated the tracings appear as if written with *blue ink*, and gradually fade out again on cooling. The salts of *nickel*, and certain of the salts of *lead* and of *bismuth*, and the juices of certain vegetable substances, may be employed in certain cases as resources of safety on papers liable to forgery, or for *interlineations*, under circumstances of necessary submission to surveillance, between parties in each other's confidence. The means of communication by sympathetic ink, however, may be turned to the most mischievous purposes; hence the detection of this means of intercourse is an object of no less interest to the ministers of justice than the more ordinary methods of counterfeiting; and it should be particularly taken into account in the examination of written correspondence between criminals and leagued bands of outlaws. The agents already described, particularly *iodine*, are, under ordinary circumstances, equally efficacious for the discovery of communications made by the use of sympathetic ink.

ART. IV.—OPIUM TRADE OF INDIA.

ORIGIN OF TRADE—PRESENT AMOUNT—POPPY—PROCESS OF MANUFACTURE—DEALERS—CHINESE PURCHASES—AMERICAN CAPTAIN—STEAM CUTTELS—GAMBLING NATURE—LARGE CAPITAL—USE OF OPIUM.

THE trade in opium has been one of the most important supports of the English government in India, as it has, in its incidents, had a most important influence upon the fortunes of China. A contemporary contains some interesting facts in relation to the circumstances of the trade, which is yet to have a great power over Chinese finances.

The Portuguese have the merit (if it may be so regarded) of having commenced the trade in opium between India and China. A hundred years ago it was of very trifling extent, and it was not until after the British East India Company made an adventure in 1773 that it gave promise of becoming a large trade. For many years the quantity shipped from British India did not much exceed 1,000 chests per annum, and even so late as the year 1820 it did not quite reach 6,000 chests, or about 900,000 pounds. Since that time, however, notwithstanding that the Chinese have latterly largely cultivated the plant from which it is produced, their imports of opium have rapidly increased. At the present date it amounts to between 10,000,000 and 11,000,000 pounds annually from India, beside a small amount from Turkey. The opium produced in India is the concrete juice of the white poppy. The capsules, when green, are incised with a knife, with three or more blades, which is drawn along them during the hottest time of the day; the white juice exudes from the wounds and concretes into opium, which is scraped off the next morning. If the night dews are heavy, or if rain falls in the interval, the quality of the drug is much impaired. The opium when collected is put into jars for transportation to the factories, where it undergoes a process to purify and prepare it for the market. About the end of March, and for some weeks after, these jars begin to arrive at their destination, and the contents are thrown into large vats, from which the mass is distributed to be made into balls. When dry, the balls are packed for sale in chests, in two layers of six each, with dried stalks, leaves, and capsules of the poppy plant. A chest of Bengal opium contains 160 pounds, and one of Bombay 140 pounds. The right to manufacture opium in India is monopolized by the government. The cultivation of the plant from which it is produced is rigidly restricted to two districts in the Presidency of Bengal, and a semi-independent native State in Western India. The Bengal opium is exported from Calcutta, and the other, known in the trade as Malwa opium, from Bombay. Calcutta and Bombay are the only ports from which opium is permitted to be exported, and the quantity shipped at the former is about double that at the latter. In the favored provinces in Bengal, where the poppy plant is allowed to be grown, the government servants grant licenses to cultivators of the soil to plant certain grounds, and afterward receive the juice from these people at a stipulated fixed price. As Malwa is an inland State, and has consequently no seaport, its opium pays a duty to the British Indian Government of about \$60 a chest upon exportation from Bombay. At Calcutta, there are regular periodical auction sales, where the opium is sold at so much per chest to the highest bidder; and so careful were the East India Company to keep up the character of their brand in the market, that pre-

vious to sale all cases were opened by examiners appointed for the purpose, and any balls of opium that had the slightest appearance of impurity or decay were removed, replaced, and destroyed, and the box resealed. The purchasers at these auctions are of all races and countries. There may be seen the acute citizen of the United States, the portly native of Hindostan, and men in strange costumes, that have sailed in their own ships, and brought with them strange coin, from the ports on the shores of Iranistan and Arabia. You may see all creeds—Christian and Pagan, Mohammedan and Jew, and last though not least, from the importance of their presence, the brokers of English merchants who count their capital by hundreds of thousands of pounds sterling, and own lines of steamers and sailing vessels. When the opium is sold it is kept in bond by the government, and only allowed to be removed to the ship on which it is to be sent out of India under the care of a customs officer, who delivers it to another aboard, whose duty is to remain by the vessel till she finally proceeds to sea. At this stage of the traffic the government of India have finally done away with all interference or control over the article, and it may be taken wheresoever the owner may think fit.

If we were to credit the policy of the powers that rule in China, it would appear that it is their ardent wish entirely to abolish the use of opium among the 350,000,000 of people subject to their will. In that empire the importation of opium is by law strictly prohibited, and by existing treaties with America, England, and other countries, any of their respective citizens, or subjects, that may be unfortunate enough to be caught with the drug in their possession in Chinese waters, or on Chinese ground, are left entirely at the mercy of the Celestials to be dealt with by their laws. The actual practice of the trade, however, is very different from what we might suppose it to be from this regulation. There is in reality no more risk incurred in introducing opium into China than there is here in importing in a legal manner any of the articles upon which a duty is levied by the customs. To understand this more clearly, let us suppose that the government of the United States, with the double view of increasing the revenue of the country, and of affording their servants superior facilities for growing rich by extortion, were to pass a law and make treaties with foreign powers prohibiting the importation of tobacco into the Union, under the penalty of death to all who should be caught attempting to evade it, and at the same time privately permit the various collectors of customs to sell permits to those who were willing to pay highly for the privilege of landing and distributing the contraband article in safety. This supposition is a parallel case with the practice in China with regard to opium. It is quite an error to suppose, as is generally done, that the drug is smuggled or taken into China in open defiance of the authority of the executive power of the country. There are receiving ships carrying various flags—some American—well armed and manned with Malays and natives of Manilla, moored in convenient harbors on the coasts of China, and when a steamer or "opium clipper" arrives from India, it is into these storeships that her cargo is delivered, and receipts or certificates regularly granted which are sent to the owners of the drug wherever they or their agents may transact their business in China. In trade these certificates are considered unquestionable, and are transmitted from one to another with the greatest facility. Chinese dealers from ports on the coast, and the interior, when they happen to want a supply of opium, purchase scrip for what they require, and send their

own boats, or sometimes junks, or steamers of light draft of water, to take it from the receiving ship and convey it to whatever port they intend to land it. At this particular stage of the traffic, as a general rule, all foreign interference with the trade may be said to end, though a few "barbarians" are engaged in the very profitable business of distributing the opium in the country to those who directly retail it to the consumers. When a lot, of one or more chests, is purchased, and intended to be landed at some particular place, the purchaser makes arrangements with the Mandarin in authority there, and strikes the best possible bargain with him for his permission to transact the business unmolested. As may be imagined, there is no fixed rate for this permission, and it varies much with the necessities of the case, but is always the uttermost dollar that the greedy official finds it possible to extract. The captain of an American steamer, who had been employed by the native dealers for sometime in conveying opium from the receiving ships to Canton, and who had made several profitable ventures on his own account, came to the conclusion that he could do equally well without the assistance of the government people, and that he would pay no more black mail. Without letting any of them know his intention, he took a considerable quantity of opium aboard and proceeded to Canton, where he landed it without being questioned in any way. He returned, took in a second cargo, and proceeded up the river as before, but no sooner had he anchored his vessel above the European factories, than he was boarded by two large launches with upward of eighty Chinese soldiers and two inferior Mandarins to take possession of his ship. The captain, however, was not thrown off his guard by his former good success, but was fully prepared to receive his visitors, knowing well that should they get possession, both ship and cargo would be confiscated, and himself and crew left entirely at the mercy of the captors—or in other words, that unless a large ransom were forthcoming they must pay it with their heads. Steamers engaged in this trade, and in the somewhat more precarious one of carrying Chinese passengers, have strong platforms erected across the wheel-houses, where in other vessels a plank is usually placed, called the captain's bridge. These platforms are guarded by strong bulwarks, steering apparatus is fixed on them, the arm-chests, and usually carronades placed so as to rake the deck below fore and aft; the engine-room hatches are well secured with iron gratings, and means are provided for telegraphing orders to the engineer. It is, in fact, a little citadel from which the crew of a steamer can direct her movements long after her decks are in possession of an enemy. The captain, being on the alert, and having seen the boats with the soldiers coming, had mustered all hands in this little fort, except one left below to knock out the shackle-pin and free the vessel from her anchor, when all was ready. When the last man of the two boat-loads was on the deck, the engineer received his orders to turn ahead, and away went the steamer with the whole posse, who had been so certain of their prize that in their astonishment they made no attempt at resistance. The captain proceeded straight to the Portuguese settlement at Macao, some hundred miles distant, and brought up under the guns of one of their batteries, when he descended to the angry Mandarins, and expressed a hope that they would not take for any want of courtesy toward them his absence while he was attending to the duties of his ship. He informed them that the fare down was two dollars per head for themselves and attendants, and that when his claim upon them for that amount was satis-

fied, they had his permission to go about their business! The steamer had to remain at Macao till he made his peace with the offended officials at Canton; but that was not difficult when he paid the full amount which they considered themselves entitled to upon the former cargo, besides for what he had aboard, and a fine as a caution for his future conduct.

There is, perhaps, no other commercial business in the world that excels the opium trade in facility for making or losing a fortune. The total capital employed in it is very large; and some of the mercantile firms engaged in the trade are almost fabulously rich, and enterprising to a degree that would be thought rash elsewhere. On account of the great value and perishable nature of the drug, it has always been a matter of the first importance to employ the fastest vessels procurable in its conveyance from India to China. The transit, however, is now almost entirely carried on by means of steamers. Some few years ago, when all the boats on the line belonged to one steam navigation company, and their directors thought fit to raise the freight per chest from \$14 to \$15 50, two mercantile firms built at once, with their own capital, superior vessels to those employed, and started a line each in opposition. These steamers must have cost \$300,000 each; and perhaps it would be difficult to find elsewhere merchants who could afford, without previous preparation, to withdraw such large sums from their working capital, and not even show the slightest appearance of inconvenience. Not long ago, a firm devised a plan for sweeping the opium market, that would be no discredit to the acquisitive ingenuity of Barnum. At the time of the operation they had a considerable stock of opium in China, beside which they bought largely in India, and loaded and dispatched two of their own vessels. Ships bound from India to China in the season of opium freights, to take advantage of the prevailing monsoon in the China Sea, always pass through the Straits of Malacca and Singapore, calling at the latter place, which is a sort of half-way house for them. There is a large Chinese population at Singapore, and of course a considerable demand for opium. When the two vessels in question reached that place, on their way to China, they found orders waiting for them to unload there, and sell their cargoes by auction without reserve. The quantity of opium brought by them was many times greater than the demand, and traders at that place were quite unprepared with funds for such an unexpected contingency. Besides, the very fact of a firm like that to which these cargoes belonged trying to force a sale, at any sacrifice, convinced the most skeptical that something dire was pending over the opium market—nothing less, perhaps, than free-trade in its production in India. When the cargoes were advertised, with a due notice of sale, those who held moderate stock of opium, suited to the straits markets, hurried forward sales so as to anticipate the other and realize what they could before the market became entirely glutted. The effect of this was that opium was to be had for a mere percentage of its original cost in India, and the private agents of those who had caused the depression purchased all they could get, and afterward bought in the two cargoes at a nominal price. While this was going forward at Singapore, the firm acted a like part in China, and forced sales with the same result. When news came from Singapore of the low prices ruling there, opium was, in more senses than one, a complete drug. Very few had foresight sufficient to retain their stocks, much less to purchase, and the private agents were again at work and bought till the market was swept and the opium had nearly all found its way into the

hands of the originators of the panic, who were safe from competition till the crop of the following season found its way to China. In due time the two vessels arrived safely with full cargoes from Singapore, prices went up higher than they had ever been known before, and some of the senior partners in the successful firm retired on splendid fortunes to their native land, which was generally supposed to lie in some latitude north of the river Tweed.

The principal use which the Chinese make of opium is to smoke it with tobacco, when it produces a languor said to be exceedingly pleasing. The evil effects of this have been generally very greatly exaggerated. It is only in its abuse, as with many of the good things of this world, that leads to the complete attenuation of frame and prostration of faculties that are said to characterize all who follow the practice. Hundreds of thousands of Chinese continue to smoke opium for the term of their natural lives without any apparent injury to mind or body. In the smoking saloons of Canton, opium is retailed to customers at its weight in silver; the metal is put in one scale and the drug in the other, and weight for weight exchanged. It will therefore be apparent that, in a country where money is of so much value, it is only the richer portion of the population who have means to carry such an expensive luxury to excess. There is no room to doubt that if the government of India abandoned the opium monopoly and allowed the drug to be produced freely all over Hindostan, that the Chinese consumption would thereby be greatly increased, as well as the injurious effects which it is said to occasion. Much is said, without any good show of reason, against the government of India for the part it performs in the trade. Indeed, some of those, in England and elsewhere, who are loudest in declaiming against the traffic, appear to be totally ignorant of the real bearings of the case. India derives a revenue of some \$20,000,000 per annum, which is every cent extracted out of the pockets of the smokers, and the system so much abused actually assists to obstruct the demoralization of the Chinese. It would be as reasonable to censure the ruler of France for permitting brandy to be made in that country, and to say that he was demoralizing people in other parts of the world by laying such an export duty upon it as might raise its selling price to consumers to about \$20 a gallon.

Art. V.—FINANCIAL HERESIES.

To the Editor of the Merchants' Magazine:—

THE English papers, in commenting upon the recent failures in the hide and leather trade, are quite emphatic in denouncing "accommodation" notes as the cause of the disturbance. This is an old cry of the Bank of England—it is the cry of "wolf" by the wolf, or "stop thief" by the thief himself—in which other banks have joined, both in England and this country. All of them seem to have a dread of what is called "accommodation paper," as a peculiar sort of *kiting* which they suppose to possess some especial power of inflation, productive of disaster in monetary affairs. This is mere financial superstition; it is a holy horror of the element of their own existence, condemning their own cher-

ished principle of doing business. All promissory notes and bills are *accommodation paper*, precisely one and the same thing; and when discounted in bank, unless the proceeds are paid in real money at once, they are exchanged for the *accommodation paper* or debt of the bank; they are converted into *debt currency*, which, as it exceeds, when created, the natural volume of currency, is mere *kiting* that degrades the value of money, locally, causing a loss in the capital of the community invested in money, precisely like the loss to a merchant by the fall of price of the goods in his warehouses. The bank exchanges notes with its customer; no value passes; it is nothing but *kiting*.

The hide dealer buys 1,000 hides, amounting to \$5,000, and gives his note for the same. What then? The hides and the note do not form separate values; they do not make \$10,000 of property. The dealer's note is as independent of the hides, and as much in excess of them, as of any other portion of his property; and his hides are no more bound to pay the note to its possessor, whether bank or individual, than his cattle, or his corn, or any other capital he may possess. He creates no value by making his note, and there is no value in it; the value is solely in the property he holds to pay it with, and without which the note is but the defacement of the paper on which it is written. When the property passes into the hands of the holder of the note, the note is extinguished, but the value remains. The bank, therefore, holds no value or property in holding the note; it must part with the note to get possession of the *value*.

All debt exceeds value, capital, and wealth, both of the individual and of the community; and its quality depends upon the property in the possession or at the command of the debtor to provide the means of payment, whether the property was acquired when the note was given, or months or years before. The hide dealer may have no other property than the 1,000 hides to pay his note. What if the warehouse takes fire, and his hides are consumed? What becomes of the *reality* of the note, and where is its value then? It is the integrity and ability of the debtor which gives the sort of reality to a note that a bank or a creditor should desire; it is a lien upon his property none the less because of the length of time the property has been in his possession. Obviously the so-called "real" note of the hide dealer for \$5,000, with nothing but the 1,000 hides to furnish the means of payment, is no more *real* than, and surely not as good as, the so-called "accommodation" note of the individual who holds \$100,000 worth of property behind it; and the individual who grants an "accommodation note," so-called, holding a previously acquired property to protect it, does no more to increase debt or cause trouble or embarrassment in financial affairs than he who grants his note for property obtained at the moment. There is no harm done by either note, if held to maturity or exchanged at any time for honest *money*; it is the operation of the bank that does the mischief, in putting mere debt into the office of money; in making a fresh creation of a currency of *price*, without the attribute of *value*, by giving bank debt instead of real money for the note. Promissory notes, given for goods purchased, merely postpone the payment and the use of currency or money; requiring it some months hence instead of to-day; and then, at the maturity of the obligation, the demand for money or currency, so far as this transaction is concerned, is just the same as it would have been to-day if the commodity had been exchanged for cash, and the business settled at once.

The party essentially accommodated in this business is the bank that gives its promise to pay on demand in exchange for the dealer's note, pretending thus to convert it into *money*, and making its whole support and profit out of the forbearance of the people—its creditors—who do not call for their pay, but hold pieces of paper, or bank balances at their credit, and *innocently pay*, instead of *receiving*, interest thereon for the indulgence they grant the bank. When its creditors demand their *money*, its debtors are called upon to pay *money* the bank never loaned, never had to loan, and necessarily has not on hand to meet its running demand liabilities: then comes the *crisis* that many writers call a "panic." It is such a panic as the wasted sufferer feels whose lungs are losing their power of inflation; it is no *panic*; it is the inevitable *crisis* of *death*.

It is therefore only the "accommodation" notes and debt of the bank, now deluding the easy credulity of the public, that need to be repudiated. The capitalist has no occasion to pry into the concerns of the honest trader to learn the origin of his "bills receivable." The dishonest trader may sell goods backwards and forwards, with or without removal, and present bills as vouchers, apparently as real as truth, that are as unreal as falsehood or a vision of the night; he merely deceives the devil if the bank believes him; for there can be nothing more unreal in its pretensions than the debt currency itself—this is speaking of the principle of the system, and not accusing its managers, who are no more responsible for its evils than the rest of the public who sustain it. The capitalist, or the bank, needs only to know the integrity and ability of the sureties for the loan. Whether the paper presented for the same be obtained for goods immediately delivered, or is merely borrowed for the purpose of obtaining the loan, makes not a particle of difference in the extent of the obligations, or in the financial affairs of the community; the only unreal thing being the fictitious currency created from debt without labor and without value. So much for the much-abused but innocent *accommodation paper*.

The second *heresy* is the notion that the bank compounds interest, and gains more by discounting short than long dated paper. That this notion should prevail among intelligent people, and even among bank directors, as it does, is peculiar evidence of the manner in which everything is taken for granted, without reflection, in this important business of creating and destroying currency and altering the value of money, which, more than any other business, needs the most careful investigation. It does not require even a slate and pencil to refute this weak notion. The bank deducts, in round numbers, \$60 discount on \$1,000 loaned for twelve months; this sum of \$60 is reinvested as cash, which gains \$3 60 more in discount for the year. Obviously it produces the same result to discount six notes at two months each for the sum of \$1,000, making \$10, and reinvesting 60 cents each time, only with much more accounting and trouble. It is not to be supposed that no accomplished merchants and bank directors understand this simple matter, but it is a very prevalent heresy, notwithstanding.

In exchange dealing, of course, the case is altered: if the bank can gain by charging exchange on each discount transaction, the shorter the paper and more frequent the transactions, the better it is for the bank, and the worse for the people.

The third *heresy* is not so obvious, and requires closer examination. It is that when the banks of any city discount notes and bills due and belonging to another city, the course of exchange turns against the former, and specie flows to the latter, *because the money owned in the former is loaned to the latter*. We have a case in point at this moment. The Boston banks aver, that the unprecedented expansion of their loans arises from discounting paper for New York that is owned and payable in New York, and *that alone* is the reason why Boston is sending specie to New York almost daily at this time, July 21st. This is very plausible, and at the first glance seems very reasonable, but nevertheless it is not quite true. The delusion is in the total misapprehension of the nature of money. Money is merely a portion of capital, like any other commodity, and goes, like other things, from where its value is less to where it is more; it is a claim upon capital, and not specially or merely money, that Boston has been lending to New York; money will not go to New York in consequence, unless it is cheaper in Boston than in New York; it follows the law of value in this, like every other thing possessing value in exchange. Hides, or hemp, or cotton goods, or capital in any other form, will go to New York when the commodity is cheapened in Boston, so as to be worth more in New York, and capital thus transferred, constitutes a fund to be drawn upon in making the bank loan to New York. Accordingly, we see that the Boston bank loans have been increasing during a dull business, locally, for a year past; and, especially during the last six months, the dullest of all, they have increased \$5,000,000; but specie was not transferred to New York as the loan advanced; the reason is obvious; because specie was as valuable here as in New York, and capital, in some other and cheaper form, had directly or indirectly placed Boston funds in New York to supply the loan. It may have been received in returns on Boston account from foreign ports, or from the south or west of our own country, as well as in goods forwarded directly from Boston to New York.

But additional local currency has been created by the Boston bank loans; money has been thereby cheapened in its exchange value, and driven abroad, or it has been prevented from coming in. The value of all consumable things is maintained by consumption, under an enlarged supply, to a very great degree, because as their value declines, their consumption increases; so that their value or price never falls in proportion to the increased supply. But money is not a consumable commodity, and it is therefore uniformly cheapened by an increased supply; unless about ten-fold the equivalent value of other things is produced, simultaneously with the money, so that the relative exchangeable power of money and property may be steadily maintained, which is absolutely impossible with the vast supply of money, and the fitful addition of debt currency now flowing upon the commercial world. This debt currency is produced instantly, and without labor, by issuing a promise to pay; property cannot be produced without time and labor. As nearly all commercial transactions are made through debt and credit, the fictitious addition to the currency must have time to percolate through the exchanges before the effect is felt. As a purgative requires time to change the gastric juices and become digested, this unwholesome dose of fiction is at length ejecting money from Boston rapidly; not because of any loan to New York, more than to Boston dealers; but because the increase of bank loans has been

proportionally greater in Boston, and cheapened money below its relative exchange value in New York. Money, therefore, must continue to flow to New York in excess of its receipt in Boston, until one of four things takes place; either Boston must reduce her loans, or New York must increase hers; or Boston must supply more goods, or New York less goods to the common market, proportionally. The value of money being always relative to something against which it is exchanged, there must be more currency or less goods in New York to cheapen money there; or there must be less currency or more goods in Boston to enhance the value of money in Boston. Either of these four things will, after awhile, bring about an equation of exchange between the two cities, by equalizing the value of money, and nothing else will.

Whether the Boston banks possess very accurate information of the amount of Boston paper discounted in New York, so as to judge that they have loaned an excess to that city, is rather problematical; for there is a continual cross firing of this sort between the two cities; but it matters not; exchange will turn against Boston, and specie will be forced to New York, just as soon, and as inevitably, by discounting Boston paper in Boston, as by discounting the paper of New York. Similar *kiting* is common between the bankers and merchants of England and the United States, with of course the same result. If the banks of New York, Boston, Philadelphia, &c., increase their loans in domestic paper, they will as effectually turn the course of exchange against this country, and compel the shipment of specie, as by discounting bills owned and payable in London itself.

The fourth *heresy* is that the banks lose interest on their reserve of specie, and that the holding of specie is therefore unprofitable; so that they make a greater profit by holding only 10 or 12 per cent of specie to their demand liabilities, as is usual in Massachusetts, than $33\frac{1}{3}$ per cent, the ratio fixed by law in Louisiana. This mistake Mr. Hooper pointed out in his recent pamphlet, and I demonstrated the same in figures in your May issue of this year. It is sufficient, therefore, to repeat, that the ownership of the specie is loaned in the bank notes and inscribed credits, and the bank gains interest on the same, accordingly. It is even more profitable to hold the larger proportion of specie, because the loans can be thereby maintained at higher figures, and consequently producing a larger income without additional cost.

There is no science that bears so immediately and so powerfully upon both the material and moral interests of society, as political economy, and no branch of this is so important as commercial finance; yet nothing is more crowded and obscured with error, and nothing is so utterly neglected by business men. The trouble with the hide and leather and shoe trade, both in England and this country, is not "accommodation notes," merely, but *converting debt into currency*, the destructive and ridiculous artificial *cheapening of money*, with the consequent *price above value* that can never stand.

C. H. C.

 JOURNAL OF MERCANTILE LAW.

DELIVERY OF COTTON.

We publish below, from the New Orleans *Delta*, the opinion and judgment of Judge EGGLESTON in the case of BUCKNER, STANTON & NEWMAN vs. DELANY, RICE & Co.

Buckner, Stanton & Newman, }
 vs. } Fifth District Court.
 Delany, Rice & Co., et al. }

About the 6th day of March, 1860, the defendants purchased of the plaintiffs 980 bales of cotton for nine-and-one-half cents per pound, making a sum total of \$40,520 44. The cotton had various planters' marks upon it, and several hundred bales were weighed on the 12th of March, several hundred bales on the 14th of the same month, and 144 bales were weighed on the 15th of the same month. The defendants were informed by the plaintiff by a letter of the 15th of March, that they would have the list of the cotton inspected, and requested their attendance.

Each party selected a broker to inspect the list, and on examination they rejected 188 bales of the list as mixed. The plaintiffs on the 19th of the month informed the defendants they would deliver the merchantable and unrejected bales, and would substitute 188 bales of similar quality in place of the bales rejected as unmerchantable. Two brokers selected for the plaintiffs 188 bales of cotton of better quality, and on the 21st March the plaintiffs sent a notice to the defendants to come forward and receive the residue of the list of cotton remaining undelivered, and if they failed to comply, they would sell the 980 bales, and hold them responsible for the loss and damages.

On the 28th March, 1860, the whole 980 bales, composed of that portion of the cotton sold, which was not rejected, and the 188 bales substituted for the same number rejected by the brokers, were sold at five-and-five eighths cents, which left a difference between the two sales of \$3,732 15. It is for this difference, together with some incidental charges and expenses, that the plaintiffs seek to hold the defendants responsible.

The sale was one by sample of cottons of various grades and qualities classed, and at an average price of nine-and-a-half cents agreed to be paid per pound on each bale.

Conceding that the plaintiffs have succeeded in their efforts to establish a mercantile custom or usage existing in this city, which authorizes the vendor of cotton to substitute in the place and stead of bad cotton sold by him a like quantity of other cotton of good or better quality, still such a custom or usage, however firmly established among merchants, can exert no controlling influence over a legal tribunal, seeing that it is in opposition to an explicit and imperative precept of the Code, and both the parties have not tacitly or expressly given their adhesion or concurrence to it. Customs and usages of trades and occupations are never permitted to subvert the positive enactments of the legislative powers, or the clear expression of legislative will. The legislation of the law making department of the government is paramount to and supreme over the enactments of any body of men, however intelligent and respectable they may be in their appropriate walks and pursuits in life. (4 Rob. R., 385.)

The articles of the Code with which the custom conflicts are 2450, 2452, 2466, 2467, and 2518. These require the vendor to deliver to the vendee the thing or things sold, and give no authority to the former to put one thing in place of another. The case must repose upon legal principles applied to the special facts developed on the trial independent of all local customs or commercial usages.

The plaintiffs, as it appears from their petition, took back the entire lot of cotton sold by them to the defendants, and sold 792 bales of it, and 188 bales of the cotton substituted to the like number of bales rejected from the lot of 980 bales, originally sold, which made up the original 980 bales, and sold them, expressing their determination to hold the vendee responsible for the deficit in price, if any there should be. This resumption of the cotton by the vendors and resale of it, it seems to me, to be a dissolution and rescission of the original sale, and disable them from maintaining this action for any difference in the price produced by the two sales. For, if there had been a valid sale by them to the defendants, as they allege, and there was no rescission of it, the vendors no longer possessing any title to the cotton, could sell and convey now to another.

They ceased to have any title which they could part with as it had passed from them to the vendees, the defendants therein. But this subsequent sale of part of the original and the substituted cotton established one of two things, either that there originally was no sale to the defendants, or that if there had been one, the plaintiff had subsequently annulled the sale, and resumed the title to and possession of the cotton.

The idea cannot be entertained for one moment that they wilfully and deliberately seized upon and sold the cotton of the defendants, their original vendees. Such a supposition would accuse them of injustice, not to say of a worse offence, which their high position in the commercial world repels.

There is, then, but one other conclusion to which the mind can be conducted, and it is this, that they revoked the sale, took the cotton back as owners or factors of the planters, and sold and delivered it, as such, to SPANGENBERG, the second vendee.

If they were not the owners, how came they in the possession of the cotton, which they aver they had sold and delivered to the defendants? If they were not the owners, how came it to pass that they sold and delivered it to SPANGENBERG? For the sale of a thing is the highest prerogative of ownership of a thing. It indicates, in unmistakable terms, the belief of the vendor that he is the owner of it, or is authorized by the owner to dispose of it.

I therefore infer, from the concurrence of the physical element of possession, or the judicial or civil element of sale, that the original sale was annulled and undone, and in consequence the plaintiffs have no legal recourse against the defendants for any deficiency resulting from the resale of the cotton. Will it be urged that the plaintiffs notified the defendants they would hold them responsible for a deficit on the resale which they intended to make? To this it may be replied, that when they took back the cotton and set aside the sale, all the parties were replaced in their primitive position, and things stood as if nothing had occurred. The plaintiffs were owners, or factors holding the cotton to sell to any one desirous of buying, and the vendees were free from any obligation to fulfill towards them. If the plaintiffs intended to attach as a condition to the annulment of the sale and the resumption of the cotton that they would sell it and hold the defendants liable for the deficit, before this could be done, and be made obligatory on the latter, they must have assented to it, and the testimony shows none.

They could not, by the action of their individual will, engraft such a condition upon the annulment and resale, and oblige the defendants in opposition to their will and without their concurrence.

The dissolution of a sale by the parties is a contract, and if I am correct in the hypothesis that the parties expressly or tacitly made one, the plaintiff could interpolate no clause upon it, nor add any stipulation to it, without the assent and will of the other party. But did the plaintiff sell the 980 bales said to be the defendants'?

From their own allegations it appears that they sold but 792 bales of the cotton of the 980, which were transferred to the latter, and to make up the 980 sold them, they took 792 of them and added 188 new bales, which were put in the place of the like number rejected by the brokers as unmerchantable. Where are the 188 bales of the old lot of cotton? They took possession of them, and what has been done with them? Unless the identical 980 bales sold to the de-

defendants were sold a second time, how can it be ascertained if any deficit exists between the two sales? The cotton sold to SPANGENBERG was not the cotton sold to the defendants.

The plaintiffs, in my opinion, have failed in making out a legal demand against the defendants, and must pay the costs of their suit. Other questions of high import arise in the case, but I abstain from their discussion and solution, as the suit is terminated by the decision of the question discussed. Judgment for defendants with costs. A true copy. [Signed]

H. B. EGGLESTON, Judge.

E. D. LOVETT, Deputy Clerk.

MARINE INSURANCE—BREACH OF WARRANTY IN MARINE POLICY—WHEN ONLY
“DEVIATION” ALLOWABLE.

Before the New York Court of Common Pleas—General Term. Charles Day, plaintiff and respondent, vs. the Orient Mutual Insurance Company, of New York, defendants and appellants.

STATEMENT OF FACTS FROM PRINTED RECORD.—The policy on which the action is brought was a time policy on the schooner *Alice Day*, for one year from March 26th, 1856, at noon, to March 26th, 1857, at noon. It contained the following stipulation or warrant by the assured:—“Warranted not to use ports or places in Texas, except Galveston, nor foreign ports and places in the Gulf of Mexico.”

The vessel insured, while the policy was in force, went to the port of Coatzacoalcos, in the Gulf of Mexico, “in violation of the warranty.” “She returned in safety, and was destroyed by the perils insured against, at Apalachicola, on the 31st August, 1856.”

The plaintiff had applied to the defendants for permission to use the port of Coatzacoalcos, and it had been expressly refused; the defendants, however, offering at the same time to cancel the policy and return the premium for the unexpired time.

She did use the port, and carried from it a cargo of mahogany. This port is a dangerous one, and the cargo objectionable. The jury found the fact that the vessel insured went to the port of Coatzacoalcos in violation of the warranty in the policy.

Judge BRADY delivered the following opinion:—The policy upon which this action was brought, was upon the schooner *Alice Day* for one year from the 26th March, 1856, at noon, to March 26th, 1857, at noon. It contained a warranty as follows:—“Warranted not to use ports or places in Texas, except Galveston, nor foreign ports and places on the Gulf of Mexico.” By a subsequent agreement, 12th April, 1857, for the additional premium of one per cent, permission was given to make a voyage from New Orleans to Vera Cruz. The schooner went to Vera Cruz, thence to Coatzacoalcos, in the Gulf of Mexico, thence to Boston, and thence to Apalachicola, where she belonged, and was there destroyed by a storm. The plaintiff claims to recover, because the policy was a time policy, and the deviation occasioned by the voyage and to Coatzacoalcos, was only temporary and did not subsequently affect the risks insured against. For the first of these propositions we are referred to the case of the Union Insurance Company vs. Tyson, (3 Hill, 118;) but COWEN, J., states in the beginning of the opinion, “It is in the nature of the policy in question that it limits the vessel to no geographical track.” It is impossible, therefore, to make out a defence on the ground of a deviation in the ordinary sense of the word. But, assuming the policy in question to be a time policy, the geographical track is declared and the voyage to Coatzacoalcos was a deviation and in violation of the warranty. The question which arises upon these facts is, whether the defendants are discharged by the deviation? There was no necessity for the deviation. It was voluntary, and discharged the underwriters. Their discharge does not depend upon any

supposed increase of risk, but wholly on the departure of the insured from the contract of insurance. The assured has no right to substitute a different risk. (Phillips on Ins., 109, 483; Robinsons vs. Marine Ins. Co., 2 John. Rep., 89; Huet vs. the Phoenix Ins. Co., 7 Johns. Rep., 363; Robertson vs. the Coal Ins. Co., 8 Johns., 491; Duncans vs. Sun Fire Ins. Co., 6 Wend., 488; Maryland Ins. Co. vs. LeRoy, 7 Cranch, 26; Hartley vs. Buggin, 2 Doug. 39; Child vs. Sun Mutual Ins. Co., 3 Sandford, 26; Kettle vs. Wiggin, 13 Mass., 68; Coffin vs. Newburyport Mutual Ins. Co., 9 Mass., 436, 449.) In the case of Robinson vs. the Columbian Insurance Co., supra, the brig Ohio was insured from New York to the island of Teneriffe, and for an additional premium of two per cent, permission was given to proceed from Teneriffe to the Isle of Way and Bonavista, and at and from thence to return to New York. The vessel arrived safely at Teneriffe, but was refused permission to enter or land any part of the cargo until after performing a quarantine of forty days, because her bill of health was not certified by the Spanish Consul at New York. The master being unable to land his cargo determined to seek another port, and went to Madeira, which was the nearest port, where he arrived, landed, and sold the cargo. The vessel afterwards proceeded to the Isle of Way, and sailed from thence to New York. During her passage she met with very bad weather which much injured her, and sustained further injury by striking on a shoal near Great Egg Harbor, and finally arrived at New York, *per curiam*. "There was no necessity for going from Teneriffe to Madeira. It was sailing on a different voyage from the one insured. It was a voluntary deviation from the voyage mentioned in the policy. Nothing but necessity or apprehension of danger could excuse his departure from the usual and direct route to Bonavista." The judgment should be reversed.

HILTON, J.—Coatzacoalcos was one of the prohibited ports mentioned in the policy, and the plaintiff in express terms warranted against its use. The voyage there was voluntary, after the defendants had positively refused permission to go, and had accompanied the refusal with an offer to cancel the policy and return the premium for the time unexpired, so that insurance might have been obtained elsewhere.

But notwithstanding all this, the voyage was made, and there cannot be the slightest doubt that, had the vessel been lost, while absent upon it, the defendants would not have been answerable—and it is equally clear, both on principle and authority, that going upon it was a plain breach of the warranty contained in the policy, and put an end to the liability of the defendants as underwriters. (See Kettell vs. Wiggin, 15 Mass. 68.)

In contracts of insurance, a warranty is regarded as very much like a condition precedent, and which, if violated, avoids the policy, and no recovery can thereafter be had upon it. (Mead vs. Northwestern Insurance Co., 3 Seldon 530; Duncan vs. Sun Fire Insurance Co., 6 Wend. 488, 494; Westfall vs. Hudson River Fire Insurance Co., 2 Kern, 289. In the language of Mr. Justice Johnson in Maryland Insurance Co. vs. Le Roy, 7 Cranch, 26) "The discharge of the underwriters from their liability in such cases, depends not upon any supposed increase of risk, but wholly on the departure of the insured from the policy of insurance." The law attaches no importance to the degree of such violation, or the consequences arising from it, and its materiality or immateriality signifies nothing, the only question being as to the fact of the violation, and when that is shown a recovery is precluded, DeHalm vs. Hartly, 1 term R. 343. Kemble vs. Rhineland, 3 John cases, 134. Phillips on ins. 181, 211.

From these views it follows that going to Coatzacoalcos being a clear breach of the warranty, from that time the policy ceased to cover or protect the vessel, and her subsequent return in no way revived or restored the defendants' original obligation as underwriters. (See Westfall vs. Hudson River Fire Insurance Co., 2 Duer. 490, 496.)

I therefore concur with Judge BRADY, that the defendants are entitled to judgment.

COMMERCIAL CHRONICLE AND REVIEW.

BUSINESS OF THE MONTH—IMPORTS—EXPORTS—WHEAT—CROPS—LARGE WHEAT DELIVERIES—CORN—ELEMENTS OF DEMAND—EXPORTS AND PRICES FOR JULY—COTTON AND HARVESTS—SUPPLY TOO LARGE—NO SPECULATION—WEST SELLS ALL ITS SURPLUS—NO HOME DEMAND—RAILROAD SECURITIES—RATES OF MONEY—FALL IN VALUE—SPECIE—FOREIGN BILLS—SPECIE SHIPMENTS—CALIFORNIA BILLS—UNITED STATES MINT—ASSAY OFFICE—CURRENT OF SPECIE—BANK RESERVE—BANK DISCOUNTS—REPRESENTATIVE VALUE—THE INFLATION OF PRICES—LEGISLATIVE ENACTMENTS.

THE business of the month has been large and on the whole satisfactory, although there are many who underrate it, as compared with the more sanguine anticipations that had been entertained. The imports at the port have been large, but less so than last year, but the accumulation in warehouse has been less than then. The exports of domestic produce from the port, as will be seen in the tables annexed to this article, have been unusually large for the month and since January, and these have, in addition to the considerable quantities of cotton that have been exported, comprised, in flour and wheat, 6,400,000 bushels of wheat, an excess of 5,000,000 over last year, and also 1,669,000 bushels of corn, an excess of more than 1,500,000 bushels over last year. In produce there has also been a considerable increase. This circumstance has grown out of the threatening aspect of the harvests abroad, and the now apparent certainty that the United States will be required to supply a large proportion of the importation into Great Britain. These are large every year, but in years of inferior crops they swell to a quantity equal to one-third of the whole wheat crop of the Union. The crops of the Western States are this year represented on all sides as enormous, as well of corn as of wheat, and the means of transportation are now so well diversified, and in such good working order, that there can be no drawback upon the deliveries, as there was in the years 1847-8, when every conveyance was taxed to its utmost to convey food to the seaports and Europe. The crop of wheat in Ohio, Indiana, Michigan, Illinois, Iowa, Wisconsin, Minnesota, New York, and Canada West, is unprecedentedly large. A Western authority makes the following estimate of the movement of the wheat crop, which estimate, so far as the Lake Michigan ports are concerned, is based on the full receipts of previous years. For Lake Erie ports the estimate is made from the movement already commenced, and from exports of previous years.

From August 1st to November 15th, exclusive of Sundays, is ninety days; for which time this prospective movement is estimated:—

Cleveland	1,800,000	Chicago	6,750,000	Green Bay	135,000
Huron & Milan	270,000	Milwaukee	6,300,000	St. Joseph	72,000
Sandusky	900,000	Waukegan	125,000	Canada West . . .	1,350,000
Fremont	270,000	Kenosha	180,000		
Toledo	2,700,000	Racine	270,000	Total bush. . . .	22,077,000
Detroit	900,000	Sheboygan	45,000		

This is a larger movement by 10,000,000 of bushels than has ever been exported from the Lake regions and Canada West, in any one year, from August 1st to the close of navigation.

The corn crop far exceeds in proportion the productive yield of wheat.

These large supplies augur low prices. There are, however, three elements for good sale: first, the European demand; second, the improved activity at the East in most employments, assuring larger means of buying food; and lastly, the drouth at the South, which has undoubtedly done great damage in cutting off the crops, and by so doing, involving the purchase of large home supplies, instead of sales in competition with the West. These are elements of a broad market for the Western produce, and of prices remunerative to the growers. It is to be borne in mind that the West has little or no home market for its produce. That crowd of railroad builders, speculators, and emigrants that a few years since devoured the Western crops at high prices at the farm doors has disappeared, and now the whole surplus over the wants of the growers is required to find distant markets over railroads, rivers, and lakes. The latest news from Europe gave a higher impetus to the market, and would doubtless produce a more active investment of capital in that direction if the advices of large supplies were not as positive as those of a large demand. This may be illustrated in the exports and prices in New York city:—

	1859.		1860.	
	Exports in July.	Price Aug. 1.	Exports in July.	Price Aug. 7.
Flour.....bbls.	74,342	\$5 30	222,748	\$5 10 a \$5 20
Wheat.....bush.	9,026	1 10	1,419,887	1 25 a 1 27
Corn.....	36,026	76	177,886	62 a 63

This large export of wheat this year left prices no higher than the moderate export of last year. The nature of the foreign demand is such as to stimulate much activity, but the supply takes from the market the hope of higher prices, and therefore the money market is not much influenced. The large cotton crop, followed by bad harvests, checks speculation in that direction. Usually when the English market opens strong for grain there is a strong West current for money that raises the price in New York rapidly. This does not this year make its appearance, although the rates have been higher during the month. The sales of crops on the part of the West will place in the hands of dealers ample funds for the purchase of goods; but those funds will not reach the magnitude of transactions that grew out of the expenditure of \$100,000,000 per annum for railroads in the speculative years. The funds pass through the hands of a different class of persons. The hardy settler who raises produce expends from the proceeds cautiously, and the goods he requires in return must be of a substantial and staple character. The land and railroad speculators who made their paper fortunes in a day, spent recklessly and lavishly, and the goods they required were of an expensive description. This day is done, and the future growth of the West will be steady upon the proceeds of the crops. The railroads will have their business measured down to the quantities they can carry on the most direct and cheapest routes. This will be a more substantial business, but less flashy than the large revenues formerly derived from speculative passengers.

The restoration to marketable activity of the vast amount of railroad securities that have so long been dormant, would relieve the funds of many men long cramped for the want of them, and impart enterprise to the markets. The value of money during the month has improved $\frac{1}{4}$ a 1 per cent on most descriptions of paper. The rates are as follows:—

	On call.		Indorsed.		Single names.	Other good.	Not well known.
	Stocks.	Other.	60 days.	4 a 6 mos.			
Jan. 1st, 1859.	4 a 4½	4 a 5	4 a 5	5 a 6	6 a 7	7 a 8	8 a 10
Feb. 1st.....	5 a 6	6 a 7	5 a 6	6 a 7	7 a 7½	8 a 9	9 a 10
Mar. 1st.....	4 a 5	4½ a 6	4½ a 5½	5½ a 6½	6 a 7	7 a 8	9 a 10
Apr. 1st.....	4 a 5	5 a 6	5 a 5½	6 a 6½	6½ a 7	8 a 9	9 a 10
May 1st.....	5 a 6	6 a 7	6 a 6½	6½ a 6	7 a 9	9 a 10	10 a 12
Jun. 1st.....	6 a 7	7 a 8	6½ a 7	7 a 8	8 a 9	9 a 10	10 a 12
July 1st.....	5 a 6	6 a 7	6½ a 7	7 a 7½	8 a 9	10 a 12	12 a 15
Aug. 1st.....	6 a 7	7 a 8	6½ a 7½	7 a 8	8 a 9	11 a 13	12 a 15
Sept. 1st.....	5½ a 6	7 a 8	6 a 7	7 a 7½	8 a 8½	11 a 14	12 a 16
Oct. 1st.....	5½ a 7	6 a 7	6½ a 7	7 a 8	8 a 9	10 a 12	12 a 18
Nov. 1st.....	5 a 5½	6 a 7	6½ a 7½	7½ a 8	8½ a 9½	12 a 15	12 a 18
Dec. 1st.....	5 a 5½	6 a 7	6 a 7	7 a 8½	8 a 9	9 a 10	12 a 18
Dec. 17th.....	5½ a 6	6 a 7	7 a 7½	7½ a 8½	8 a 9	9 a 10	12 a 18
Jan. 1st, 1860..	6 a 6½	6½ a 7	7 a 7½	7½ a 8½	7½ a 8	9 a 10	12 a 18
Jan. 15th.....	7 a 7½	7 a 7½	8½ a 9	9 a 9½	9 a 10	11 a 11	15 a 20
Feb. 1st.....	6 a 6½	7 a 7½	8½ a 9	9 a 9½	9 a 10	11 a 12	15 a 20
Feb. 15th.....	5 a 6	6 a 7	7 a 7½	7½ a 8	8½ a 9½	10 a 12	15 a 18
Mar. 1st.....	5½ a 6	6 a 7	7 a 7½	7½ a 8	8½ a 9½	10 a 12	15 a 18
Mar. 15th.....	5 a 5½	5½ a 6	6 a 7	7½ a 8	8½ a 9½	10 a 12	15 a 18
Apr. 1st.....	5 a 5½	6 a 6½	5½ a 6	6 a 6½	5½ a 7½	9 a 10	11 a 13
Apr. 15th.....	5 a 5½	6 a 6½	5½ a 6	6 a 6½	6½ a 7½	9 a 10	11 a 13
May 1st.....	5 a 5½	6 a 6½	5 a 6	6 a 6½	6½ a 7½	9 a 10	11 a 12
May 15th.....	5 a 6	6 a 6½	5 a 6	6 a 7	6½ a 7½	9 a 10	10 a 12
June 1st.....	4½ a 5	6 a 6½	5 a 6	6 a 7	6½ a 7½	8 a 9	9 a 10
June 15th.....	4½ a 5	5 a 6	4½ a 5	5 a 5½	5½ a 6	6 a 7½	8 a 9
July 1st.....	5 a 5½	5½ a 6	.. a 5	5 a 6	5½ a 6	7 a 7½	8 a 9
July 15th.....	5 a 5½	5½ a 6	.. a 5	5 a 6	5½ a 6	7 a 7½	8 a 9
Aug. 1st.....	5 a 6	6 a 7	5 a 6	6 a 6½	6½ a 7	7½ a 8½	9 a 10
Aug. 15th.....	5½ a 6	6 a 7	6 a 6½	6 a 7	6½ a 7½	8 a 9	9 a 10

There have been many efforts to advance the rates for the benefit of lenders, and it is a long time since the legal rate of money has been obtained for the best paper. The 4 a 6 months' paper taken in January and February, at 9 a 9½, was met with money 3½ a 4 per cent lower on the same description. In 1859 the reverse was the case, paper having risen as the season advanced. It is now possible that the crops will move gradually, and, instead of raising the value of money, only tend to diminish it. The shipments of specie have continued fair, or large, as compared with last year, since money is now here worth less than it was then. The rates of bills do not vary materially, as follows:—

RATES OF BILLS IN NEW YORK.

	London.	Paris.	Amsterdam.	Frankfort.	Hamburg.	Berlin.
Jan. 1..	9 a 9½	5.18½ a 5.17½	41½ a 41½	41½ a 41½	36½ a 36½	73 a 73½
15..	8½ a 9	5.21½ a 5.18½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
Feb. 1..	8½ a 9	5.18½ a 5.17½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
15..	8½ a 9	5.18½ a 5.17½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
Mar. 1..	8½ a 9	5.17½ a 5.15	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
15..	8½ a 8½	5.17½ a 5.15½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
Apr. 1..	8½ a 8½	5.18½ a 5.16½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
15..	8½ a 8½	5.16½ a 5.17½	41½ a 41½	41½ a 41½	36½ a 36½	73½ a 73½
May 1..	9½ a 9½	5.13½ a 5.12½	41½ a 41½	41½ a 42	36½ a 36½	73½ a 73½
15..	9½ a 9½	5.13½ a 5.13½	41½ a 41½	41½ a 42	36½ a 37	73½ a 73½
Jun. 1..	9½ a 9½	5.13½ a 5.12½	41½ a 41½	41½ a 42	37 a 37½	73½ a 73½
15..	9½ a 9½	5.13½ a 5.12½	41½ a 41½	41½ a 42	36½ a 37½	73½ a 73½
July 1..	9½ a 9½	5.13½ a 5.13½	41½ a 41½	41½ a 42	36½ a 37	73½ a 73½
15..	9½ a 9½	5.13½ a 5.13½	41½ a 41½	41½ a 41½	36½ a 37	73½ a 73½
Aug. 1..	9½ a 9½	5.13½ a 5.13½	41½ a 41½	41½ a 42	36½ a 37	73½ a 73½
15..	9½ a 10	5.13½ a 5.13½	41½ a 41½	41½ a 42	36½ a 37½	73½ a 73½

The full rates for sight bills obtained by many drawers causes a more active movement in specie, which has been 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.

	1859.		1860.		Specie in	Total
	Received.	Exported.	Received.	Exported.	sub-treasury.	In the city.
Jan. 7.....		\$1,062,558		\$85,080	\$7,757,965	\$25,600,699
14.....	\$1,376,300	218,049	1,788,666	88,482	7,729,646	26,470,512
21.....		567,398		259,400	8,352,485	27,588,970
28.....	1,210,713	467,694	1,760,582	81,800	8,957,123	29,020,862
Feb. 4.....		606,969	4,569	427,457	9,010,569	28,934,870
11.....	1,319,923	361,550	1,476,621	92,350	9,676,732	29,464,299
18.....		1,013,780		592,997	10,012,572	30,603,762
26.....	1,287,967	338,354	1,393,179	202,000	8,955,203	29,729,199
Mar. 3.....		1,427,556	382,503	667,282	8,734,028	31,820,840
10.....	933,130	307,106	1,198,711	115,473	8,237,909	30,139,089
17.....		870,578	152,000	429,260	8,099,409	31,271,247
24.....		208,955	895,336	465,115	8,122,672	31,408,876
31.....	1,032,314	1,343,059	155,110	706,006	8,026,492	31,447,251
Apr. 7.....		576,107		310,088	7,562,885	30,162,017
14.....	1,404,210	1,637,104	1,146,211	630,010	7,714,000	31,640,982
21.....		1,496,889		241,513	7,531,483	30,764,897
28.....	1,723,352	1,680,743	1,455,337	1,774,767	7,668,723	30,848,532
May 5.....		2,169,197		2,355,517	7,041,143	30,856,889
12.....	1,480,115	1,926,491	1,382,753	333,881	6,539,414	29,319,801
19.....		2,223,578		1,251,177	6,864,148	30,599,341
26.....	1,938,669	5,126,643	1,519,703	1,317,773	6,982,660	30,414,433
June 2.....		2,325,972		1,719,138	6,621,100	31,196,557
9.....	1,513,978	1,877,294		1,542,466	6,620,622	30,406,203
15.....		1,669,263	1,385,652	2,526,478	6,426,755	30,537,000
22.....		1,620,731		1,417,757	6,326,894	29,677,815
29.....	2,041,237	1,861,163	1,541,580	1,962,776	6,253,357	28,717,607
July 9.....		1,398,835		1,166,773	5,187,468	27,939,162
14.....	1,736,861	2,495,127	1,514,884	1,283,135	5,404,367	28,156,611
21.....		2,030,220	673,290	1,624,280	5,432,789	28,876,433
28.....	2,145,000	2,344,040		1,880,497	5,112,942	28,212,668
Aug 4.....		1,284,855	988,676	1,739,259	5,559,922	27,638,011
11.....	1,860,274	1,505,389	1,006,283	1,357,198	5,732,534	27,312,274
Total.....	22,903,940	46,142,916	21,891,967	30,024,289		

The receipts from California have been fair. There has been some opposition in the drawing of bills in San Francisco. The cost of shipping gold thence to New York is \$1 55 freight, 20 cents State stamp, and \$1 50 insurance, making \$3 25; from this deduct 35 cents—the average value of insurance scrip—leaving \$2 90 as the cost of the bill. But the bars sell nearly 1 per cent higher in New York than in San Francisco, which reduces the rate to \$1 90, at which the bill will not leave a profit. The object in drawing cheap is to control the market. The mint operations have been as follows:—

UNITED STATES MINT, PHILADELPHIA.

	Deposits.		Coinage.			
	Gold.	Silver.	Gold.	Silver.	Cents.	Total
January.....	\$200,000	\$41,000	\$1,024,563	\$41,000	\$24,000	\$1,090,563
February.....	1,838,578	35,573	1,632,160	21,600	24,000	1,677,760
March.....	144,478	82,255	317,451	132,989	29,000	479,440
April.....	281,891	49,764	252,756	38,431	30,000	321,188
May.....	90,828	72,468	133,004	81,100	35,000	249,104
June.....	54,893	54,676	63,718	97,160	24,000	134,878
July.....	97,041	14,181	101,975	87,000	16,660	205,635
Total, 1860.	\$3,527,706	\$359,897	\$3,425,627	\$499,186	\$182,660	\$4,820,573
Total, 1859.	830,580	545,650	744,525	656,650	209,000	2,986,405

The deposits at the assay-office of New York have been as in the following table:—

NEW YORK ASSAY-OFFICE.

	Foreign.				United States.				Payments	
	Gold.		Silver.		Gold.		Silver.		in	Coin.
	Coin.	Bullion.	Coin.	Bullion.	Coin.	Bullion.	Coin.	Bullion.	Bars.	Coin.
Jan.	14,000	18,000	11,200	14,000	2,478,000	1,800	20,000	647,000	1,910,000	
Feb.	5,000	28,000	6,500	24,000	951,000	.....	7,500	932,000	90,000	
Mar.	8,000	15,000	23,400	5,500	267,000	1,100	2,500	180,000	142,500	
Apr.	8,000	32,000	14,500	10,000	183,000	3,700	3,800	187,000	70,000	
May	11,200	20,800	25,500	18,000	176,000	7,000	16,500	230,000	45,000	
June	12,000	19,000	10,000	4,000	147,000	1,750	2,750	158,000	38,500	
July	9,500	18,000	12,800	8,000	159,500	1,200	3,000	140,000	72,000	
Tot.	67,700	150,800	103,900	83,500	4,361,500	16,550	58,050	2,474,000	3,668,000	
'59	63,000	74,000	283,980	51,900	2,197,600	12,900	30,720	2,179,000	851,100	

These operations have been much in excess of last year in the matter of coin, and the export has been much less than last year for the seven months since January. It has reached only \$28,000,000, against \$43,000,000 same time last year. These figures indicate some recovery of the metals that flowed out so freely last year, since the receipts are in excess of them. The outward current last year, following the course of payments, drew large sums from the West, without much disturbing the aggregate on the seaboard. The amount held by the banks of New York is less than last year, when, indeed, the quantity was burdensome. The quantity of specie that it is safe to hold can never be subjected to arbitrary rules, as the legislators have so frequently attempted to do. The true means that the banks must depend upon to meet the claims upon them exist in their assets. The lines of discount, in a speculative year, necessarily embrace a vast deal of paper predicated upon inflated values and prices, and is far less safe than a larger quantity based upon lower and regular values. Thus a line of discounts of \$100,000 might, in 1855, represent 6,000 barrels of flour. This year the same line would represent 20,000 bbls. If the line was raised to \$200,000 this year, it would represent nearly double the flour it did in 1854, hence could not be called inflated relatively. To require the banks to keep more or less specie on hand, in order to avoid losses from unsafe paper, seems to be absurd, as in fact is much that legislators undertake to do. It would be surer for them to undertake a sort of "specific system," and confine discounts to barrels, yards, and tons, than to allow of the ad valorem mode of discounting, and then compel them to keep specie to meet the claims of depositors who never deposited specie with them. Most of the depositors lodge with the banks claims upon other parties, which the bank collects, seldom in specie. The depositor then legally claims specie, when, in fact, offset is all that is due him.

The import tables for the month show a decline as compared with the corresponding season last year, and the quantity entered warehouse is greater. The decline in the imports is mostly to be attributed to the lessened consignment of dry goods. That last year came in such quantities, and encountered such losses, as were not likely to be repeated, the more so, that the general war that then threatened seems to be subsiding into a confederation, whereof the Syrian expedition is the exponent. The decline in the imports for the month is \$2,404,671; and a decline of \$11,000,000 as compared with 1857:—

FOREIGN IMPORTS AT NEW YORK IN JULY.

	1857.	1858.	1859.	1860.
Entered for consumption.....	\$26,042,740	\$14,013,659	\$21,681,460	\$18,759,905
Entered for warehousing.....	6,796,835	2,949,166	1,486,147	1,594,918
Free goods.....	2,455,333	1,506,027	3,943,374	4,402,475
Specie and bullion.....	505,298	36,895	175,189	64,351
Total entered at the port.....	\$35,800,206	\$18,505,747	\$27,286,120	\$24,881,649
Withdrawn from warehouse....	10,470,820	3,164,538	2,595,063	3,593,993

The decline for the month, added to the falling off of the previous six months, gives a diminution of \$14,000,000 since January, and this diminution has been to the extent of \$3,420,000 in dry goods. The stock in warehouse has diminished, since the quantities entered for the seven months have been \$2,000,000 more, and the withdrawals are greater by \$3,800,000. The amount of specie received from abroad is much less than for several of the previous years, as follows:—

FOREIGN IMPORTS AT NEW YORK FOR SEVEN MONTHS, FROM JANUARY 1ST.

	1857.	1858.	1859.	1860.
Entered for consumption.....	\$91,280,614	\$50,334,179	113,511,023	\$98,705,594
Entered for warehousing.....	47,911,631	15,185,419	23,209,758	25,377,377
Free goods.....	11,680,078	12,955,525	18,429,131	17,765,566
Specie and bullion.....	5,857,310	1,815,258	1,301,982	751,188
Total entered at the port.....	156,729,633	80,290,381	156,450,994	142,599,725
Withdrawn from warehouse....	23,616,081	25,076,502	14,110,784	17,909,650

The whole warehouse operations have been larger than in any year except 1857. The figures for the dry goods imports were as follows:—

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

ENTERED FOR CONSUMPTION.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$6,996,986	\$2,691,875	\$4,911,803	\$4,700,030
Manufactures of cotton.....	2,644,673	1,066,295	2,961,195	1,504,437
Manufactures of silk.....	6,483,722	2,244,955	5,095,323	4,426,960
Manufactures of flax.....	1,034,170	575,752	1,156,373	421,291
Miscellaneous dry goods.....	1,187,900	417,254	510,912	740,867
Total.....	\$18,347,451	\$6,996,131	\$14,635,606	\$11,793,585

WITHDRAWN FROM WAREHOUSE.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$2,644,823	\$409,266	\$441,207	\$488,655
Manufactures of cotton.....	639,531	131,971	57,071	175,232
Manufactures of silk.....	2,042,522	192,302	186,717	133,646
Manufactures of flax.....	392,013	88,225	37,689	40,700
Miscellaneous dry goods.....	247,997	90,665	40,124	14,924
Total.....	\$5,966,886	\$912,429	\$712,808	\$853,157
Add entered for consumption....	18,347,451	6,996,131	14,635,606	11,793,585
Total thrown upon market..	\$24,314,337	\$7,908,560	\$15,348,414	\$12,646,742

ENTERED FOR WAREHOUSING.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$1,235,003	\$370,985	\$771,660	\$447,732
Manufactures of cotton.....	408,236	63,427	164,492	178,703
Manufactures of silk.....	568,065	70,999	133,349	182,427
Manufactures of flax.....	164,535	54,452	79,446	75,020
Miscellaneous dry goods.....	206,291	43,045	33,538	30,237
Total.....	\$2,582,130	\$602,908	\$1,182,485	\$913,628
Add entered for consumption.....	18,347,451	6,996,131	14,635,606	11,793,585
Total entered at the port....	\$20,929,581	\$7,599,039	\$15,818,091	\$12,707,213

The decline as compared with last year is \$3,100,000.

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

ENTERED FOR CONSUMPTION.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$14,405,242	\$7,667,688	\$21,119,357	\$18,653,647
Manufactures of cotton.....	11,593,109	4,886,559	15,849,312	10,300,197
Manufactures of silk.....	17,805,042	8,855,134	20,613,222	21,161,104
Manufactures of flax.....	4,104,518	2,115,268	6,477,370	4,126,995
Miscellaneous dry goods.....	4,420,275	1,782,132	3,252,605	3,321,775
Total.....	\$52,328,186	\$25,307,081	\$67,311,866	\$57,563,708

WITHDRAWN FROM WAREHOUSE.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$3,688,663	\$2,606,395	\$1,271,404	\$1,767,264
Manufactures of cotton.....	2,402,012	2,947,330	1,120,282	1,336,739
Manufactures of silk.....	3,244,488	2,581,456	576,856	1,036,333
Manufactures of flax.....	1,128,012	1,544,048	656,944	538,092
Miscellaneous dry goods.....	591,981	943,991	271,150	392,740
Total.....	\$11,055,156	\$10,623,420	\$3,896,636	\$5,571,168
Add entered for consumption ...	52,328,186	25,307,081	67,311,866	51,563,708
Total thrown on market....	\$63,383,342	\$35,930,501	\$71,208,502	\$63,134,876

ENTERED FOR WAREHOUSING.

	1857.	1858.	1859.	1860.
Manufactures of wool.....	\$5,349,836	\$1,492,256	\$2,320,121	\$2,339,406
Manufactures of cotton.....	2,502,530	1,441,855	911,922	1,605,632
Manufactures of silk.....	3,989,463	914,698	525,498	1,138,035
Manufactures of flax.....	1,458,629	594,960	437,587	290,506
Miscellaneous dry goods.....	1,087,599	418,308	275,990	425,400
Total.....	\$14,388,107	\$4,862,277	\$4,471,118	\$5,798,979
Add entered for consumption ...	52,328,186	25,307,081	67,311,866	57,563,708
Total entered at the port....	\$66,716,293	\$30,169,358	\$71,782,984	\$63,362,687

We may here call attention to the remarkable fluctuation in the imports of dry goods, at this port, as presented in the aggregates for the first seven months of each year, as follows :—

1850.....	40,414,677	
1851.....	42,240,217	
1852.....		34,994,294
1853.....	57,421,619	
1854.....	55,308,983	
1855.....		34,724,395
1856.....	60,296,946	
1857.....	66,716,293	
1858.....		30,169,358
1859.....	71,982,984	
1860.....	63,362,687	

Every third year there has been an inevitable decline of imports to the same figure. In 1852, 1855, and 1858, a reaction and fall took place. Will the same happen next year?

The cash duties received at the port of New York, during the month of July, have been less than for the same period of 1859; they are reckoned, of course, upon the goods thrown on the market. We annex a comparative summary:—

CASH DUTIES RECEIVED AT NEW YORK.

	1857.	1858.	1859.	1860.
In July.....	\$6,987,019 61	\$3,387,305	\$4,851,243 49	\$4,504,066
Previous six months..	19,293,521 31	11,089,112	19,512,181 99	18,339,671

Total since Jan. 1st \$26,280,540 92 \$14,476,418 \$24,363,428 88 \$22,843,741

The domestic exports from the port of New York for the month of July have been considerably larger than for the same month in any previous year. This arises from the large crops of cotton this year being supported by the revival of the breadstuff demand abroad, and this has carried the New York business to a high figure. The value of domestic produce exported exceeds that of last year by \$2,600,000, while specie sent abroad is \$3,400,000 less:—

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

	1857.	1858.	1859.	1860.
Domestic produce.....	\$4,273,696	\$4,771,962	\$4,938,065	\$7,525,713
Foreign merchandise (free).....	407,697	70,463	380,782	232,552
Foreign merchandise (dutiable)...	582,059	277,419	232,527	140,949
Specie and bullion.....	2,623,377	2,801,496	10,051,019	6,563,985

Total exports..... \$8,891,829 \$7,921,829 \$15,602,393 \$14,463,199

Total, exclusive of specie... 5,263,452 5,119,844 5,551,374 7,811,214

This leaves the total foreign exports from New York, since January 1st, exclusive of specie, \$14,307,000 more than for the corresponding seven months of last year, and \$14,727,415 more than for 1858, and also more than for any previous year:—

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

	1857.	1858.	1859.	1860.
Domestic produce.....	\$38,725,336	\$33,352,354	\$33,373,647	\$46,281,575
Foreign merchandise (free).....	2,315,874	853,024	1,765,100	1,860,424
Foreign merchandise (dutiable)...	2,883,956	2,557,844	1,021,890	3,325,061
Specie and bullion.....	26,026,439	15,161,455	43,248,991	28,143,737

Total exports..... \$69,951,605 \$51,924,677 \$80,409,628 \$79,610,797

Total, exclusive of specie... 43,925,166 33,763,222 37,160,637 51,467,060

There has been a corresponding decline in the amount of specie exported, that being less by \$15,105,000 than at the same time last year. The prospect is now that the improved demand for breadstuffs, and the lessened import, will cause the specie to reaccumulate in the country.

JOURNAL OF BANKING, CURRENCY, AND FINANCE.

BRITISH SPECIE IMPORTS AND EXPORTS, SIX MONTHS, TO JUNE 30.

	IMPORTS.					
	1859.			1860.		
	Gold.	Silver.	Total.	Gold.	Silver.	Total.
Belgium.....	£3,540	1,734,000	£1,737,540	£1,600	£571,200	£572,800
France.....	671,600	5,277,300	5,948,900	62,300	2,265,800	2,328,100
Hanse Towns....	286,600	728,900	1,015,500	4,540	376,000	380,540
Holland.....	300	479,800	480,100	.....	1,800	1,800
Russia.....	1,413,000	.....	1,413,000	187,000	1,400	188,400
Spain & Portugal.	28,500	74,850	103,350	1,680	129,942	131,622
Gibraltar.....	.....	.....	.....	1,560	8,520	10,080
Malta.....	1,900	.....	1,900	2,400	300	2,700
Constantinople..	505,400	1,600	507,000	2,060	.....	2,060
Alexandria.....	49,100	5,000	54,100	.....	2,600	2,600
Cape Good Hope, Cape Verde, and Sierra Leone..	74,540	2,830	77,370	71,500	1,857	73,357
United States...	5,089,000	358,600	5,447,600	1,980,000	517,000	2,497,000
Mexico, West In- dies, Cent. Ame- rica, etc.....	1,206,300	1,236,900	2,443,200	579,740	1,853,250	2,432,990
Brazils.....	252,780	300	253,080	108,863	.....	108,863
South America...	.....	.....	.....	.....	500	500
Australia.....	4,146,240	.....	4,146,240	3,043,590	.....	3,043,590
New Zealand....	124	.....	124	5,000	.....	5,000
Total.....	13,728,924	9,900,080	23,629,004	6,051,833	5,730,169	11,782,002
	EXPORTS.					
Belgium.....	£302,000	£51,200	£353,200	£67,250	£4,800	£72,050
France.....	10,840,800	803,200	11,644,000	4,135,170	184,800	4,319,970
Hanse Towns...	854,650	630,300	1,484,950	11,075	193,800	204,875
Holland.....	231,500	7,800	239,300	1,540	700	2,240
Spain & Portugal.	70,400	.....	70,400	252,635	700	253,335
Gibraltar.....	.....	.....	.....	9,800	.....	9,800
Malta.....	50,000	.....	50,000	50,000	.....	50,000
Alexandria.....	9,000	.....	9,000	104,586	.....	104,586
Aden.....	100	.....	100	700	.....	700
Mauritius.....	.....	750	750	.....	.....	.....
Ceylon.....	14,340	.....	14,340	4,949	.....	4,949
Bombay.....	50,429	3,446,090	3,496,519	502,953	1,992,595	2,495,548
Madras.....	55,865	139,962	195,827	78,022	84,584	162,606
Calcutta.....	7,000	3,345,656	3,352,656	147,481	1,054,361	1,201,842
Singapore.....	914	113,745	114,659	.....	129,200	129,200
Penang.....	.....	7,800	7,800	.....	14,940	14,940
Manilla.....	22,000	750	22,750	.....	.....	.....
Hong Kong.....	700	722,389	723,089	20,870	970,778	991,648
Shanghai.....	.....	431,692	431,692	.....	869,458	869,458
Foo-chow-foo....	.....	.....	.....	.....	19,194	19,194
Cape Good Hope, Cape Verde, and Sierra Leone..	10,000	.....	10,000	15,265	1,200	16,465
United States...	.....	.....	.....	500	1,580	2,080
Mexico, West In- dies, Cent. Ame- rica, etc.....	30,580	200	37,780	28,540	67,000	95,540
Brazils.....	85,920	177,000	262,920	437,313	71,850	509,163
South America..	.....	.....	.....	3,000	.....	3,000
Total....	12,636,198	9,878,534	22,514,732	5,871,649	5,661,405	11,533,189

The following amounts have been exported from Marseilles and other Mediterranean ports, to India, China, Reunion, Mauritius, &c., between January 1st and June 1st, 1860:—Gold, £126,756; silver, £1,406,941; total, £1,533,697, which is included in the amounts exported to Alexandria, Aden, Mauritius, Ceylon, Bombay, Madras, Calcutta, Singapore, Penang, Manilla, Hong Kong, Shanghai, and Foo-chow-foo.

The aggregate imports and exports for the year to June 30th, were as follows:—

	Imports.			Exports.		
	Gold.	Silver.	Total.	Gold.	Silver.	Total.
6 mos. to Jan. 1.	12,238,956	7,280,388	19,519,344	11,233,044	7,299,078	18,532,122
6 mos. to July 1	6,051,833	5,730,169	11,782,002	5,871,649	5,661,405	11,533,189
Total	18,290,789	13,010,557	31,301,346	17,104,693	12,960,483	30,065,311

ENGLISH CUSTOMS DUTIES.

The following account of the gross product of the customs duties during the past year, contrasted with the three previous years, will possess peculiar interest, as the last of the period before the complete adoption of free trade. Each article is arranged in the order of the amount yielded, sugar being at the head of the list—a place recently occupied by tobacco. Among the principal items which will never appear again—the duties having been entirely abolished—are silk manufactures, which gave £307,561; butter and cheese, which gave £154,243, and tallow, which gave £75,502; while among those upon which reductions will operate to the largest extent are timber, wine, spirits, and fruit:—

	1856.	1857.	1858.	1859.
Sugar	£5,655,626	£4,942,081	£5,786,937	£5,891,192
Tobacco	5,209,626	5,253,431	5,454,214	5,573,463
Tea	5,538,242	5,020,032	5,166,170	5,408,924
Spirits	2,560,556	2,366,494	2,246,481	2,462,112
Wine	2,073,735	1,965,361	1,827,111	1,982,302
Timber	577,580	589,725	576,797	629,868
Fruit	364,386	353,080	494,985	597,170
Corn	488,723	473,383	586,783	532,900
Coffee	586,767	456,805	442,120	431,361
Silk manufactures .....	.....	250,995	270,540	307,561
Refined sugar .....	.....	278,336	235,891	223,273
Molasses .....	.....	150,308	200,418	158,638
Spices	118,230	112,559	127,359	134,916
Butter	124,458	110,593	95,489	104,587
Tallow	69,559	74,776	87,665	75,502
Leather manufactures	66,962	65,231	58,117	73,431
Cheese	49,530	48,200	44,369	49,656
Eggs	19,566	21,169	22,426	24,787
Rice	26,903	28,154	33,036	24,503
Watches	15,426	14,555	15,133	16,267
Cocoa	15,678	11,554	12,796	14,504
Embroidery	12,323	10,669	8,521	9,564
Clocks	8,036	8,224	7,748	8,978
Caoutchouc	12,102	8,952	8,663	7,157
Hops	23,873	32,459	37,320	4,434
Woolen manufactures	4,460	1,986	1,559	3,808
Worsted yarn .....	.....	1,776	2,207	3,148
Other articles	274,625	265,533	289,941	311,060
Total	£24,206,844	£22,956,371	£24,155,852	£25,065,066

BANKS OF THE UNITED STATES, JANUARY, 1860.

By the politeness of JOHN W. FORNEY, Esq., Clerk of the House of Representatives, we have received the following official copy of the annual report of the banks of the United States, nearest to January, 1860:—

STATES.	Banks.	Branches.	Date of returns.	Capital.	Loans and discounts.	Stocks.	Specie.	Circulation.	Deposits.
Maine	68	..	January 2, 1860	\$7,506,890	\$12,654,794	.....	\$670,979	\$4,149,718	\$2,411,022
New Hampshire	52	..	December 5, 1859	5,016,009	8,591,688	.....	255,278	8,271,183	1,187,991
Vermont	46	..	July & Aug., 1859	4,029,240	6,946,523	\$176,400	198,409	3,882,983	787,834
Massachusetts	174	..	October 29, 1859	64,519,200	107,417,323	.....	7,532,647	22,086,920	27,804,699
Rhode Island	91	..	January 2, 1860	20,865,569	26,719,877	.....	214,102	450,920	3,558,295
Connecticut	73	1	May .., 1859	21,512,176	27,856,785	1,267,406	989,920	7,561,519	5,574,900
New York	803	..	December 10, 1859	111,441,320	200,351,332	26,897,874	20,921,545	29,959,506	104,070,273
New Jersey	49	..	January .., 1860	7,884,412	14,909,174	962,911	940,700	4,811,832	5,741,465
Pennsylvania	90	..	November .., 1859	25,565,582	50,327,157	2,513,674	8,378,474	13,132,892	26,167,843
Delaware	9	3	January .., 1860	1,640,775	3,150,215	4,750	208,924	1,135,772	976,226
Maryland	31	..	January 2, 1860	12,568,962	20,898,762	848,233	2,779,418	4,106,869	8,874,180
Virginia	24	41	January 1, 1860	16,005,156	24,975,792	3,584,078	2,943,652	9,812,197	7,729,652
North Carolina	13	17	January 1, 1860	6,626,478	12,213,272	863,828	1,617,687	5,594,047	1,487,273
South Carolina	18	2	December .., 1859	14,962,062	27,801,912	2,994,688	2,324,121	11,475,634	4,165,615
Georgia	25	4	October .., 1859	16,689,560	16,776,282	2,583,158	3,211,974	8,798,100	4,788,289
Florida	2	..	January .., 1860	300,000	464,630	100,025	32,876	183,640	129,518
Alabama	8	..	January .., 1860	4,901,000	13,570,027	524,513	2,747,174	7,477,976	4,851,153
Louisiana	12	1	December 31, 1859	24,496,866	35,401,609	5,842,096	12,115,431	11,579,313	19,777,812
Tennessee	16	18	January .., 1860	3,067,037	11,751,019	1,233,432	2,267,710	5,538,378	4,324,799
Kentucky	11	34	January .., 1860	12,835,670	25,284,869	851,562	4,502,250	13,520,207	5,662,892
Missouri	9	29	January .., 1860	9,082,951	15,461,192	725,670	4,160,912	7,884,885	3,357,176
Illinois	74	..	January .., 1860	5,251,225	387,229	9,826,691	223,812	8,981,723	697,037
Indiana	17	20	Nov. '59, to Jan. '60	4,343,210	7,675,861	1,349,466	1,583,140	5,390,246	1,700,479
Ohio	52	..	February 6, 1860	6,890,839	11,100,462	2,153,552	1,828,640	7,983,889	4,039,614
Michigan	4	..	December .., 1859	755,465	892,949	192,831	24,175	222,197	375,397
Wisconsin	108	..	January 2, 1860	7,620,000	7,592,361	5,031,504	419,947	4,429,855	3,085,818
Iowa	12	..	December 5, 1859	460,450	724,228	101,849	255,545	563,806	527,378
Kansas Territory	1	..	January 1, 1860	52,000	48,256	.....	8,268	8,895	2,695
Total, January, 1860	1,392	170	.....	\$421,880,095	\$691,945,550	\$70,344,343	\$83,594,537	\$207,102,477	\$253,802,129
" " 1859	1,329	147	.....	401,976,242	657,183,799	.....	104,537,818	193,306,818	259,563,278
" " 1858	1,284	138	.....	294,622,799	683,165,242	.....	74,412,832	155,218,314	185,932,049
" " 1857	1,283	133	.....	370,384,636	684,456,887	.....	58,349,838	214,778,872	230,351,352

CITY WEEKLY BANK RETURNS.

NEW YORK BANK RETURNS.—(CAPITAL, JAN., 1860, \$69,333,632; 1859, \$68,050,755.)

	Loans.	Specie.	Circulation.	Deposits.	Average clearings.	Actual deposits.
Jan. 7	124,597,663	17,863,734	8,539,063	97,493,709	22,684,854	74,808,855
14	123,582,414	18,740,866	8,090,548	99,247,743	23,363,980	75,883,763
21	123,845,931	19,233,494	7,880,865	99,644,128	22,813,547	76,830,581
28	123,088,626	20,063,739	7,760,761	98,520,793	21,640,967	76,879,826
Feb. 4	124,091,982	19,924,301	8,174,450	99,476,430	21,898,736	77,577,694
11	123,336,629	19,787,567	8,185,109	98,146,463	21,674,908	76,471,055
18	124,206,031	20,591,189	8,050,001	100,387,051	22,061,811	78,325,240
25	124,398,239	20,778,896	7,928,595	100,622,481	22,151,504	78,470,977
Mar. 3	125,012,700	23,086,812	8,165,026	103,663,462	22,787,290	80,876,172
10	127,301,778	21,861,180	8,419,633	104,813,906	23,791,953	81,021,948
17	127,562,848	23,171,833	8,380,999	108,560,981	25,562,858	82,998,123
24	127,613,507	23,286,204	8,335,266	107,505,395	25,397,976	82,107,419
31	128,388,223	23,420,759	8,444,327	106,311,554	22,839,523	83,422,031
Apr. 7	130,606,731	22,599,132	8,929,228	109,193,464	25,656,629	83,536,335
14	129,919,015	23,626,982	8,775,297	109,153,863	24,256,270	84,897,593
21	128,448,868	23,233,314	8,790,459	108,145,233	25,758,735	82,386,498
28	127,085,667	23,279,809	8,749,048	103,206,723	21,391,290	81,815,433
May 5	127,479,520	23,815,746	9,391,861	108,505,388	26,546,063	81,459,325
12	126,184,532	22,780,387	9,153,811	108,038,848	27,802,174	80,236,674
19	124,938,389	23,735,193	9,035,522	106,229,724	25,339,444	80,890,280
26	125,110,700	23,431,773	8,826,473	104,433,136	24,309,496	80,123,640
June 2	124,792,271	24,535,457	8,774,063	104,268,785	22,888,107	81,380,678
9	125,431,963	23,783,581	8,999,948	103,386,091	22,776,108	80,609,933
16	125,399,997	24,110,553	8,828,786	104,031,268	22,492,614	81,538,654
23	125,886,565	23,350,921	8,779,115	102,737,055	22,116,242	80,620,813
30	127,208,201	22,434,250	8,745,182	102,496,762	21,309,053	81,187,709
July 7	127,244,241	22,751,694	9,343,727	103,450,426	22,119,106	81,331,320
14	127,123,166	23,641,357	8,075,528	106,899,678	23,456,447	82,913,231
21	128,427,489	23,443,644	8,833,619	107,717,216	23,457,781	84,259,435
28	129,074,298	23,099,726	8,760,252	105,524,100	21,239,450	84,234,650
Aug. 4	130,118,247	22,128,189	9,176,386	107,264,777	23,417,789	83,846,988
11	129,855,179	21,579,740	9,129,835	105,505,399	22,626,292	82,879,107
18	129,950,346	21,008,701	9,088,648	105,690,481	22,934,365	82,756,116

BOSTON BANKS.—(CAPITAL, JAN., 1859, \$35,125,433; 1860, \$36,581,700.)

	Loans.	Specie.	Circulation.	Deposits.	Due to banks.	Due from banks.
Jan. 2	59,807,566	4,674,271	6,479,483	18,449,305	7,545,222	6,848,374
16	60,068,941	4,478,841	6,770,624	17,753,002	7,867,400	6,735,283
30	59,917,170	4,182,114	6,486,139	17,378,070	7,784,169	6,516,532
23	59,491,387	4,172,325	6,199,485	17,483,054	7,383,370	6,517,541
Feb. 6	50,705,422	4,249,594	6,307,922	17,900,002	7,259,703	6,656,460
13	59,993,784	4,462,698	6,364,320	17,271,596	7,426,539	6,593,702
20	60,115,836	4,577,334	6,305,537	17,597,881	7,430,060	6,549,382
27	59,927,917	4,714,034	6,411,573	18,020,239	7,700,590	7,480,954
March 5	59,993,784	5,034,787	6,396,656	18,645,621	7,736,290	7,768,074
12	59,885,196	5,323,610	6,430,643	18,393,293	7,715,663	7,390,935
19	60,258,208	5,446,840	6,405,084	18,660,205	.....	.....
26	60,180,209	5,627,961	6,328,273	18,742,817	8,351,016	7,804,222
Apr. 2	60,050,953	6,045,703	6,340,268	19,262,894	8,473,775	8,080,218
9	60,668,559	6,320,551	7,753,491	20,469,893	9,206,161	9,788,121
16	61,189,629	6,289,719	7,267,165	20,291,620	9,160,868	8,314,312
23	61,035,965	6,315,952	7,152,766	20,266,917	9,055,077	8,138,121
30	61,239,552	6,317,949	6,992,903	20,195,951	9,273,558	7,948,086
May 7	61,614,199	6,311,714	7,322,813	20,810,086	9,116,514	8,324,391
14	61,744,290	6,263,535	7,076,071	20,753,862	9,210,132	8,209,699
21	61,724,621	6,268,919	7,081,306	20,726,996	9,197,894	8,241,899
28	61,258,986	6,201,113	6,660,595	20,320,518	9,057,822	8,272,557
June 4	61,585,669	6,192,455	6,800,711	20,656,295	9,172,878	8,366,511

	Loans.	Specie.	Circulation.	Deposits.	Due to banks.	Due from banks.
11 ..	62,346,519	6,300,700	7,090,282	20,228,677	9,629,483	7,857,439
18 ..	63,085,953	6,322,698	7,165,453	20,677,536	9,988,840	7,991,098
25 ..	63,557,155	6,262,930	7,188,326	20,750,673	10,307,194	8,188,802
July 2 ..	64,172,028	6,059,370	6,925,022	20,828,714	10,300,178	7,527,888
9 ..	65,039,459	6,087,718	7,932,653	21,133,175	11,304,893	9,105,876
16 ..	65,153,413	5,685,920	7,560,636	20,312,421	11,098,306	7,995,222
23 ..	64,852,961	5,335,523	7,523,745	19,751,313	11,093,127	8,158,425
30 ..	64,460,289	5,212,470	6,848,834	19,296,454	10,353,708	6,961,414

PHILADELPHIA BANKS.—(CAPITAL, JAN., 1860, \$11,687,435.)

Date.	Loans.	Specie.	Circulation.	Deposits.	Due banks.
Jan. 2....	25,386,387	4,450,261	2,856,601	14,982,919	2,619,192
9....	25,248,051	4,453,252	2,675,623	14,161,437	2,596,212
16....	25,275,219	4,561,998	2,672,730	14,934,517	2,563,449
23....	25,445,737	4,514,579	2,644,191	15,064,970	2,601,271
30....	25,526,198	4,535,321	2,601,750	15,401,915	2,619,573
Feb. 6....	25,493,975	4,669,929	2,656,310	15,409,241	2,574,015
13....	25,493,975	4,669,929	2,656,310	15,409,241	2,574,015
20....	25,458,354	4,581,356	2,663,695	14,864,302	2,782,306
27....	25,553,918	4,706,108	2,653,192	14,690,092	3,115,010
Mar. 5....	25,742,447	4,816,052	2,697,108	15,192,971	3,133,312
12....	25,742,447	4,816,052	2,697,108	15,192,971	3,133,312
19....	25,832,077	4,873,419	2,733,345	15,205,432	3,209,553
26....	26,043,772	4,992,542	2,784,773	15,693,622	3,198,530
April 2....	26,405,229	5,060,274	2,858,812	15,553,269	3,652,757
9....	27,214,254	5,209,576	3,528,762	15,528,762	4,085,695
16....	27,444,580	5,415,711	3,252,186	16,012,140	4,164,678
23....	27,545,351	5,464,280	3,154,285	16,613,616	3,985,110
30....	27,571,002	5,453,470	3,037,846	16,529,891	3,902,514
May 7....	27,590,212	5,477,019	2,968,444	16,763,609	3,731,987
14....	27,463,831	5,537,360	2,944,245	16,489,872	4,269,845
21....	27,401,926	5,367,416	2,870,617	16,422,835	4,085,882
28....	27,283,932	4,886,579	2,818,719	15,884,903	3,974,369
June 4....	27,171,002	4,582,610	2,824,471	15,620,293	3,744,431
11....	27,046,016	4,183,667	2,810,552	15,698,909	3,128,287
18....	26,882,709	4,222,644	2,725,269	15,642,639	3,109,639
25....	26,780,533	4,329,638	2,654,503	15,643,433	3,060,615
July 2....	26,835,868	4,305,866	2,960,381	15,824,391	3,159,819
9....	26,835,868	4,305,866	2,960,381	15,824,391	3,159,819
16....	26,878,435	4,403,157	2,859,852	15,796,205	3,313,195
23....	26,842,743	4,553,641	2,821,082	15,966,734	3,099,567
30....	26,851,776	4,249,304	2,785,718	16,085,967	3,211,855

NEW ORLEANS BANKS.—(CAPITAL, JAN., 1860, \$18,917,600.)

	Short loans.	Specie.	Circulation.	Deposits.	Exchange.	Distant balances.
Jan. 7 ..	25,022,456	12,234,448	12,038,494	18,563,804	7,323,530	1,557,174
14 ..	24,928,909	12,336,735	12,417,847	18,673,233	7,410,360	1,387,704
21 ..	24,699,024	12,821,411	12,809,512	18,664,355	7,423,629	1,377,796
28 ..	24,916,431	12,818,159	12,882,184	19,677,121	8,144,681	1,603,763
Feb. 4 ..	25,145,274	12,750,642	13,215,494	19,565,305	8,003,380	1,613,036
11 ..	25,197,351	12,741,881	13,343,924	19,244,847	7,349,365	1,396,150
18 ..	25,005,952	12,894,521	13,458,989	19,903,519	7,886,609	1,470,787
25 ..	24,397,286	12,945,204	13,600,419	19,218,590	8,083,929	1,635,526
Mar. 3 ..	24,946,210	12,952,002	13,860,399	20,116,272	8,027,049	1,092,475
10 ..	24,088,800	13,039,092	13,726,554	19,711,423	8,582,012	1,601,149
17 ..	24,054,845	12,729,356	13,797,154	19,304,618	8,498,790	1,718,310
24 ..	23,832,766	12,610,790	13,835,755	19,102,068	8,342,599	1,738,246
31 ..	23,674,714	12,437,195	13,975,624	18,681,020	8,149,061	1,610,499
Apr. 7 ..	23,107,740	12,368,071	14,100,890	18,070,209	8,560,117	1,942,056
14 ..	22,422,203	12,290,539	13,638,089	17,849,018	8,179,441	1,608,463
21 ..	22,380,033	12,100,687	12,999,204	18,380,033	7,649,069	1,649,060
28 ..	21,437,974	11,910,361	12,783,749	17,699,538	7,686,634	1,877,017

	Short loans.	Specie.	Circulation.	Deposits.	Exchange.	Distant balances.
May 5 ..	21,437,974	11,910,361	12,783,749	17,699,538	7,686,634	1,877,017
12 ..	20,545,529	11,672,364	12,258,444	17,442,974	7,213,833	1,763,871
19 ..	19,385,119	11,706,007	12,163,609	17,260,226	6,909,386	1,680,480
26 ..	18,588,492	11,593,719	11,900,864	17,938,774	6,599,676	1,596,210
June 2 ..	18,282,807	11,191,024	11,791,799	16,985,565	6,173,783	1,459,051
9 ..	17,423,118	11,072,236	11,572,259	16,989,587	5,958,996	1,442,041
16 ..	16,864,692	10,693,389	11,389,389	16,105,586	5,538,830	1,665,076
23 ..	16,821,969	10,223,276	11,138,434	15,319,947	5,067,682	1,739,481
July 7 ..	16,627,125	9,883,812	10,921,057	14,671,491	4,548,395	1,601,540
14 ..	16,795,836	9,693,954	10,695,884	14,557,417	4,123,242	1,401,804
21 ..	16,945,426	9,544,793	10,310,824	14,326,547	3,706,020	1,512,608
28 ..	17,802,024	9,607,448	10,071,383	14,358,384	3,219,947	1,163,961

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

	Loans.	Specie.	Circulation.	Deposits.	Due banks.
Jan. 16	7,202,367	980,530	2,080,548	1,527,548	304,562
23	7,060,471	1,022,273	2,012,478	1,545,103	255,076
30	6,989,320	1,003,037	1,896,363	1,555,686	265,804
Feb. 6	6,984,209	997,589	1,907,323	1,609,692	230,426
13	6,939,052	951,638	1,833,093	1,602,311	191,222
20	6,957,621	988,306	1,868,598	1,643,703	175,051
27	7,022,230	991,377	1,821,283	1,760,957	224,434
Mar. 5	7,101,459	1,018,255	1,871,873	1,768,879	273,343
12	7,035,624	999,093	1,901,543	1,651,216	197,007
19	7,066,774	1,004,750	1,945,328	1,636,887	198,556
26	7,038,891	981,560	1,980,732	1,572,130	192,411
Apr. 2	7,166,377	1,005,415	2,085,583	1,601,167	191,101
9	7,206,737	990,962	2,072,373	1,693,230	171,100
16	7,159,568	1,018,445	2,071,878	1,651,362	187,255
23	7,278,279	1,156,278	2,024,138	1,897,498	240,143
30	7,234,761	1,141,373	1,995,053	1,913,537	175,671
May 5	7,234,761	1,141,373	1,995,053	1,913,537	175,671
14	7,263,197	1,088,851	2,011,258	1,890,810	215,765
19	7,196,493	1,133,719	2,022,988	1,906,773	213,944
27	7,190,192	1,122,057	1,952,683	1,918,321	206,316
June 4	7,282,963	1,089,751	1,907,248	1,919,903	277,978
11	7,214,889	1,126,308	1,919,688	1,892,800	240,728
18	7,247,541	1,102,446	2,029,558	1,743,915	271,062
25	7,291,888	1,150,248	2,048,358	1,779,752	315,853
July 14	7,310,663	1,068,974	2,071,443	1,818,515	239,832
21	7,294,391	1,083,220	2,073,593	1,846,879	205,011

ST. LOUIS BANKS.

	Exchange.	Circulation.	Specie.
Jan. 7	4,373,543	538,555	662,755
14	4,467,513	520,305	642,497
21	4,352,699	502,175	580,754
28	4,290,563	495,380	563,335
Feb. 4	4,149,236	457,095	590,502
11	4,048,593	424,605	625,043
18	3,906,896	391,605	639,450
25	3,951,433	399,085	630,877
March 3	3,891,263	395,905	689,301
10	3,998,827	377,935	651,302
17	3,963,924	377,355	641,252
24	3,880,915	356,245	664,179
31	3,790,291	340,095	685,984
April 7	3,862,454	344,630	657,321
14	3,868,345	325,950	676,858
21	3,852,614	314,360	601,014
28	3,694,877	303,750	673,234
May 5	3,609,648	301,300	746,176

	Exchange.	Circulation.	Specie.
12.....	3,683,644	294,115	808,918
19.....	3,695,707	285,140	826,793
26.....	3,767,986	273,540	671,669
June 2.....	3,879,617	255,210	627,942
9.....	3,823,735	253,780	656,358
16.....	3,888,763	244,850	682,917
23.....	3,967,032	235,935	705,764
30.....	3,825,423	206,749	804,983
July 7.....	3,736,695	199,385	791,729
14.....	3,392,096	152,025	684,358
21.....	3,679,192	191,375	752,397
28.....	3,625,333	177,620	658,852

PROVIDENCE BANKS.—(CAPITAL, \$14,903,000.)

	Loans.	Specie.	Circulation.	Deposits.	Due banks
Jan. 2.....	19,144,354	315,917	2,011,336	2,635,486	938,508
Feb. 6.....	19,144,846	326,297	1,958,540	2,566,168	921,779
Mar. 3.....	19,009,255	342,965	1,917,593	2,598,169	970,971
Apr. 1.....	18,686,210	343,992	1,952,022	2,640,170	1,040,260
May 7.....	18,893,658	448,413	2,045,590	2,773,248	1,356,071
June 4.....	18,891,907	422,726	1,938,254	2,844,012	1,210,104
July 2.....	19,243,061	430,128	2,153,904	2,790,587	1,115,951
Aug. 6.....	19,530,296	397,286	2,218,347	2,748,678	1,169,800

NEW YORK CITY BANKS, QUARTERLY STATEMENT, JUNE 25, 1860.

The following is the quarterly statement of the condition of the New York city banks, on the morning of Saturday, the 25th June, compared with the statement for June, 1858 and 1859:—

LIABILITIES.

	1858, June 19.	1859, June 19.	1860, June 25.	Inc. on 1859.
Capital.....	\$67,041,182	\$68,645,014	\$69,758,777	\$1,113,763
Net profit.....	7,531,640	7,555,451	8,055,245	499,794
Circulation.....	7,080,996	8,128,072	8,723,385	595,313
Due other banks.....	28,275,873	23,744,605	26,394,167	2,649,562
Net deposits.....	74,806,752	72,713,844	79,988,683	7,274,789
Due all others.....	430,561	571,902	977,431	405,529
Total.....	\$185,166,404	\$181,358,888	\$193,897,688	\$12,538,750

RESOURCES.

Loans.....	\$118,299,388	\$118,543,934	\$125,139,040	\$6,595,106
Stocks.....	8,922,278	12,210,779	12,601,564	390,785
Bonds and mortgages....	440,335	503,312	633,268	129,956
Real estate.....	5,815,368	6,055,947	6,314,469	258,522
Due from banks.....	5,338,023	6,213,431	7,013,735	800,304
Cash items.....	14,594,592	17,099,736	19,070,961	1,971,225
Specie.....	31,704,814	20,682,304	23,054,639	2,372,335
Overdrafts.....	51,606,000	49,445	69,962	20,517
Total.....	\$185,166,404	\$181,358,888	\$193,897,638	\$12,538,750

NEW YORK CITY BANKS.

The following table shows the capital of each bank, June 30, 1860; profits according to their quarterly reports of June 30, 1860; the ratio of specie to deposits for the week ending July 21; the semi-annual dividends of the year 1859; the percentage of net profits to capital, June 30, 1860, and prices offered and asked for their shares, and the latest sales at the Stock Board:—

BANKS.	Capital.	Net Profits to profits.	Ratio of capital.	Div'nds, 1859,			Prices of shares.		
				Specie, July 21.	p. c.	p. c.	Offered.	Asked.	Sales.
Bank of New York	\$3,000,000	\$175,939	\$5 86	25.8	3½	3	102	102½	103
Manhattan Comp'y.	2,050,000	584,165	28 59	29	5	5	140	143	140½
Merchants'.....	2,766,012	124,108	4 49	31.1	3½	3½	106	107	107½
Mechanics'.....	2,000,000	314,067	15 70	24.9	4	4	116	118	107
Union.....	1,500,000	79,738	5 32	27.3	3½	3½	102½	103½	103
Bank of America..	3,000,000	371,195	12 37	32.8	3½	3½	111	112	...
Phenix.....	1,800,000	222,671	12 37	25.3	4	4	107	107½	107
City.....	1,000,000	167,652	16 77	20	4	4	123	125	...
Tradesmen's... ..	1,000,000	91,802	9 18	26	4	4	109	112	112
Fulton.....	600,000	211,710	35 29	22	5	5	140	145	...
Chemical.....	300,000	658,216	219.40	38.7	6	6	400	...	...
Merchants' Exch'ge.	1,235,000	126,259	10 22	25.3	3½	3½	97	98	97
National.....	1,500,000	78,209	5 21	16.2	3½	3	105	106	105½
Butchers & Drovers'	800,000	121,630	15 20	35.6	5	5	120	125	..
Mech'ics & Traders'.	600,000	44,860	7 48	21.7	3½	3½	108	110	109½
Greenwich.....	200,000	44,153	22 02	13.8	6	6	150	...	...
Leather Manufac'rs'	600,000	242,595	40 43	28.3	5	5	140	145	...
Seventh Ward. ...	500,000	140,813	28 16	29	5	5	130	135	...
State of New York	2,000,000	153,891	7 84	36.2	3½	3½	99½	100	101
American Exch'ng'e	5,000,000	179,659	3 59	28.9	3½	3½	100½	101	101
Bank of Commerce	9,085,840	498,752	5 49	38.2	3½	3½	100	100½	99½
Broadway.....	1,000,000	443,118	44 31	29.8	5	5	137	140	...
Ocean.....	1,000,000	71,550	7 15	25.7	3½	3½	98	99	99½
Mercantile.....	1,000,000	146,412	14 64	26	5	5	120	125	...
Pacific.....	422,700	89,453	21 16	19.2	5	5	120	125	120
Bank of Republic..	2,000,000	399,291	19 96	34.1	5	5	129	130	130
Chatham.....	450,000	17,872	3 97	22.6	.	.	98	99½	...
People's.....	412,500	41,489	10 00	33	3½	3½	100	102	...
Bank of N. America	1,000,000	143,600	14 36	31.1	3½	3½	106	108	...
Hanover.....	1,000,000	90,943	9 09	22.1	.	.	94	96	94½
Irving.....	500,000	35,832	7 16	25.3	3½	3½	...	96	...
Metropolitan.....	4,000,000	552,559	13 81	23.2	4	4	110½	111	111½
Citizens'.....	400,000	50,611	12 65	24.5	4	4	102	105	...
Nassau.....	1,000,000	45,415	4 54	21.8	3	3½	101	102	102
Market.....	1,000,000	91,151	9 12	25	4	4	100	102	...
St. Nicholas.....	750,000	24,142	3 22	21	3½	3½	90	94	93
Shoe & Leather...	1,500,000	180,487	12 03	25.4	4	4	107	109	108
Corn Exchange ...	1,000,000	96,050	9 60	30.3	3½	3½	101½	102½	102
Continental.....	2,000,000	124,532	6 23	19.8	3½	3½	100	101	...
Commonwealth....	750,000	54,674	7 29	22.5	3½	3½	96½	97	97
Oriental.....	300,000	29,239	9 74	25.5	3½	3½	...	100	...
Marine.....	664,200	17,312	2 61	23.4	3½	3	85	87	85
Atlantic.....	400,000	17,074	4 27	31.7	3½	3½	65	70	68
Import'rs & Trad'rs'	1,500,000	189,422	12 63	20.6	3½	4	110	112	...
Park.....	2,000,000	219,863	10 99	27.6	4	4	110	112	...
Artisans'.....	600,000	34,869	5 81	31.9	3½	3½	96	98	99½
Mech. Bank. Ass'n	500,000	41,820	8 36	26.4	3½	3½	102½	103	...
Grocers'.....	300,000	41,760	13 92	26.4	3½	3½	94	96	...
North River.....	316,000	14,539	4 60	24.5	.	.	93	96	95
East River.....	206,525	25,740	12 46	21.9	3½	3½	95	97	...
N. Y. Dry Dock...	200,000	9,330	4 68	*27	4	4	110	114	...
N. Y. Exchange...	150,000	18,413	12 27	*7.1	4	4	...	103	...
Bull's Head.....	200,000	22,788	11 40	*11.8	4	4	100	105	...
New York County.	200,000	22,141	11 07	*9.3	4	4	104	...	...
Manuf. & Merchants'	500,000	14,570	2 91	*20.3	.	.	...	...	...

Total, June 30, '60. 69,758,777 8,055,235
 Total, Mar. 31, '60. 69,420,057

* On gross deposits.

VALUATION AND TAXATION IN CINCINNATI.

The Cincinnati *Gazette* of a recent date has the following statement in reference to the valuation of property and tax levy in Cincinnati and Hamilton :—

We give first the taxable basis or grand levy of the city, applicable as an estimate for the year 1860, for the official action of the council, and the revenue derived therefrom :—

VALUATION OF THE CITY.

Value of lots with improvements in seventeen wards.....	\$61,428,917
Value of personal property in the same.....	26,483,458
Value of personal property in railroads, insurance companies, and other corporations, with additions by Board of Equalization.....	4,049,602
Total.....	\$91,861,978

TAX LEVY.

For State purposes, in the city	\$363,249 81
For county purposes, in the city.....	252,895 44
For city purposes on general levy, in city.....	\$1,000,086 51
For city purposes, special levy, water tax.....	50,000 00
	<hr/>
	1,059,000 00

Total amount levied in city..... \$1,666,145 25

The last item mentioned in the above is the special levy on each lineal foot of the frontage on the lines of water pipe, as provided for by the act of 1856.

We give next the taxable basis or grand levy of the county, applicable as an estimate for the year 1860, for the official action of the three County Commissioners, and the distribution for general county expenses :—

VALUATION OF THE COUNTY.

Value of lands.....	\$17,049,369 00
Value of lots.....	64,970,382 00
Value of personal property.....	33,415,039 00
Total.....	\$115,434,790 00
Taxable value of county other than city	25,654,165 00
Taxable value city	87,780,625 00

DISTRIBUTION—FOR GENERAL COUNTY PURPOSES.

3 mills on the dollar, on \$2,000,000 taxable value, produce.....	\$6,000 00
2 mills on the dollar, on \$4,000,000 taxable value, produce.....	8,000 00
1.50 mills on the dollar, on \$6,000,000 taxable value, produce.....	9,000 00
1.25 mills on the dollar, on \$40,000,000 taxable value, produce....	50,000 00
1 mill on the dollar, on \$83,434,796 taxable value, produce.....	63,434 79

Taxable basis \$115,434,790, producing..... \$136,434 79

There is an additional levy of 1.1819 of one mill for public buildings or payment of debts.

TAXABLE VALUATION OF MISSISSIPPI.

The Auditor's report of the State of Mississippi gives the following statement of the taxable value for 1859 :—

Land....acres 20,085,173	\$139,887,168	Slaves and cattle sold.....	\$288,794
Money at interest	8,573,445	Carriages.....No. 13,600	2,123,608
Stocks.....	550,125	Watches....	15,732
Merchandise brought into the State.....	12,355,646	Clocks.....	17,349
Merchandise sold at auction	44,424		162,987
Liquors sold at auction ...	202,161	Total.....	\$165,146,910

FAILURES IN LONDON IN 1858-59.

The pressure of the Italian War for an idea, produced the following financial results in London :—

LIST OF FAILURES IN LONDON, ETC., FROM NOVEMBER 1, 1858, TO OCTOBER 31, 1859.

NOVEMBER, 1858.
 Plowes, Son & Co., Rio Janeiro, merchants.
 W. J. Grey & Son, Newcastle, coalfitters.
 Cowan & Bigg, London and Newcastle, ship and insurance brokers.
 Pickworth & Walker, Sheffield, builders.
 James Hyde & Co., Honduras, merchants.
 James Davies & Son, London, boot and shoe manufacturers.

DECEMBER.
 Hicks & Gadsden, London, American merchants.
 Metcalf & Co., West Ham, distillers.
 Forchelmier & Co., Prague, worsted spinners.
 M. P. Poppe, Antwerp, oil and seed merchant.

JANUARY, 1859.
 M. Demetriadi, Manchester, Greek trade.
 John Symons & Co., Manchester, commission agents.
 Bryant & Davies, London, commis'n merchants.
 Prior, Turner & Co., London, Naples, and Palermo, Neapolitan trade.

FEBRUARY.
 Bodin, Lichtenstein & Co., Marseilles, merchants.

MARCH.
 Gutteman, Brothers & Co., Genoa, merchants.

APRIL.
 Aquarone, Fils, Porro & Co., Marseilles, merch'ts.

MAY.
 Wolf & Co., Berlin, bankers.
 Lloyd, Beilby & Co., London, Australian trade.
 Arnstein & Eskeles, Vienna, bankers.

Lutteroth & Co., Trieste, merchants.
 Cresswell & Sons, Birmingham, ironmasters.
 A. Sevastopulo & Sons, London, Mediteranean trade.
 Frommel & Co., Augsburg, bankers.
 The Bank of Thuringia.

JUNE.
 Stevens Brothers, Liverpool, East India agents and merchants.
 Robert Brandt & Co., London, merchants.

JULY.
 Caluta Brothers, London, Greek trade.
 Carter & Martin, Belfast, flax trade.
 James Kennedy & Son, Belfast, flax trade.
 Hull Brothers, Belfast, flax trade.
 McConnell & Kennedy, Belfast, flax trade.

AUGUST.
 A. di Demetrio & Sons, London, Greek merch'ts.
 E. & A. Prior, London, coal merchants.

SEPTEMBER.
 Mazurra & Co., Havana, Spanish trade.
 W. H. Duncker, Hamburg, general merchant.
 J. B. Kempe, St. Petersburg, tallow trade.
 Kovrigni & Co., St. Petersburg, tallow trade.
 C. C. Ingate & Son, London, Mediterranean trade.

OCTOBER.
 J. & W. Pattison, Melbourne, contractors and general dealers.
 Fairfax & Co., Svyden, merchants.
 Alexeieff & Co., Moscow, general merchants.
 M. Gutschkoff, Moscow, manufacturer.

STATISTICS OF POVERTY.

The New York News, speaking of pawnbroking establishments, says :—

We learn that there are fifty-eight licensed pawnbrokers in the city. There are, beside, numerous places where a similar business is done by persons under the description of loan offices. It is somewhat counter to our usual notions on this subject that, when times are flush, the pawnbrokers do the most business, turning their capital over frequently, while in hard times, when employment is difficult, the pledge remains long, or perhaps is left unredeemed.

The following is the result of the business of the pawnbrokers on the eastern side of the city :—

No.	Amount.	No. pledges.	No.	Amount.	No. pledges.
1.....	\$250,000	46,000	17.....	\$5,200	12,500
2.....	75,000	75,000	18.....	10,000	23,500
3.....	30,000	40,000	19.....	15,000	22,500
4.....	40,000	60,000	20.....	5,000	10,000
5.....	12,000	26,000	21.....	23,400	30,403
6.....	9,300	27,000	22.....	39,000	32,519
7.....	75,000	110,000	23.....	18,500	40,000
8.....	35,000	55,000	24.....	10,000	25,000
9.....	41,400	70,000	25.....	20,000	30,000
10.....	11,500	11,500	26.....	10,000	40,000
11.....	250,000	90,000	27.....	12,500	20,000
13.....	130,000	70,000	28.....	30,000	40,000
14.....	36,700	624,000			
15.....	25,000	44,000			
16.....	15,000	23,000			
			Total.....	\$1,237,000	1,754,222

On the west side it is assumed that there is about an equal amount of business,

raising the number of pledges to 3,250,000, and the amount loaned to over \$2,000,000. One singular fact is mentioned, that on the average not more than from 10 to 15 per cent of the pledges remained unredeemed, showing that the pawnbroker exerts an influence that is rather conducive to the comfort of the poor than to their ruin. The articles they receive form a fund to provide against an emergency somewhat like the deposit in a savings bank, and the hope of regaining them unquestionably acts as powerful stimulus to exertion.

DEBT OF RUSSIA.

The following shows the consolidated debt of Russia at this time:—

Foreign debt.....	silver roubles	367,000,000	or	£57,943,000
Internal debt.....		152,000,000	or	23,750,000

Total consolidated debt..... 519,000,000 or £81,093,000

FLOATING DEBT.

Treasury bills falling due at fixed dates..	sil. roub.	102,000,000	or	£15,937,000
Bills of the government credit establishments payable on presentation.....		1,013,000,000	or	158,281,000
Paper money.....		735,000,000	or	114,843,000

Total floating debt..... 1,850,000,000 or 289,061,000
Grand total..... 2,369,000,000 or 370,154,000

The above sum does not include the last loan of £12,000,000, contracted by MESSRS. THOMSON, BONAR & Co., in 1859.

BANK PROFITS.

An examination of the quarterly returns of the banks of this city, shows that the profits of one are 219 per cent above par, two above forty per cent, and one above thirty-five per cent. Of the whole the following is the general result as to the fifty-five banks, on the 30th June, 1860:—

Above		Above		Above	
219 per cent.....	1	15 per cent.....	2	7 per cent.....	5
40 ".....	2	14 ".....	2	6 ".....	1
35 ".....	1	13 ".....	2	5 ".....	5
28 ".....	2	12 ".....	7	4 ".....	5
22 ".....	1	11 ".....	2	3 ".....	3
21 ".....	1	10 ".....	3	2 ".....	2
19 ".....	1	9 ".....	5		
16 ".....	1	8 ".....	1		

The average exceed eleven-and-a-half per cent, or \$8,055,000 net profits against a capital of \$69,758,000.

JULY DIVIDENDS.

We publish, says the *Charleston Mercury*, the following statement of July dividends payable in Charleston, which, in accordance with our well-established custom, we have obtained from reliable sources:—

South Carolina Railroad Company, 3½ per cent.....	\$203,683
Bank of Charleston, 3¼ per cent.....	110,628
People's Bank, 5 per cent.....	50,000
Charleston Insurance and Trust Company, \$5 per share.....	50,000
Charleston Gas Light Company, \$1 25 per share.....	38,286
State Bank, 87½ cents per share.....	35,000
Union Bank, \$1 75 per share.....	35,000
Planters' and Mechanics' Bank, 87½ cents per share.....	35,000
Bank of South Carolina, \$1 50 per share.....	33,333
Southwestern Railroad Bank, 75 cents per share.....	26,174
South Carolina Insurance Company, \$2 50 per share.....	25,000

Total..... \$642,104

STATISTICS OF TRADE AND COMMERCE.

WOOL TRADE.

The following from Messrs. BOND & Co.'s wool circular, of Boston, shows the imports of wool into Boston for the first half of the years—

	1855.	1856.	1857.	1858.	1859.	1860.
England.....	122,245	37,517	27,346	134,752	1,647,852	312,812
Buenos Ayres..	440,553	1,366,748	789,614	1,000,814	2,797,241	2,073,123
France.....	9,767	33,691	343,997	19,180	835,905	329,757
Turkey.....	1,332,537	1,390,430	1,812,187	1,272,671	1,740,344	990,909
Cape G. Hope.	117,683	183,427	371,864	799,310	1,952,457	3,197,937
Malta.....	.....	76,500	191,660	.....	.....	97,009
Chili and Peru.	1,526,568	1,647,082	1,756,961	2,523,459	2,199,190	1,504,145
Russia.....	.....	.....	291,054	.....	12,959	.....
East Indies ...	.....	.....	.....	64,213	258,062	231,599
Sundries.....	3,660	.....	2,810	68,405	78,592	123,595
Total.....	3,553,018	4,735,395	5,592,493	5,882,804	11,620,461	8,767,977

CLASSIFIED TABLE OF WOOLS IMPORTED INTO BOSTON FOR THE THREE YEARS PRECEDING AND THE THREE YEARS SUCCEEDING THE TARIFF OF 1857.

	Carpet.	Common.	Fine.		Carpet.	Common.	Fine.
1854..	9,149,000	2,635,000	1,609,000	1857..	9,231,000	4,443,000	4,217,000
1855..	5,775,000	1,207,000	264,000	1858..	6,291,000	1,369,000	2,390,000
1856..	6,656,000	835,000	931,000	1859..	7,724,000	3,597,000	6,856,000
Total.	21,580,000	4,677,000	2,804,000	Total.	23,296,000	9,409,000	13,963,000

VALUE OF OHIO FLEECE WOOL IN OCTOBER OF EACH YEAR FROM 1840 TO 1859.

	Fine. Medium. Coarse.				Fine. Medium. Coarse.		
1840.....	45	36	31	1850.....	47	42	36
1841.....	50	45	40	1851.....	41	38	32
1842.....	price all round 32½ a 35			1852.....	49	45	40
1843.....	41	35	30	1853.....	55	50	43
1844.....	42	37	32½	1854.....	41	36	32½
1845.....	36½	30	26	1855.....	50	42	34
1846.....	34	30	26½	1856.....	55	47	37
1847.....	33½	29	25	1857.....	56	49	41
1848.....	32	38	34	1858.....	53	46	36
1849.....	41	37	32	1859.....	58	49	35

For 1857 we give the price in August, there having been no sales in October.

This shows a falling off this year from last of about 3,000,000 lbs. First, in common clothing wools from France and England, these having advanced in Europe while they have barely held their own here. Secondly in coarse carpet wools from Buenos Ayres, Chili, and Turkey. On the other hand, the importation of fine wools from the Cape of Good Hope has increased over fifty per cent. Another table shows the actual prices obtained in this market for Ohio fleece wools for 20 years. By this it appears that in October, 1859, fine wools sold for 13c. per lb. more than the average price of the whole 20 years, and that the average price for the three years since July, 1857, during which wool costing 20c. and under has been admitted free, was 6c. per pound above the average of the three preceding years and 12c. above the average of the eleven years of the tariff of 1846. The proportionate value of medium wool does not vary mate-

rially from this. The third table shows that during the three years of free wool under 20c. the importation of common clothing wool has been 100 per cent, and of fine 400 per cent. larger than in the three years immediately preceding, while the increase in the importation of carpet wools has hardly been enough to notice. The second table shows an increase in the value of common wools. This we think is in a great measure owing to the fact that in consequence of large accumulations of this grade in France and England, made prior to 1857, and which is but just now reduced, European manufacturers have been able to supply our markets with goods made therefrom on better terms than the manufacturers of this country, as will be seen by the following extract from the export returns of the British government for the past three years:—

EXPORTS TO THE UNITED STATES.

	1857.	1858.	1859.
Cloths of all kinds, duffies and kerseymeres. . . pcs.	258,356	129,873	140,714
Mixed stuffs, flannels, blankets, and carpets. . yds.	33,613,358	33,442,180	55,607,049

The first class of goods are mostly made of fine wool, and the second of low clothing and carpet wools. Now, allowing that it requires but one pound of raw wool, in average marketable condition, to make each yard of these goods, it appears that during the three years, we have imported from Great Britain alone 127,693,587 lbs. of wool in manufactured goods, while the entire importation of raw wool for the same time into Boston, of common clothing and carpet grades, has been 32,700,000 lbs., and into the United States probably not exceeding 60,000,000 lbs. The advance before noticed in these wools in Europe already begins to manifest itself in a decline in this class of goods from Great Britain to this country, while the same returns show a slight increase in exports of fine woolens hither during the current year. The severity of the past winter in England was fatal to a large portion of the flock in some sections, creating a scarcity of low combing wools, and creating a demand for the clip of Canada, which heretofore has been mostly consumed in this country.

 SUGAR AND COFFEE IN HAYTI.

In 1776 the unrefined sugar of St. Domingo was estimated at 92,000,000 lbs., and the white sugar at 65,000,000 lbs. These two articles, without counting 18,000,000 lbs. syrup, brought in a revenue of from twenty-five to thirty million francs. This was the highest point of cultivation it reached since the importation of the sugar cane from Spain, in 1643. There was no change in the amount produced from '76 to '89, when it commenced declining, and continued the downward road until about 1815. In 1806, during the European blockade, a pound of white sugar was worth its weight in gold. It was then that the French chemists, stimulated by Napoleon, endeavored to find a substitute. Premiums were offered to those who should succeed in extracting sugar from native vegetables. The discovery of Mangraff, a Berlin chemist, was remembered. He it was who, in 1745, found that beet root contained sugar similar to that of the cane, and in as great proportion. The project was revived, and the manufacture of beet root sugar established, which has since regularly progressed. Under the first empire the amount produced reached very nearly 17,000,000 kilogrammes, and to-day it exceeds the enormous figure of 130,000,000 kilogrammes.

The amount of sugar annually consumed in Europe is estimated at 568,000,000 kilogrammes.

The great success which attended the beet root cultivation led the chemists to look round for a good substitute for coffee, which was first brought to the island in the year 1723. This plant, as is well known, was brought from Mocha, in Arabia, to Batavia, by the Dutch, and from there it was sent to Amsterdam, and a few grains distributed among the various sovereigns of Europe. Louis XIV. conceived the idea of sending it to the colonies, and accordingly it was first sent to Martinique, and afterwards to St. Domingo. No substitute has as yet been discovered which can at all rival its exquisite flavor. Delille used to say that he imagined he drank a sunbeam in every drop of coffee. Hayti exports annually to Europe and America 40,000,000 pounds. The discovery of a substitute, it may readily be supposed, would be very disastrous to the trade of Hayti.

DISTRIBUTION OF THE NAVY.

The principal use of the navy being to protect the interests of commerce, it is a matter of useful information to record their situation on the 1st of July throughout the world, as follows:—

HOME SQUADRON.			
Steamers.	Tons.	Officers and men.	Guns.
Corvette Brooklyn.....	2,000	325	20
Fulton.....	698	110	5
Water Witch.....	378	110	4
Mohawk.....	450	110	4
Crusader.....	400	105	3
Pocahontas.....	850	150	5
Sailing vessels.			
Frigate Sabine.....	1,726	500	50
Sloop Saratoga.....	882	260	22
Sloop Savannah.....	1,726	300	54
Sloop-of-war St. Louis.....	700	240	20
“ Preble.....	566	200	16
“ Falmouth.....	708	100	12
Store-ship Release.....	327	50	1
Total.....	11,396	2,660	186
British forces on this station..... ships	21	3,470	820
MEDITERRANEAN SQUADRON.			
Flag ship steamer Richmond (going out).....	1,934	260	16
Steam gun-boat Iroquois.....	1,000	160	10
“ “ Pawnee (going out).....	1,289	208	8
Total.....	4,223	620	34
British forces on this station..... vessels	22	5,786	532
PACIFIC SQUADRON.			
Flag-ship, steamer Lancaster.....	2,600	500	18
Steam frigate Saranac.....	1,446	390	6
Steam gun boat Wyoming.....	994	100	5
“ “ Narragansett.....	800	100	2
Sailing sloop-of-war St. Mary.....	958	250	20
“ “ Levant.....	792	230	20
“ “ Cyane.....	792	230	20
Total.....	5,785	1,710	91
British forces on this station..... vessels	12	2,845	281

AFRICAN SQUADRON.			
Steamers.			
San Jacinto.....	1,446	300	18
Mohican.....	994	160	10
Mystic.....	500	90	6
Sumpter.....	400	85	6
Sailing vessels.			
Corvette Constellation, (flag).....	1,200	350	22
“ Portsmouth.....	1,022	300	22
Marion, sloop, (bound home).....	566	160	16
Total.....	6,128	1,445	95
British force on this station..... vessels	12	2,845	100
BRAZIL SQUADRON.			
Flag-ship, sailing frigate Congress.....	1,700	500	50
Brig Bainbridge, (ordered home).....	250	80	6
Brig Dolphin.....	300	80	4
Steam gun-boat Seminole, (going out).....	801	140	4
Steamer Pulaski.....	800	50	8
Total.....	3,851	850	72
British naval forces in the Brazils..... vessels	9	1,672	146
EAST INDIES SQUADRON.			
Flag-ship steamer Hartford.....	1,990	300	14
Side wheel steamer, Saginaw.....	400	120	4
Sailing sloop, John Adams.....	900	180	13
Steam gun-boat, Dacotah.....	1,035	100	5
Total.....	4,375	400	36
British forces on this station..... vessels	49	5,051	386
ON SPECIAL SERVICE.			
School ship, corvette Plymouth.....	989	240	23
Steam frigate, Niagara.....	4,580	450	12

The following table will give a good idea of the gradual increase and decrease in our naval forces abroad :—

HOME.		SQUADRONS.			EAST INDIA.		
Vessels.	Officers and men.	Guns.		Vessels.	Officers and men.	Guns.	
1860.....	13	2,660	186	1860.....	4	430	36
1859.....	6	1,315	125	1859.....	4	1,260	69
1857.....	3	1,000	100	1857.....	3	900	30
AFRICAN.		MEDITERRANEAN.					
1860.....	7	1,445	95	1860.....	3	620	54
1859.....	4	800	86	1859.....	2	810	62
1857.....	3	370	82	1857.....	3	980	43
PACIFIC.		BRAZIL.					
1860.....	7	1,710	98	1860.....	5	850	72
1859.....	6	1,621	122	1859.....	3	720	60
1857.....	5	1,200	100	1857.....	3	800	60

CANADA TRADE.

The following is a comparative statement of the value of imports into Canada, and the duties collected thereon, during the respective half years ending on the 30th June, 1859 and 1860 :—

Province of Canada, 1859.....	Value.	Duty.
“ “ 1860.....	\$17,729,533	\$2,317,845
	14,343,271	2,123,904
Excess of 1859 over 1860.....	\$3,389,262	\$223,941

CUBA AND PORTO RICO.

The Cuban *Messenger* remarks:—In regard to our own island, we will here give the official reports of the total revenues during the first four months of the present year, compared with the result obtained during the same period of 1859, which is as follows:—

CUSTOM-HOUSE REVENUES—ON IMPORTS AND EXPORTS.

Month.	1859.	1860.
January.....	\$803,939 93 $\frac{1}{4}$	\$861,387 31 $\frac{1}{4}$
February.....	1,010,002 78	1,068,784 70
March.....	1,156,009 94	1,263,028 84
April.....	1,061,933 93 $\frac{1}{4}$	1,169,844 49 $\frac{1}{4}$
Total.....	\$4,031,586 59	\$4,363,635 35 $\frac{1}{4}$
Revenue of 1859.....		4,031,586 59
Difference in favor of 1860.....		\$332,048 76 $\frac{1}{4}$

LAND REVENUES.

January.....	\$590,548 18 $\frac{1}{4}$	\$557,161 35 $\frac{1}{4}$
February.....	508,161 12 $\frac{1}{2}$	481,920 51
March.....	763,772 43 $\frac{1}{4}$	679,753 11
April.....	665,075 81	501,280 74 $\frac{1}{4}$
Total.....	\$2,527,552 55	\$2,220,115 71 $\frac{1}{2}$
Revenue of 1859.....		2,527,552 55
Difference against 1860.....		\$307,436 83 $\frac{1}{2}$

TOTAL REVENUES.

January.....	\$1,394,183 12	\$1,418,548 66 $\frac{1}{2}$
February.....	1,518,163 90 $\frac{1}{2}$	1,550,705 21
March.....	1,919,782 37 $\frac{1}{4}$	1,943,371 95
April.....	1,727,009 74 $\frac{1}{4}$	1,671,125 23 $\frac{1}{4}$
Total.....	\$6,559,139 14	\$6,588,751 06
Revenue of 1859.....		6,559,913 14
Difference in favor of 1860.....		\$24,611 92

As to Puerto Rico, the result is not as favorable, but it must be remembered that the prosperity and business of that island was unprecedented in 1858, when the total amount of the imports and exports reached the enormous sum of \$12,815,519. The comparative tables of 1858 and 1859 are as follows:—

Years.	Imports.	Exports.
1858.....	\$7,456,363	\$5,387,155
1859.....	6,764,673	4,289,498
Decrease in 1859.....	\$691,690	\$1,067,657

In consequence of this, the revenues of the island were in 1859 about \$200,000 less than in 1858. This difference can be easily understood when we are reminded of the fact that the number of vessels arriving and leaving the different ports of that island in 1859, was much smaller than the year previous, as is shown by the following table:—

Years.	Arrivals.	Departures.
1858.....	1,494	1,376
1859.....	1,378	1,277
Difference against 1859.....	107	93

The commerce and productions of both islands are rapidly increasing; and, as the government is disposed to encourage all sources of public wealth, it is reasonable to expect that the revenues will increase in the same proportion as the commercial and agricultural interests become more extensive.

SILK.

The Japanese say they can supply silk to rival the Chinese. In the present progress of affairs new supplies may soon be wanted.

Raw silk, free of duty, was imported in the fiscal year 1858-9, to the value of \$1,330,890, of which \$701,182 came direct from China, and \$630,000 worth through England and France. What share of this last was Italian cannot be ascertained. Raw silk, paying duty, was imported to the value of \$288,267, of which but \$4,733 came directly from China. The import of the previous fiscal year was nearly the same, a larger proportion coming direct from China; but, in previous years, the quantity was less by about half a million dollars.

In 1855-6 the value of raw silk imported..	\$991,234
In 1856-7 " " " "	953,784
In 1857-8 " " " "	1,540,195
In 1858-9 " " " "	1,619,157

The following is a technical statement of qualities of Chinese raw silk imported and consumed in the United States for the past two calendar years:—

	Imports.		Consumption.	
	1858.	1859.	1858.	1859.
Tsatsless bales	263	563	298	530
Taysams	1,846	2,400	2,070	2,264
Canton	2,279	3,268	2,320	2,216
Thrown, etc.	1,387	546	1,392	512
Total	5,675	6,777	5,990	5,522

The export trade to China in the fiscal year 1858-9, was largely of cottons, nearly \$3,000,000 worth of cotton goods, in every form, being sent out, of which \$2,500,000 was plain brown cottons.

EXPORT OF DOMESTIC COTTONS TO CHINA.

	1856-7.	1857-8.	1858-9.
Brown and white cottons	\$955,768	\$1,174,928	\$2,662,937
Cotton duck	6,435	8,437	23,758
Printed and colored cottons	131,815	631,149	143,330
Total	\$1,094,018	\$1,814,514	\$2,830,025

The following is the account of the export of domestic cottons to China and the East Indies for five calendar years, as made up by the commercial journals:

	New York.	Boston.*	Total.		New York.	Boston.	Total.
1855 . . pkgs	11,929	6,110	18,039	1858	43,419	23,664	64,083
1856	17,674	17,067	34,741	1859	53,662	16,566	70,228
1857	12,676	15,341	28,017				

The average value of these is somewhat above \$55 the package, making the export value nearly \$400,000.

TOTAL VALUE OF EXPORTS TO CHINA FOR THREE YEARS.

1856-7	\$2,019,900	\$2,375,230	\$4,395,130
1857-8	3,007,748	2,689,603	5,697,351
1858-9	4,233,016	2,894,183	7,127,199

* The exportation from Boston is to the East Indies, including China, while at New York the item covers only the shipments direct to China.

MOUTHS OF THE MISSISSIPPI.

Captain HUMPHREYS, of the War Department at Washington, in a paper upon the "Bars of the Mississippi," says, in regard to what is now doing at the Mouth of the Mississippi, under the auspices of the department:—In the latter part of 1858 those parties (CRAIG & RIGHTER) refused to comply further with their contracts to maintain the depth of eighteen feet in the channels for a period of four-and-a-half years, and, by their failure, the winter of 1858-9 passed without any work being done upon the bars. The War Department was obliged to enter into a new contract with other contractors for deepening the Southwest Pass; but these likewise failed to carry out their contract. The War Department, in accordance with law, opened the work to competition as to the plans and methods to be used, as well as to cost, merely requiring that a certain depth should be obtained and maintained. The contractors were at liberty to use any plan, any process, any means that they chose to stir up the bottom. They were at liberty to use Mr. ELLER's plan if they thought fit, and probably would have done so had they considered it the most economical and effectual plan. Having, however, failed to secure, in that way, a continuation of the work, the department was forced to resort to a contract for the use of the dredges and appliances, and its officers are now, for the first time since 1839, with a remnant (\$70,000) of the appropriation of 1856, conducting the operation of deepening the channels. The plan used is that of stirring up the bottom of the channel during the river flood, and leaving the current of the river to carry it seaward to deep water. It is one that has been successfully tried.

It may be remarked, that the requirement of the appropriation act of 1856, that the work must be done by contract, has been one source of the defect of continuity in the operation, and the failure to maintain the increased depth after it was attained; for the failure of contractors to continue the deepening could only be ascertained after the shoaling, arising from neglect, had occurred. Then new contracts had to be entered into, and thus additional time was lost during the season for successful dredging and of commercial activity. But no plan whatever will prove of any practical benefit to navigation unless a permanent fund be provided, untrammelled by restrictions as to the mode of expenditure, from which a sufficient sum annually can be relied upon for the continuous prosecution of the work after the channel has once been opened. This can be effected by dredging with harrows or scrapers; that is, tearing up the bottom of the channel, and leaving the current of the river to carry off the loosened material, other and more powerful means being applied to the mud lumps. This plan is in accordance with the law under which the bar is formed, as demonstrated by experiments, in all conditions of the river, made by my direction under the authority of the Topographical Bureau.

TOBACCO—ITS GROWTH AND CONSUMPTION.

The last annual report on foreign commerce, from the State Department, gives very full and explicit information on the subject of the growth, manufacture, and consumption of tobacco in foreign countries, where we have also a market for our own tobacco. The low prices of the wine crop for some years, and also the failures of the crop, induced many large owners of vineyards in Germany to convert, at great expense, their vineyards into tobacco fields—tobacco then

bearing a good price. But the last two or three years have proved excellent wine years, and the prices of tobacco have been considerably reduced. So the tobacco fields are being turned back into vinyards.

German tobacco has been bought by American speculators and exported to the United States, where it is manufactured into cigars and re-exported to Europe as American tobacco. The American traders found after a while that they were not buying even German tobacco, but beet and turnip leaves, with which it is extensively adulterated. German cigars, made partly of beet and turnip leaves, are also exported into the United States and to other countries. Belgium and Holland and the Zollverein are the chief consumers of the beet and turnip leaf tobacco, and the article stands in the way of the consumption of the pure American tobacco. The quantity of German tobacco now on hand, including the beet and turnip leaf crops, is represented as immense. It is held back for higher prices. One single house has five hundred quintals of leaves on hand, waiting for a rise in the leaf market.

The American tobacco which is manufactured into snuff is mixed with five per cent of German tobacco, in consequence of which all snuff manufactured at Bingen, etc., is subject to a transit duty when exported to Northern Germany. Thus the American tobacco, which has already paid duty, pays duty a second time. "This," writes one of our consuls, "is a splendid specimen of dis-united Germany." The United States will be a perfect paradise for custom-house officials under a like system.

In this report there are fifty consular dispatches respecting the tobacco trade of the United States in various parts of the world. The tariffs upon tobacco, and the monopoly regulations concerning it, and laws affecting its price to the consumer, are given in this report with much detail.

BRITISH EXCHANGE OF COTTON GOODS FOR COTTON.

The *Cotton Supply* journal gives the following statement of the exchanges of cotton goods by England in 1859, for raw cotton, with its two great sources of cotton supply, India and the United States:—

EXCHANGE WITH INDIA IN 1859.

Export of cotton goods to India.....lbs.	193,603,270
Import of raw cotton from India.....	192,330,880
Excess of export.....	1,272,390

EXCHANGE WITH THE UNITED STATES IN 1859.

Export of cotton goods, 1859.....	45,029,411
Import of raw cotton, 1859.....	961,707,264
Excess of imports.....	916,677,853

It appears that India and China together took last year over two-fifths of all the British exports of cotton manufactures. The statements are thus given:—

BRITISH EXPORTS OF COTTON GOODS IN 1859.

To India.....yards	968,016,350
China, etc.,.....	194,335,622
Total to India and China.....	1,162,351,983
To all the rest of the world.....	1,401,093,410

ANNUAL COFFEE CIRCULAR.

Messrs. LONSDALE, of New Orleans, give the following figures in their annual circular :—

EXPORTS OF COFFEE TO THE UNITED STATES FROM RIO DE JANEIRO, FROM MAY 1, 1859, TO MAY 1, 1860.			
New Orleans.....bags	272,979	Other United States ports...	155,212
New York.....	256,769		
Baltimore.....	171,935	Total to U. S. in 1859-60.	945,413
Philadelphia.....	88,518	" " 1853-59.	1,252,948
		" " 1857-58.	966,029
TOTAL EXPORTS FROM RIO TO ALL PARTS OF THE WORLD.			
From 1st of May, 1859, to 1st of May, 1860.....			1,959,927
" " 1858 " 1859.....			1,875,284
" " 1857 " 1853.....			1,907,562
Estimated stock of coffee on hand at Rio on 1st of May, 1860.....			60,000
Stock of Rio coffee on hand at all the importing ports of the United States is estimated at, this day.....			43,000
Same period last year.....			103,800
Decrease of stock this year in United States.....			60,800
Stock on hand in United States July 1, 1859.....			103,800
Received in United States in 1859 and 1860.....			945,000
Total.....			1,048,800
Stock on hand in United States July 1, 1860.....			43,000
Sales for consumption in the United States in 1859-60.....			1,005,800
" " " " 1858-59.....			1,209,000
" " " " 1857-58.....			1,116,000
Decrease of sales for consumption this year, compared with 1857-58			110,200
" " " " 1858-59			203,200

EXPORTS FROM NEW ORLEANS.

The *Crescent* of Wednesday says :—The value of exports of produce from this port for the quarter ending on the 31st of March last, are larger than any on record. The increase for the three-quarters of the fiscal year of 1859-60 is nearly \$10,000,000 over the three-quarters of 1858-59 :—

EXPORTS FOR THE QUARTERS ENDING			
Sept. 30, 1858.....	\$11,826,595	Sept. 30, 1859.....	\$9,064,209
Dec. 31, 1858.....	28,822,809	Dec. 31, 1859.....	32,351,775
Mch. 31, 1859.....	31,057,053	Mch. 31, 1860.....	40,933,323
Total... ..	\$72,706,458	Total.....	\$82,349,307

EXPORTS OF CHARLESTON, S. C., QUARTER TO JUNE 30, 1860.

	Quantities.	Bales.	Value.
Wood.....feet	1,720,692		\$25,430
Rosin and turpentine.....bbls.	15,935		36,882
Spirits.....galls.	80,000		41,513
Cotton, Sea Island.....lbs.	2,923,554	89,567	4,638,783
" upland.....	85,208,489		
Rice.....bush.	9,464		195,780
"tierces	7,340		
Total exports.....			\$4,960,360
" imports.....			830,723

THE COTTON TRADE.

The *Cotton Supply Reporter*, an English periodical, gives in its last issue the following statement of the exchanges of cotton goods by England, in 1855, for raw cotton, with its two great sources of cotton supply, India and the United States. To India the export was greater than the import in actual weight :—

Export of cotton goods to India, 1859.....lbs.	193,603,270
Import of raw cotton, 1859.....	192,330,880
Excess of exports.....	1,272,390

EXCHANGE WITH THE UNITED STATES.

Export of cotton goods, 1859.....lbs.	45,029,411
Import of raw cotton, 1859.....	961,707,264
Excess of imports.....	916,677,853

The journal from which this statement is taken very justly argues that it is better for England to cultivate the Asiatic market for its cotton goods, instead of the American, in which argument we heartily concur. Some further statements of the vastness of the Asiatic market for manufactures are given in the same connection, as follows :—

Export of cotton goods to India and China, 1859.....yards	1,162,351,982
Export of cotton goods to all the rest of the world, 1859.....	1,401,093,410

India and China together thus take almost as much as all the rest of the world of English manufactures of cotton. Of this vast stock to Asia, India takes 968,016,350 yards, leaving for China but 194,340,000 yards. It is likely that our own export to China is quite equal to this, if not in excess. American drills are far superior, in Chinese estimation, to any British cloths of the same description, and the market for them is now very rapidly increasing.

STOCK OF WHEAT.

The Buffalo *Commercial Advertiser* gives the following estimate of the stock of wheat July 12. There are other estimates which make the quantity nearer 3,000,000 bushels. We put this on record, however, as a matter of interest at this time :—

Stock of wheat afloat on New York canals, destined for tide-water, not including shipments from interior, July 11. bush.	472,644
Stock of wheat afloat on lakes, destined for Buffalo and Oswego, July 11.....	271,982
Stock in store in Buffalo, June 23.....	243,289
Add receipts June 23 to July 14.....	619,709
Total.....	860,998
Deduct export by canal from June 23 to July 14.....	649,302
Stock in store at Oswego, July 11, 1860.....	211,696
Stock in store at Chicago, July 12, 1860.....	188,586
Stock in store at Milwaukee, July 12, 1860.....	64,922
Stock in store at Milwaukee, July 12, 1860.....	160,000
Estimated stock in store in New York, July 14.....	575,000
“ “ Albany and Troy, July 12.....	75,000
“ “ Kenosha, Racine, St. Joseph, Waukegan, Toledo, and Detroit.....	200,000
Total stock of wheat as above.....	2,219,830

AFRICAN LABORERS.

The correspondence of the Secretary of State with the foreign consuls contains the following in relation to the French arrangements for African laborers, from CHARLES KIMBALL, Esq., consul at Point a Pitre, Gaspe :—

Having received your correspondence of 17th June last, enclosing copy of a letter from WM. MORGAN, Esq., United States Consul at Marseilles, concerning the emigration of negroes to the French colonies from the coast of Africa, I have the honor to inform you that I find, according to the rules of the government, it is impossible for the authorities here to answer any communications of importance on the subject until my letter should be sent to the minister in France. Therefore the information I shall give is, in my opinion, as near the position of affairs as can be ascertained.

The house of REGIS, of Marseilles, has a contract with the imperial government of France simply to procure and transport to the islands of Guadaloupe and Martinique a certain number of negroes. The procuring of the negroes is done under the surveillance of an officer of the French marine service, with the aid of an interpreter. The negroes are made to understand the articles of agreement with the French government; if they wish to accept those conditions, then M. REGIS, if said negroes are held as prisoners of war by the African chiefs, pay for each from 30 to 50 francs; or, if the negroes are at liberty, he pays them the said sum. From there the negro is taken to the house of REGIS and fed at his expense, and according to the rations allowed by the French government, until the ship may be ready to sail

The vessel destined for the transportation of the emigrants must first be surveyed in France by the competent authorities, and a certificate given to the house of REGIS as to the capacity of said vessel; also the amount of wood to be put on board for the voyage. The vessel once on the coast of Africa, the emigrants are placed on board under the certificate received from France, and under the direction of an officer of the French marine. On the voyage to the Island the vessel is under the surveillance of an officer and doctor, and an interpreter appointed by the government. Arriving here the negroes are transferred to the commissioners of emigration likewise appointed from France. These officers are obliged to report directly to France, on the arrival of the ship here, the state of health, etc., of the emigrants. All being in good health, the commissioners commence to distribute the negroes to the planters, with reference to as equal a distribution as possible.

When on the plantation, they are under the same laws as the coolies, except the negroes are engaged for ten years and the coolies for five years. At the end of their engagement they have the right to demand of the French government to be sent to Africa. On the plantations the negroes are to be paid regularly every Sunday morning for their week's work, at from 12 to 20 francs per day, according to age and sex. Food is provided by the planter according to the code of Napoleon; also two suites of clothes a year. Planters have no right to work the emigrants at night or Sundays without the emigrants themselves agree to the same, and all such extra work must be paid for as soon as done. To prevent all the abuses on the plantations one of the above-mentioned commissioners visits, at least twice a month, each plantation. Before the courts of justice the emigrant has his rights as well as any other citizen. As we have had but two convoys, about 650 each, which, I believe, are all satisfied, as also the planters. The crops of the island are fast increasing with the emigration.

CANADIAN RECIPROCITY.

The Board of Trade of Chicago, at a special meeting held on the 18th, report favorably in regard to the effects of the reciprocity treaty. They give the following facts as reasons for the maintenance of the treaty :—

	Imports.	Exports.
Free goods from Canada in 1857.....	\$222,229	\$1,788,968
“ “ “ 1858.....	83,900	1,091,200

NAUTICAL INTELLIGENCE.

THE HARBOR OF NEW YORK.

Some time ago, Mr. CHARLES H. HASWELL, marine engineer, proceeded to make observations on the deposits in the harbor; he did not propose to consider the encroachment upon the boundaries thereof, by the extension of bulkheads and piers, and the injurious effects therefrom, for the two-fold fact that the necessity of restraining these encroachments had become so manifest to the public at that particular time that not only had the attention of our Legislature been called to the subject, but it was then receiving the consideration of a committee appointed for the purpose of investigating and reporting thereon; and secondly, that the operation of such encroachment was to investigate the reduction of the tidal volume of the harbor. Accordingly, in a communication to the Board of Underwriters of New York, he thus lucidly and elaborately reports:—"As a prelude to my task, I assumed it to be indisputable that the bar at Sandy Hook was, in its general features, like the bars of all tidal rivers, and that it presented a series of irregular obstructions stretching across the entrance into the lower bay, with a varying and less depth of water upon it than in the channels within it. The causes admitted to produce this general result are numerous, but the following apply, in my opinion, peculiarly to the locality under consideration:—

"1st. The arrest of the current of the last of the ebb tide from the bay, where it meets the first of the sea flood when it surrenders the *detritus* it holds in suspension.

"2d. The difference of the flood and ebb currents in their directions.

"3d. The action of ground swells from the sea, which, if heavy and flowing from the southward and eastward, deposit sand and gravel upon the bar, and at all times, when aided by the current of the flood, within the entrance thereof.

"4th. The occasional diminution of the back water of the bays and rivers leading thereto from drouth, and the reduction of the tidal volume by the presence of ice upon flats and the shores.

"5th. A reduction of the tidal area by the constant accretion of *detritus* upon the shores.

"The first three positions are similar, in a great degree, to those entertained by E. K. CALVER, R. N.; the fifth one, by Sir HENRY DE LA BECHE.

"In the prosecution of my observations, I selected sixteen locations which I thought best suited to furnish me with the elements desired, and providing myself with an equal number of bottles of like capacity, (30 cubic inches,) I repeatedly filled one of them with water from each of these localities at half-tide, (both ebb and flow,) both in dry and wet weather and at different seasons of the year; such water was then filtered, and the residuum weighed and noted in grains, the average results of which, deduced from the operations of five years, furnish the following:—

WEIGHT, IN GRAINS, OF DEPOSITS IN 30 CUBIC INCHES OF WATER TAKEN FROM THE UNDERMENTIONED LOCALITIES.

Sandy Hook.....	.109	Manhattanville.....	.578
Narrows.....	.265	Harlem Bridge.....	1.031
Robbins' Reef.....	.367	Hell Gate.....	1.093
Ellis' Island.....	.811	Thirtieth street, east.....	1.265
Battery.....	1.687	Twenty-third-street, east.....	2.968
Liberty-street.....	6.927	Grand-street.....	4.000
Canal street.....	8.531	Wall-street.....	5.187
Thirtieth-street, west.....	.937	Broad-street.....	6.375

42.131

“The mean weight of deposits is thus found to be 2.633 grains in every 30 cubic inches of water examined; (42.131 divided by 16 equal to 2.633.) Excluding therefrom all the city localities, except one upon each side of it, for the purpose of arriving at a mean of the average presence of *silt* in the water of our harbor above the Narrows, the following result is obtained:—

Narrows .....	.265	Manhattanville.....	.578
Robbins' Reef.....	.367	Harlem Bridge.....	1.031
Ellis' Island .....	.811	Grand-street.....	4.000
Battery	1.687	Thirtieth-street, west .....	.937
			9.676

“From which it appears that the average annual flow of *silt* in the rivers bordering this city reaches the enormous rate of 1.209 grains in every 30 cubic inches of water (9.676 divided by 8 equal to 1.209;) and assuming the quantity of the former to be equal to 125 pounds per cubic foot, a cubic inch of it will weigh .072 pound. The volume of this deposit compared with water, is, therefore, as 1 to 12,565.

“Confining my observations to the city of New York alone, and taking the deposits shown in the water from the several localities around the city, the mean amount of *silt* in every 30 cubic inches of water is as follows:—

Battery.....	1.687	Grand-street.....	4.000
Liberty-street	6.937	Wall-street.....	5.187
Canal-street.....	8.531	Broad-street	6.375
Thirtieth-street, east	1.265	Thirtieth-street, west .....	.927
Twenty-third-street, east	2.968		37.887

“The average of these deposits is 37.887 divided by 9 equal to 4.209; and hence, by the elements before given, it appears that the volume of the deposit from the water in the slips of this city between Thirtieth-street (east and west) and the Battery, when compared with that of the water (at half-tide,) is as 1 to 3,610. Startling as these results appear, it must be borne in mind that they do not give a full exhibition of the facts of the case, for the observations made were necessarily confined to the presence of *silt*, and embraced only that portion which was retained in suspension by the flow of currents; whilst the deposit of *detritus* from the flow of gravel, sand, &c., could not be arrived at, unless by a different system of observation, and it is, consequently, not embraced in the above results.”

SHIPS BUILDING ON THE LAKES.

The building of vessels on the lakes for Eastern account has come to be a regular business; one has been recently launched at Cleveland for Boston account. She is 95 feet keel, 26 feet beam, and 8½ feet hold, and registers about 200 tons. She costs about \$10,000, and is owned one-half by her commander, Captain LEWIS, of Boston, and one-half in Albany. She is christened the “Lewis Spanner,” after LEWIS SPANNIER, of Albany, who presents her with a magnificent suit of colors. Experienced builders speak in the highest possible terms of the model and finish of this vessel, and her captain is delighted.

The advantage to Boston merchants of building their vessels here may be understood from the fact that ship plank which is there worth \$60 per thousand, can be had here, of better quality, for \$18 to \$20; again, spars which cost \$40 here, cannot be had there for less than \$100. Then, too, the vessel may make \$1,000 in freight of lumber on her voyage. She will be launched in full rig and with anchors, chains, &c., complete. She will load at Sandusky with lumber for Boston.

LAKE TIDES.

The elevation of Lake Huron is 579 feet 7 inches, and that of Lake Superior 623 feet 7 inches above the level of the Atlantic Ocean. But that there are fluctuations in the water-level of the lakes is well established. These changes are of three kinds. First. A gradual rise and fall, spreading over a series of years. Secondly. The temporary changes due to storms and prevailing winds; and thirdly, sudden and temporary changes, attributed by some to subaqueous action, by others to changes in the pressure of the atmosphere, and various other causes. In some parts of the lakes a tide is perceptible, (as at Green Bay, Wisconsin,) in other parts the changes are said to be periodical and quite uniform. It is to be hoped that simultaneous observations, for a series of years, extending over the whole lake region, and supported by liberal appropriations, will ultimately throw more light upon this problem of high scientific interest, than the best topographical engineers now possess. A correct survey and delineation of the great inland seas of our country is demanded by the interests of commerce and navigation, and, in case of a war with our neighbors, would be of inestimable value.

TONNAGE ON THE LAKES.

The following synopsis will exhibit the vessels in commission on the lakes for the years 1858 and 1859, and will give some idea of the extent of the trade on these waters:—

	1858.			1859.		
	Number.	Tonnage.	Value.	Number.	Tonnage.	Value.
Steamers.....	130	72,108	\$3,953,800	131	66,834	\$2,846,137
Propellers.....	182	65,271	3,537,900	197	66,793	2,844,250
Barks.....	57	22,817	707,500	59	22,604	542,000
Brigs.....	97	27,121	628,900	99	27,808	494,200
Schooners and sloops...	974	200,323	6,383,900	1,001	192,518	4,810,150
Total.....	1,442	387,740	\$15,212,000	1,487	376,557	\$11,536,737

It is believed that the tonnage and value of this year will exceed that of 1858.

DISASTERS ON THE LAKES.

Lake Michigan has been more free from wrecks than Lake Erie. Interesting data are furnished by the statements of annual losses by marine disasters on the lakes. The last four years exhibit the following figures:—

Years.	Losses.	Years.	Losses.
1856.....	\$3,126,744	1858.....	\$732,232
1857.....	1,387,935	1859.....	1,020,100

The losses by screw propellers during ten years of lake business, show first an increase of the use of this kind of vessel, and second, the decrease in disasters as navigation has improved, and knowledge of managing propellers has advanced.

THE NEW ROUTE BETWEEN THE WEST AND ENGLAND.

New York has a new competitor for Western trade. The immense harvests of the West must find an outlet, and acting upon the apparent advantages to be derived from her trade, a line of British steamships has already been established between Portland and Liverpool. The Grand Trunk Railway will carry a large portion of the produce to these steamers, freighting them at once, and giving the farmers an advantage in speedy returns over New York port, where vessels are now scarce.

NEW LIGHTS AT CIVITA VECCHIA AND ANCONA.

Official information has been received at this office, from the Ministry of Commerce and Public Works of his Holiness the Pope, that two new lighthouses have recently been put in operation within the dominions of the Church—one at Civita Vecchia, and the other at Ancona. The figure and height of the lighthouses are not given, but they are both illuminated with the Fresnel apparatus, and are revolving white lights, the former eclipsed once in 40 seconds, and the latter once in 45 seconds. By order,

R. SEMMES, Secretary.

WASHINGTON, July 26, 1860.

MONTAUK POINT LIGHTHOUSE, LONG ISLAND, N. Y.

The repairs on the Montauk Point Lighthouse will be completed, the 1st order Fresnel lens restored to its place, and relighted at sunset on the 10th of October, 1860. The interval between the flashes will be the same as before, (2 minutes,) but about 25 per cent more of light will be visible than formerly. A new keepers' dwelling, which will be painted brown, has been built on the hill adjoining the tower. The other land marks are the same as before. By order of the Lighthouse Board,

WM. F. SMITH, Secretary.

WASHINGTON, July 31, 1860.

LIGHTHOUSE ON MERRILL SHELL BANK, COAST OF MISSISSIPPI,

INSTEAD OF THE LIGHT-VESSEL.

Official information has been received at this office from Lieut. W. H. STEVENS, Corps of Engineers, that a lighthouse on a screw-pile foundation has been erected on the shoal, and to mark the position heretofore occupied by the light-vessel at Merrill's Shell Bank. The foundation is square in plan, and is composed of iron screw-piles; is surmounted by a wooden superstructure, with a lantern above its center. The height of the focal plane is about 45 feet above mean sea level. The illuminating apparatus is a lens of the fourth order of the system of Fresnel, showing a fixed light of the natural color, which in ordinary states of the weather, should be visible from the deck of a vessel (ten feet above the water) about eleven nautical miles. The lighthouse will be lighted up for the first time at sundown on the 10th of August next, and will be kept burning during that and every night thereafter until further orders. On the same day, (August 10.) the Merrill Shell Bank light-vessel will be removed from her station, and will not be replaced. By order of the Lighthouse Board,

WM. F. SMITH, Engineer, Secretary.

WASHINGTON, July 9, 1860.

SINGLE REVOLVING LIGHT IN THE GULL STREAM, ENGLAND.

GULL STREAM LIGHTHOUSE.

The Corporation of the Trinity-house of London has given notice, that on and after the night of the 30th of June, the character of the lights in the Gull Stream light-vessel will be altered, and a single quick revolving white light, showing a flash every twenty seconds, will be substituted for the two horizontal fixed lights at present exhibited. A single ball will be shown at the masthead by day.

NORTH FORELAND LIGHT.

Also, that on and after the 4th day of June, in order to enable vessels at night to keep to the eastward of Margate Sand, a red strip of light would be exhibited from the lantern of the North Foreland lighthouse, in a direction from N. by W. $\frac{1}{2}$ W. to N. $\frac{1}{2}$ E., to show from the Tongue light-vessel to one cable's length east of Margate Sand. By order,

R. SEMMES, Secretary.

WASHINGTON, July 21, 1860.

POSTAL DEPARTMENT.

LOCAL DISPATCH POSTS SUPPRESSED.

POST-OFFICE DEPARTMENT, APPOINTMENT-OFFICE, July 14, 1860.

SIR :—I am directed by the Postmaster-General to transmit to you the enclosed copy of an order, made this day, declaring the streets in New York city post routes, and to request you to have the same published for the information of all concerned.

As the act of 15th June, 1860, limits the carriers' fee for the delivery of letters to one cent, it becomes necessary, independently of other considerations, for the department, in order to sustain the carrier system, to take charge of the whole business of letter carrying in New York. Therefore, in promulgating the order of the Postmaster-General, you will at the same time give notice of his determination rigidly to enforce the laws against any and all private carriers or expresses in the city, from and after the 1st proximo. Very respectfully, your obedient servant.

(Signed)

HORATIO KING.

Hon. JOHN A. DIX, Postmaster, New York.

NOTICE TO NEW YORK LETTER CARRIERS.

POST-OFFICE DEPARTMENT, July 14, 1860.

Agreeably to the authority conferred by the tenth section of the act of Congress of 3d March, 1851, entitled "An act to reduce and modify the rates of postage in the United States and for other purposes," it is hereby ordered that all the avenues, streets, lanes, alleys, roads, and highways in all that part of the city of New York lying south of and below 55th (Fifty-fifth) street, including that street, be and the same are hereby established as post roads. This order to take effect 1st August, 1860.

(Signed)

J. HOLT, Postmaster-General.

THE NEWSPAPER WINDOW AT THE LONDON POST-OFFICE.

It was a quarter before six when they crossed the Hall—six being the latest hour at which newspapers can be posted without fee.

It was then just drizzling newspapers. The great window of that department being thrown open, the first black fringe of a thunder-cloud of newspapers impending over the Post-office was discharging itself fitfully—now in large drops, now in little; now in sudden plumps, now stopping altogether. By degrees it began to rain hard; by fast degrees the storm came on harder and harder, until it blew, rained, hailed, snowed, newspapers. A fountain of newspapers played in at the window. Water-spouts of newspapers broke from enormous sacks, and engulfed the men inside. A prodigious main of newspapers, at the Newspaper River Head, seemed to be turned on, threatening destruction to the miserable Post-office.

The Post-office was so full already, that the window foamed at the mouth with newspapers. Newspapers flew out like froth, and were tumbled in again by the bystanders. All the boys in London seemed to have gone mad, and to be besieging the Post-office with newspapers. Now and then there was a girl; now a woman; now and then a weak old man; but as the minute hand of the clock crept near six, such a torrent of newspapers came tumbling in together pell-mell, head over heels, one above another, that the giddy head looking on chiefly wondered why the boys, springing over one another's heads and flying the garter into the Post office with the enthusiasm of the corps of acrobats at M. FRANCONI'S, didn't post themselves nightly along with the newspapers, and get delivered all over the world.

Suddenly it struck six. Shut, Sesame! Perfectly still weather. Nobody there. No token of the late storm—not a soul, too late!

But what a chaos within! Men up to their knees in newspapers on great platforms; men gardening among newspapers with rakes; men digging and delving among newspapers as if a new description of rock had been blasted into those fragments; men going up and down a gigantic trap—an ascending and descending-room worked by a steam engine—still taking with them nothing but newspapers. All the history of the time, all the chronicled births, deaths, and marriages, all the crimes, all the accidents, all the vanities, all the changes, all the realities, all the civilized earth, heaped up, parcelled out, carried about, knocked down, cut, shuffled, dealt, played up again, and passed from hand to hand, in an apparently interminable and hopeless confusion, but really in a system of admirable order, certainty, and simplicity, pursued six nights every week, all through the rolling year.

JOURNAL OF INSURANCE.

INSURANCE DIVIDENDS.

The following table embraces the dividends declared by the fire insurance companies of this city for the months of June and July, 1860:—

JUNE DIVIDENDS.			
Companies.	Capital.	Per cent.	Dividend.
Bowery.....	\$300,000	10	\$30,000
Howard.....	250,000	10	25,000
Manhattan.....	250,000	10	25,000
North American.....	250,000	5	12,500
Total.....	\$1,050,000		\$92,500
JULY DIVIDENDS.			
Ætna.....	\$200,000	5	\$10,000
Adriatic.....	150,000	5	7,500
American (also Scrip dividend of 50 per cent). ..	200,000	3½	7,000
Arctic.....	250,000	6	15,000
Brevoort.....	150,000	..	.....
Brooklyn.....	102,000	10	10,200
Citizens.....	150,000	12½	18,750
Clinton.....	250,000	7	17,500
Columbia.....	200,000	..	.....
Commerce.....	200,000	8	16,000
Commonwealth.....	250,000	6	15,000
Commercial.....	200,000	8	16,000
Continental (also Scrip dividend of 45 per cent) ..	500,000	7	35,000
East River.....	150,000	6	9,000
Empire City.....	200,000	7	14,000
Excelsior.....	200,000	..	.....
Fulton.....	200,000	10	20,000
Gebhard.....	200,000	5	10,000
Goodhue.....	200,000	6	12,000
Hamilton.....	150,000	4	6,000
Hanover.....	200,000	6	12,000
Harmony.....	150,000	5	7,500
Hope.....	150,000	5	7,500
Humboldt.....	200,000	..	.....
Home.....	1,000,000	6	60,000
Importers and Traders'.....	200,000	4	8,000
Jersey City.....	150,000	5	7,500
Kings County.....	150,000	..	.....
Knickerbocker.....	280,000	6	16,800
Lafayette.....	150,000	5	7,500
Lamar.....	300,000	..	.....

Companies.	Capital.	Per cent.	Dividend.
Long Island.....	200,000	10	20,000
Market (also Scrip dividend of 33 $\frac{1}{3}$ per cent)...	200,000	12	24,000
Mechanics and Traders'.....	200,000	10	20,000
Mechanics'.....	150,000	7	10,500
Mercantile.....	200,000	6	12,000
Merchants'.....	200,000	10	20,000
Metropolitan.....	800,000	..	..
Montauk.....	150,000	5	7,500
Nassau.....	150,000	10	15,000
National.....	200,000	10	20,000
New Amsterdam.....	200,000	8	16,000
New York Equitable.....	210,000	10	21,000
New World.....	200,000	5	10,000
Pacific.....	200,000	12	24,000
Park.....	200,000	10	20,000
People's.....	150,000	4	6,000
Relief.....	150,000	8	12,000
Republic.....	150,000	6	9,000
Resolute (also Scrip dividend of 33 $\frac{1}{3}$ per cent).....	200,000	5	10,000
Standard.....	200,000	5	10,000
Tradesmen's.....	150,000	4	6,000
United States.....	250,000	5	12,500
Washington.....	200,000	5	10,000
Williamsburg City.....	150,000	7	10,500
Total, July.....	\$11,592,000		\$691,750
Total, June.....	1,050,000		92,500
Grand total.....	\$12,642,000		\$784,250

NEW HAMPSHIRE FIRE INSURANCE COMPANIES.

SYNOPSIS OF FIRE INSURANCE COMPANIES, FROM REPORT OF INSURANCE COMMISSIONER TO THE GOVERNOR, JUNE, 1860.

Companies.	Amount of property at risk.	Amount of premium notes.	Amount of cash premiums.	Amount of losses.	Amount of assessments.
Rockingham, Exeter.....	1,022,778	99,457 60	568 83	3,203 70	11,147 56
Atlantic, Exeter.....	3,342,006	88,129 15	3,107 84	4,744 62	.....
Cochecho, Dover.....	992,831	81 475 44	3,431 74	3,831 77	629 92
Belknap, Laconia.....	2,809,194	200,767 95	1,902 75	10,206 10	13,343 09
Equitable, Concord.....	2,294,256	48,611 29	4,354 75	3,400 11	.....
Farmington, Farmington.....	251,748	15,652 70	485 63	.....	.....
Farmers', Epping.....	90,818	4,465 76	291 08	.....	.....
Lake, Alton.....	130,978	10,683 10	1,083 49	144 00	.....
Manchester, Manchester.....	100,242	940 57	1,201 75	450 00	.....
Hand-in-Hand, Laconia.....	127,500	2,029 60	2,029 60	.....	.....
Union, Concord.....	1,729,656	93,592 38	922 01	2,664 28	5,576 81
Great Falls, Somersworth.....	1,343,605	81,430 17	1,312 37	2,692 28	.....
Portsmouth, Portsmouth.....	893,639	76,816 96	637 87	4,697 96	6,907 39
Farmers', Gilmanton.....	12,028,696	609,022 33	3,703 71	11,199 84	42,156 54
Hillsboro', Amherst.....	619,797	46,013 00	1,687 43	3,407 67	4,544 76
Rochester, Rochester.....	209,500	12,003 49	348 66	.....	.....
Amoskeag, Manchester.....	106,294	1,467 10	733 55	1,400 00	.....
New Hampshire, Concord.....	.....	.....	.....	.....	.....
Merrimack, Concord.....	.....	7,221 10	18 60	30 00	.....
Carroll County, Sandwich.....	.....	.....	.....	.....	3,370 28
Granite, Boscawen.....	1,100,461	63,238 51	297 61	2,731 28	.....
Nashua, Nashua.....	192,346	2,557 11	2,407 68	1,523 22	.....
Cheshire, Keene.....	4,267,407	139,796 12	5,046 33	7,009 45	6,500 00
Ashuelot, Keene.....	1,371,658	46,235 22	2,437 78	1,814 96	.....
Farmers', Exeter.....	3,245,431	169,766 13	861 38	1,270 45	10,726 59

COMMERCIAL REGULATIONS.

RATES OF PILOTAGE IN AND OUT OF THE MISSISSIPPI PASSES.

Vessels drawing 10 feet or less, at.....	\$2 50 per foot
Vessels drawing over 10 feet and under 18.....	3 50 "
Vessels drawing 18 feet and upwards.....	4 50 "

Draft.	Per foot.	Amount.	Draft.	Per foot.	Amount.
4 feet.....	\$2 50	\$10 00	13½.....	\$3 50	\$47 25
4½.....	"	11 25	13¾.....	"	48 12
4¾.....	"	11 87	14.....	"	49 00
5.....	"	12 50	14½.....	"	50 75
5½.....	"	12 75	14¾.....	"	51 62
5¾.....	"	13 75	15.....	"	52 50
6.....	"	15 00	15½.....	"	54 25
6½.....	"	16 25	15¾.....	"	55 12
6¾.....	"	16 87	16.....	"	56 00
7.....	"	17 50	16½.....	"	57 75
7½.....	"	18 75	16¾.....	"	58 62
7¾.....	"	19 37	17.....	"	59 50
8.....	"	20 00	17½.....	"	61 25
8½.....	"	21 25	17¾.....	"	62 12
8¾.....	"	21 87	18.....	\$4 50	81 00
9.....	"	22 50	18½.....	"	83 25
9½.....	"	23 75	18¾.....	"	84 37
9¾.....	"	24 87	19.....	"	85 50
10.....	"	25 00	19½.....	"	87 75
10½.....	\$3 50	36 75	19¾.....	"	88 87
10¾.....	"	37 62	20.....	"	90 00
11.....	"	38 50	20½.....	"	92 25
11½.....	"	40 25	20¾.....	"	93 37
11¾.....	"	41 12	21.....	"	94 50
12.....	"	42 00	21½.....	"	96 75
12½.....	"	43 75	21¾.....	"	97 87
12¾.....	"	44 62	22.....	"	99 00
13.....	"	45 50			

CERTIFICATE OF ORIGIN.

LA ROCHELLE, (France,) 1859.

* * * * I would beg leave to call the attention of the department to a want of reciprocity as regards the ships of France and those of the United States, the latter being required to produce at the custom-houses here a consular certificate as to the origin of cargo, while the former, it would appear, can manage to evade its production at our custom-houses; for, with two exceptions, no French masters have ever procured at this consulate such certificate, although I have in every instance notified them in writing as to its necessity. I have written to the collectors of the ports to which the vessels were bound on the subject, and have also very respectfully brought the matter to the knowledge of the Secretary of the Treasury.

In my despatch to that officer on the 1st inst., I have again mentioned the circumstance, and as several French vessels are at this time chartered for the United States, I have requested him to give me instructions as to the necessity or otherwise of continuing to give the written notice. I urge the matter solely at the instance of American shipmasters, who justly think that unless it is reciprocal they should be relieved from the heavy charges of the French consulates.

SIAM DUTIES.

Pursuant to the treaty entered into between the American Minister, TOWNSEND HARRIS, and the Siamese authorities, the following is the tariff of export and inland duties to be levied on articles of trade :—

SECTION I.

The undermentioned articles shall be entirely free from inland or other taxes on production or transit, and shall pay export duty as follows :—

	Tical.	Salung.	Fuang.	Hun.	
1. Ivory.....	10	0	0	0	per pecul
2. Gamboge.....	6	0	0	0	do.
3. Rhinoceros' horns.....	50	0	0	0	do.
4. Cardamums, best.....	14	0	0	0	do.
5. Cardamums, bastard.....	6	0	0	0	do.
6. Dried mussels.....	1	0	0	0	do.
7. Pelicans' quills.....	2	2	0	0	do.
8. Betel nut, dried.....	1	0	0	0	do.
9. Krachi wood.....	0	2	0	0	do.
10. Sharks' fins, white.....	6	0	0	0	do.
11. Sharks' fins, black.....	3	0	0	0	do.
12. Lukkrabau seed.....	0	2	0	0	do.
13. Peacocks' tails.....	10	0	0	0	per 100 tails.
14. Buffalo and cow bones.....	0	0	0	3	per pecul
15. Rhinoceros' hides.....	0	2	0	0	do.
16. Hide cuttings.....	0	1	0	0	do.
17. Turtle shells.....	1	0	0	0	do.
18. Soft shells.....	1	0	0	0	do.
19. Becher de mer.....	3	0	0	0	do.
20. Fish maws.....	3	0	0	0	do.
21. Birds' nests, uncleaned.....	20 per cent				
22. Kingfishers' feathers.....	6	0	0	0	per 100
23. Cutch.....	0	2	0	0	per pecul
24. Beyche seed, (nux vomica).....	0	2	0	0	do.
25. Pungtarai seed.....	0	2	0	0	do.
26. Gum Benjamin.....	4	0	0	0	do.
27. Augral bark.....	0	2	0	0	do.
28. Agilla wood.....	2	0	0	0	do.
29. Ray skins.....	3	0	0	0	do.
30. Old deers' horns.....	0	1	0	0	do.
31. Soft or young horns.....	10 per cent				
32. Deer hides, fine.....	8	0	0	0	per 100 hides
33. Deer hides, common.....	3	0	0	0	do.
34. Deer sinews.....	4	0	0	0	per pecul
35. Buffalo and cow hides.....	1	0	0	0	do.
36. Elephants' bones.....	1	0	0	0	do.
37. Tigers' bones.....	5	0	0	0	do.
38. Buffalo horns.....	0	1	0	0	do.
39. Elephants' hides.....	0	1	0	0	do.
40. Tigers' skins.....	0	1	0	0	per skin
41. Armadillo skins.....	4	0	0	0	per pecul
42. Stick lack.....	1	1	0	0	do.
43. Hemp.....	1	2	0	0	do.
44. Dried fish, flaheng.....	1	2	0	0	do.
45. Dried fish, plasalit.....	1	0	0	0	do.
46. Sapan wood.....	0	2	1	0	do.
47. Salt meat.....	2	0	0	0	do.
48. Mangrove bark.....	0	1	0	0	do.
49. Rosewood.....	0	2	0	0	do.
50. Ebony.....	1	1	0	0	do.
51. Rice.....	4	0	0	0	per royan

SECTION II.

The undermentioned articles, being subject to the inland or transit duties herein named, and which shall not be increased, shall be exempt from export duty:—

	Tical.	Salung.	Fuang.	Hun.	
52. Sugar, white.....	0	2	0	0	per pecul
53. Sugar, red.....	0	1	0	0	do.
54. Cotton, cleaned and uncleaned.	10 per cent				
55. Pepper.....	1	0	0	0	do.
56. Salt fish, platu.....	1	0	0	0	per 10,000 lbs.
57. Beans and peas.....	.	.	.	.	One-twelfth.
58. Dried prawns.....	.	.	.	.	do.
59. Tilseed.....	.	.	.	.	do.
60. Silk, raw.....	.	.	.	.	do.
61. Beeswax.....	.	.	.	.	One-fifteenth.
62. Tallow.....	1	0	0	0	per pecul
63. Salt.....	6	0	0	0	per royan
64. Tobacco.....	1	2	0	0	per 1,000 bun.

SECTION III.

All goods or produce enumerated in this tariff shall be free of export duty, and shall only be subject to one inland tax or transit duty, not exceeding the rate now paid.

[L. s.]
[L. s.]

[L. s.]

[L. s.]

TOWNSEND HARRIS.
[L. s.]*

And whereas, the said treaty has been duly ratified on both parts, and the respective ratifications of the same were exchanged at Bangkok, on the 15th day of June, 1857, by CHARLES WILLIAM BRADLEY, Consul of the United States at Ningpo, in China, and the royal Siamese Commissioners, on the part of their respective governments.

PLAQUES.

TREASURY DEPARTMENT, July 27, 1860.

SIR:—I have examined your report under date of the 4th ultimo, and other papers and samples submitted to me, on the appeal of J. B. BEHRMANN from your decision assessing a duty of 24 per cent on certain articles described as "plaques," composed of a metallic base or plate, on which is laid a composition of porcelain and tinsel or foil, and used in the manufacture of ornaments for the person. The Department is of the opinion that the articles cannot be classified, as claimed by the importer, as "imitation of cameos and mosaics, not set," nor as subject to the duty of 24 per cent assessed on the entry under the final clause of the 20th section of the tariff of 1842, but that they should be treated as unenumerated, and liable to a duty of 15 per cent under the 1st section of the tariff act of 1857. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

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

CAUSTIC SODA.

It having been decided in several suits in circuit courts of the United States that "caustic soda" is entitled, under the law, to be admitted to entry at the same duty as "soda ash," and the Department having acquiesced in those decisions, collectors are hereby instructed that the duty to be assessed on "caustic soda" will be at the rate of 4 per cent, as a non-enumerated article, assimilated by operation of the 20th section of the tariff act of 1842, to "soda ash," specified in schedule H of the tariff of 1857.

* Signatures of Siamese plenipotentiaries.

COPY BOOKS WITH PRINTED HEADINGS.

TREASURY DEPARTMENT, July 27, 1860.

SIR:—I acknowledge the receipt of your report on the appeal of JOHN GILKISON, Esq., from your decision on certain "copy books with printed headings" imported by him. The books in question were, it appears, decided by you on the entry to be liable to a duty of 24 per cent under the classification in schedule C of the tariff of 1857, of "manufactures of paper, or of which paper is a component material, not otherwise provided for." The appellant claims entry at the rate of 15 per cent under the classification in schedule E, of "blank books, bound or unbound." The Department is of opinion that they cannot properly fall within either of these classifications, nor under that of "printed books," &c., in schedule G, but should be treated as unenumerated, and subject to a duty of 15 per cent under the 1st section of the tariff act of 1857. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

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

HUMAN HAIR.

TREASURY DEPARTMENT, July 27, 1860.

SIR:—I acknowledge the receipt of your report of the 9th ultimo on the appeal of T. MOREAU, Esq., from your decision assessing a duty at the rate of 24 per cent under the classification in schedule C of the tariff of 1857, of "human hair, cleansed or prepared for use," on a certain lot of hair imported from Havre, per the "Nuremberg," styled by the importers, "cheveux bruts." The appellant contends that it should be subject to a duty of 8 per cent under the classification in schedule G of "hair of all kinds, uncleaned and unmanufactured." The classification depends on a question of fact. Assuming the description of the article by the appraiser to be correct, and that it is, in fact, human hair, cleansed, dyed, and fully prepared and ready for braiding, curling, and other uses by the hair worker, the Department is of the opinion that it falls within the classification in schedule C, to which you have referred it. The duty of 24 per cent was properly exacted by you, and your decision is affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

F. H. HATCH, Esq., Collector, &c., New Orleans, La.

CUBAN MANIFESTS OF CARGOES.

Information has been received at the Department of State from JOHN C. HELM, Esq., the United States Consul-General at Havana, that the form of a manifest as hereto annexed, which is in conformity with the Spanish law, has been transmitted to him by the Captain-General of Cuba. It is stated by Mr. HELM that "if this form be followed by shipmasters trading with the island, a vast amount of trouble will be avoided, as well as the fines which will invariably be imposed by the Custom house authorities at Havana and other Cuban ports for a variance from this form."

Report and manifest of the cargo laden at the port of _____, on board of the _____ Captain _____ burden _____ tons, for _____ consigned to _____, _____ 18—.

No. Bills of Lading.	Marks.	No.	Shippers.	Consignees.	Merchandise.	Contents, Quantities, and Weights.	Value.

RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

GERMAN RAILWAYS.

The whole length of railways in Germany in 1857, was 6,708 miles, besides 2,060 authorized but not opened. The capital raised by shares and loans was, up to the end of 1857, in Prussia—

Government railways....	£9,727,133	Shareholders railways....	8,903,559
Shareholders railway*....	9 495,855	And in Austria—	
Shareholders railways....	24,859,110	All railways.....	29,258,650
And in other German countries—			
Government railways....	30,608,990	Total amount.....	£112,752,297

Of the new lines, 95 miles were opened in 1858. The revenue from the 6,708 miles in 1857 was £12,875,913, or about 11.5 per cent on the capital.

The average cost of (capital raised for) German railways on the 31st December, 1857, was £16,980 per mile opened, which is a little less than half that of British railways, the ratio being as 48 to 100.

In 1857, the Prussian railways carried 18,414,094 passengers, and killed only one passenger, and injured but one. What did the British do in the same time? According to Captain GALTON's report (Board of Trade) they killed 25 passengers from causes beyond their own control, and wounded not less than 63 passengers. The British roads carried 139,008,887 passengers in that year, (1857,) and killed 1 to 5,560,355; the Prussian being 1 to 18,414,094. The greater safety of the German railways may, we think, be traced to their moderate speed and careful working.

The percentage of working expenses to receipts on German railways has greatly fallen in the course of years, but owing to the increase of the traffic the cost per mile per annum has enlarged. The great fall in the percentage of expenses has of course benefited the owners of the German railways. The following table exhibits these interesting facts clearly:—

	Miles open.	Working expenses per mile.	Per cent of exp'se to rec'ts.		Miles open.	Working expenses per mile.	Per cent of exp'se to rec'ts.
1834....	79	...	....	1846....	2,100	535	52.7
1835....	80	281	75.0	1847....	2,893	555	53.9
1836....	115	261	62.5	1848....	3,519	525	58.3
1837....	131	251	65.5	1849....	3,944	510	53.8
1838....	188	288	68.9	1850....	4,387	525	51.1
1839....	295	421	73.3	1851....	4,620	546	48.4
1840....	392	416	57.5	1852....	4,839	794	52.2
1841....	560	530	59.2	1853....	5,101	750	52.4
1842....	793	480	57.6	1854....	5,323	811	55.5
1843....	980	471	51.8	1855....	5,754	869	48.0
1844....	1,214	475	50.8	1856....	6,529	855	48.9
1845....	1,587	475	52.9	1857....	6,708	931	48.5

the latter column being expressed in pounds sterling.

The percentage of profits on capital of the German railways in 1857 appears to have been 7.05 per cent. In Great Britain, according to Captain GALTON,

* Managed by government.

in 1857 it was only 4.06 per cent, and less than 4 per cent dividend. We are not quite clear whether the German 7.05 per cent is profit or dividend. If it be profit on the whole capital the dividend would no doubt be much larger than 7 per cent since the preferred part of the German railway capital (£22,800,000 up to 1858) pays about $4\frac{1}{2}$ per cent interest, which would raise the dividend, the profits on the total capital being in excess of $4\frac{1}{2}$ per cent. In Great Britain the case is at present different, for although the rate of interest on preferred railway capital (including loans) is about $4\frac{3}{4}$ per cent on the average—not quite $4\frac{3}{4}$ —namely, 4.67 on the average, yet the profits on the whole capital being less than the rate of interest on the preferred capital, the dividend is crushed below the percentage of profits.

On an average the capital invested in German railways realized, in—

	Per cent.		Per cent.		Per cent.
1834.....	.....	1842.....	3.88	1850.....	3.67
1835.....	2.26	1843.....	4.71	1851.....	4.45
1836.....	3.64	1844.....	4.17	1852.....	4.87
1837.....	2.69	1845.....	3.64	1853.....	4.74
1838.....	1.95	1846.....	3.60	1854.....	4.25
1839.....	2.27	1847.....	3.39	1855.....	5.11
1840.....	3.60	1848.....	2.67	1856.....	6.07
1841.....	3.65	1849.....	3.12	1857.....	7.05

Time was, therefore, when even the German railways, now paying upwards of 7 per cent per annum, paid under $2\frac{1}{2}$. The steady progress of the railway dividends, even in so comparatively poor a country as Germany, must afford hope for the future.

RAILROADS OF THE STATE OF NEW YORK.

The three leading railroads of the State—New York Central, New York and Erie, and the Hudson River—cost together eighty-eight millions of dollars. When we add the Harlem Road, the grand aggregate amounts to about one hundred millions of dollars. The total freights on these four roads for the fiscal year ending 1st September, 1859, were over thirteen-and-a-half millions of dollars, and the aggregate receipts somewhat over twenty millions, on all the roads of the State of New York.

At the same time the foreign commerce of the State and City has advanced rapidly. The total value of property carried on the State Canals has increased from sixty-seven millions in 1836, to upwards of two hundred millions of dollars per annum.

The New York Central Railroad has carried in five years past, 3,884,702 tons; New York and Erie Railroad, 4,449,365 tons; and the Canals, 18,929,636 tons; a total exceeding 27,000,000 tons of merchandise, agricultural products, etc.; the tolls and freight on this property exceeding \$49,000,000, for the five years.

New York City is the recipient of nearly all this vast property. Her merchants and capitalists, ship owners and boat-owners, traders and laborers, derive incomes from the freight and commissions on property received.

These facts point to the growing importance of railroads. They are essential to the development of the State's resources. If every dollar of the capital in-

vested in their construction were sunk, the State at large would, nevertheless, derive permanent benefits.

CAPITAL, FUNDED DEBT, FLOATING DEBT, COST, AND RECEIPTS OF EACH FOR YEAR ENDING SEPTEMBER 1ST, 1859.

Name of road.	Capital.	Funded debt.	Floating debt.
New York Central Railroad.....	\$24,000,000	\$14,333,771	.....
New York and Erie "	11,000,000	25,260,000	\$353,703
Hudsen River "	3,758,466	8,842,000	414,654
New York and Harlem.....	5,717,100	5,353,297	.....
Total, four roads.....	\$44,475,566	\$53,789,068	\$768,357
Albany and West Stockbridge.....	\$1,000,000	\$1,392,984	.....
Black River and Utica.....	815,711	700,000	\$8,158
Blossburg and Corning.....	250,000	220,000	.....
Buffalo, New York, and Erie.....	680,000	2,410,721	252,142
" and State Line.....	1,934,950	1,049,000	161,263
Cayuga and Susquehanna.....	687,000	411,000	.....
Chemung.....	380,000	.....	.....
Elmira, Jefferson, and Canandaigua...	500,000	.....	.....
Genesee Valley.....	75,689	165,000	42,500
Hudson and Boston.....	175,000	.....	.....
Long Island.....	1,852,715	636,907	17,539
New York and Flushing.....	120,000	125,000	.....
" and New Haven.....	2,980,839	2,163,500	21,121
Niagara Bridge and Canandaigua.....	1,000,000	.....	.....
Northern.....	.....	1,494,900	.....
Oswego and Syracuse.....	396,340	213,500	10,875
Potsdam and Watertown.....	665,419	911,000	192,748
Rensselaer and Saratoga.....	610,000	140,000	.....
Rochester and Genesee Valley.....	557,560	150,000	23,496
Saratoga and Schenectady.....	300,000	85,000	.....
" and Whitehall.....	500,000	395,000	.....
Syracuse, Binghamton, and New York..	200,130	1,643,126	146,079
Troy and Bennington.....	75,350	172,100	150
" and Boston.....	604,911	806,500	247,676
" and Greenbush.....	275,000	.....	.....
" Union.....	30,000	680,000	.....
Watertown and Rome.....	1,498,500	685,000	65,682
Albany and Susquehanna.....	404,950	.....	33,134
Atlantic and Great Western of N. Y. . .	1,020	.....	.....
Erie and New York City.....	352,741	14,000	42,716
Lake Ontario, Auburn, and New York..	77,855	.....	.....
Sodus Point and Southern.....	31,585	.....	1,850
Staten Island.....	50,603	.....	22,686
Buffalo and Alleghany Valley.....	16,000	.....	.....
Buffalo, Bradford, and Pittsburgh.....	250,000	8,525	53,109
Total.....	\$64,825,434	\$70,461,921	\$2,097,281
Broadway (Brooklyn).....	199,000	14,000	556
Brooklyn City.....	1,000,000	.....	.....
Eighth Avenue.....	800,000	.....	.....
Ninth "	795,360	.....	.....
Second "	650,000	350,000	18,000
Sixth "	750,000	.....	.....
Third "	1,170,000	110,600	25,000
Total city railroads.....	\$5,364,360	\$474,600	\$43,556
All other railroads.....	64,825,434	70,461,921	2,097,281
Total State of New York.....	\$70,189,794	\$70,936,521	\$2,140,837

Name of road.	Total debt.	Cost of road.	Rec'pts, 1859'
New York Central Railroad.....	\$14,833,771	\$30,840,713	\$6,200,848
New York and Erie ".....	25,613,713	35,320,907	4,482,149
Hudson River ".....	9,256,654	11,388,279	1,842,636
New York and Harlem.....	5,353,297	8,019,671	1,076,322
Total, four roads.....	\$54,557,425	\$85,569,570	\$13,601,955
Albany and West Stockbridge.....	1,392,984	2,392,984	.....
Black River and Utica.....	708,158	1,237,553	62,941
Blossburg and Corning.....	220,000	496,661	26,858
Buffalo, New York, and Erie.....	2,662,863	3,150,762	541,249
" and State Line.....	1,210,263	2,779,994	848,327
Cayuga and Susquehanna.....	411,000	.....	59,205
Chemung.....	.....	400,000	.....
Elmira, Jefferson, and Canandaigua.....	.....	.....	.....
Genesee Valley.....	207,500	329,224	5,826
Hudson and Boston.....	.....	175,000	63,803
Long Island.....	654,536	2,566,270	334,195
New York and Flushing.....	125,000	.....	21,825
" and New Haven.....	2,184,621	5,330,486	992,404
Niagara Bridge and Canandaigua.....	.....	.....	.....
Northern.....	1,494,900	4,799,287	382,932
Oswego and Syracuse.....	224,375	775,677	109,152
Pottsdam and Watertown.....	1,103,748	1,594,955	100,047
Rensselaer and Saratoga.....	140,000	901,025	235,902
Rochester and Genesee Valley.....	173,496	653,927	44,220
Saratoga and Schenectady.....	85,000	480,684	.....
" and Whitehall.....	395,000	908,890	154,099
Syracuse, Binghamton, and New York..	1,789,205	2,851,292	196,401
Troy and Bennington.....	172,250	253,918	.....
" and Boston.....	1,054,176	1,510,513	218,689
" and Greenbush.....	.....	294,731	.....
" Union.....	680,000	732,114	.....
Watertown and Rome.....	750,682	2,150,502	362,993
Albany and Susquehanna.....	33,134	406,952	.....
Atlantic and Great Western of N. Y.....	.....	.....	.....
Erie and New York City.....	42,716	287,707	.....
Lake Ontario, Auburn, and New York..	.....	74,672	.....
Sodus Point and Southern.....	1,850	35,298	.....
Staten Island.....	22,686	114,014	.....
Buffalo and Alleghany Valley.....	.....	21,300	.....
Buffalo, Bradford, and Pittsburg.....	61,634	328,851	.....
Total.....	\$72,559,202	\$123,608,813	\$18,263,034
Broadway (Brooklyn).....	14,556	213,069	29,804
Brooklyn City.....	.....	1,054,107	471,442
Eighth Avenue.....	.....	769,550	379,499
Ninth ".....	.....	352,694	8,522
Second ".....	368,000	993,366	262,166
Sixth ".....	.....	877,336	323,956
Third ".....	135,600	1,564,098	502,951
Total city railroads.....	\$518,156	\$5,824,220	\$1,978,340
All other railroads.....	72,559,202	123,608,813	18,263,034
Total State of New York.....	\$73,077,358	\$129,433,033	\$20,341,374

RAILWAY STATISTICS.

In 1857, says an English journal, the linear extent of English railways exceeded the ten chief rivers of Europe united; and more than enough of single rails were laid to make a belt of iron round the earth. The tunnels, joined

together, would stretch more than seventy miles; the viaducts in the vicinity of the metropolis alone would reach 11 miles; and the earthworks measured 550,000,000 of cubic yards—a mass of material, which, if piled in a pyramid, would rise $2\frac{1}{2}$ miles high, with a base larger than St. James's Park; 80,000,000 of train miles were run annually. The total number of stations amounted to 3,121; 5,000 engines, with 150,000 vehicles, composed the working stock; and 109,660 officers and servants were employed. The engines, in a straight line, would extend from London to Chatham, and the vehicles from London to Aberdeen; 2,000,000 of tons of coals were annually consumed; and in every minute of time, 20 tons of water were flashed into steam by 4 tons of coal. The coal consumed is almost equal to the whole amount exported to foreign countries, and to one-half of the annual consumption of London. Such was the wear and tear, that 20,000 tons of iron were required to be replaced per year; 2,000,000 of sleepers out of 26,000,000 laid down annually perished; and 300,000 trees, equal to 5,000 acres of forest, must be annually felled to make up the loss. In 1853, 111,000,000 of passengers were conveyed, each passenger traveling an average of 12 miles. A curious calculation has been made. Twelve miles by railway are accomplished in half an hour, whereas the old stage coach required an hour and a half to get through the distance. The aggregate time thus saved for the above number of passengers is equal to *thirty-eight thousand years*. But in 1857, the number of passengers amounted to 139,008,888, and the receipts from all sources were £24,174,616.

RAILROAD RECEIPTS FOR JULY.

	1860.	1859.		
Baltimore and Ohio Railroad.....	\$321,895	\$261,589	increase	\$60,306
Washington branch.....	44,520	31,784	"	12,736
Northwest Virginia branch.....	16,622	10,787	"	5,835
Total.....	383,037	304,261	"	78,076
Buffalo, New York and Erie.....	45,526	39,828	"	5,698
Chicago, Burlington, and Quincy....	154,723	100,883	"	53,840
Chicago and Northwest.....	39,840	24,274	"	15,566
Chicago and Rock Island.....	80,609	65,831	"	14,778
Cleveland and Toledo.....	50,639	45,963	"	4,676
Galena and Chicago.....	78,842	88,527	decrease	9,685
Hudson River.....	140,865	125,304	increase	15,561
Illinois Central.....	196,000	138,900	"	57,100
Indianapolis and Cincinnati.....	29,605	25,213	"	4,392
Michigan Central.....	128,383	108,304	"	20,079
Milwaukee and Mississippi.....	37,827	45,834	decrease	8,007
New York Central.....	549,174	504,517	increase	44,956
New York and Harlem.....	100,039	91,189	"	8,850
Pittsburg, Fort Wayne, and Chicago	163,997	134,941	"	29,056
St. Louis, Alton, and Chicago.....	83,119	58,801	"	24,318
Toledo and Wabash.....	84,879	59,141	"	25,738

A METHOD OF TESTING THE STRENGTH OF STEAM BOILERS.

The following is from a paper contributed to Newton's *London Journal*, by Dr. JULY:—The author adverted to the means hitherto adopted for testing boilers. 1st. That by steam pressure, which gives no certain indication whether strain has not taken place under its influence, so that a boiler so tested may subsequently explode when worked at the same or even a somewhat less degree of

pressure. He trusted that this highly reprehensible practice had been wholly abandoned. 2d. That by hydraulic pressure obtained by a force-pump, which does not afford an absolutely reliable proof that the boiler has passed the ordeal without injury, and moreover requires a special apparatus. The plan which had been adopted by the author for two years past, with perfect success, was free from the objections which applied to the above, and is as follows:—The boiler is entirely filled with water; then a brisk fire is made in or under it. When the water has thereby been warmed a little, say to 70° or 90° Fahrenheit, the safety valve is loaded to the pressure up to which the boiler is to be tested. Bourdon's or other pressure indicator is then constantly observed, and if the pressure occasioned by the expansion of the water increases continuously up to the testing pressure, without sudden stoppage or diminution, it may be safely inferred that the boiler has stood it without strain or incipient rupture. In the trials made by the author, the pressure rose from zero to 62 lbs. on the square inch in five minutes. The facility of proving a boiler by this method was so great, that he trusted that owners would be induced to make those periodical tests, without which, fatal experience has shown, no boiler should be trusted.

PERFORMANCE OF LOCOMOTIVES.

	Great Western, Illinois		—N. Y. Central.—		—M. S. & N. I.—	
	Illinois	Central	Albany & Sch. Div.	Middle Division	E. and N. Division	Western Division
Wages.....	\$0.0441	\$0.0401	\$0.0472	\$0.0473	.....	.....
Fuel.....	.....	0.0752	0.1038	0.1090	0.0514	0.0437
Stores.....	0.0054	0.0077	0.0074	0.0071	0.0071	0.0063
Cleaning.....	0.0054	0.0062	.....	.....	.....	.....
Repairs.....	0.0503	0.0503	0.0447	0.0334	0.0569	0.0759
Total.....	0.1557	0.1795	0.2080	0.1968	.....	.....
Wood per cord.....	.....	.....	3.84	.....	2.75	.....
Coal per ton.....	.....	.....	5.00	.....	.....	.....
Engines reported...	.....	.....	34	45	37	25
Miles run.....	32,420	200,506	60,474	89,540	76,567	43,141
Per pint oil.....	22.70	15.46	20.80	22.45	19.10	24.31
Per cord wood.....	41.63	46.34	37	35.24	53.42	62.85
Per ton coal.....	39.86	33.74	.....	.....	.....	.....
Cars per train.....	10.58	10.52	15.32	11.98	.....	.....
Length main track..	.....	708.25	17	184.79	.....	.....

LOUISVILLE CANAL.

Congress has authorized an addition to the Louisville and Portland Canal, by the following resolution:—

A RESOLUTION AUTHORIZING THE ENLARGEMENT OF, AND CONSTRUCTION OF A BRANCH TO, THE LOUISVILLE AND PORTLAND CANAL.

Resolved, by the Senate and House of Representatives of the United States of America in Congress assembled, That the president and directors of the Louisville and Portland Canal Company be, and they are hereby authorized, with the revenues and credits of the company, to enlarge the said canal, and to construct a branch canal from a suitable point on the south side of the present canal, to a point in the Ohio River, opposite Sand Island, sufficient to pass the largest class of steam vessels navigating the Ohio River: *Provided,* That nothing herein contained shall authorize the said president and directors, directly or indirectly, to use or pledge the faith or credit of the United States for the said enlargement or construction. It hereby being expressly declared, that the Government of the

United States shall not be in any manner liable for said enlargement and construction. *Provided, further,* That when said canal is enlarged and its branch canal constructed, and its cost of said improvement paid for, no more tolls shall be collected than an amount sufficient to keep the canal in repair, and pay for all necessary superintendence and management.

Approved 24th May, 1860.

NEW YORK CITY RAILROADS.

The business of the New York City roads for the year ending Sept. 30, 1859, were, according to the State Engineer's report, as follows:—

	No. passengers carried.		Receipts.	
	1858.	1859.	1858.	1859.
Third Avenue.....	7,945,462	9,974,101	\$403,055	\$502,951
Eighth "	6,768,203	7,589,997	338,410	379,500
Sixth "	5,612,357	6,479,129	280,617	323,956
Second "	4,504,645	5,182,011	227,457	262,166
Harlem.....	3,069,721	3,493,113	153,486	261,983
Total.....	27,900,388	32,718,351		
	Expenses.		Net Earnings.	
	1858.	1859.	1858.	1859.
Third Avenue.....	\$242,811	\$307,188	\$160,244	\$195,763
Eighth "	177,753	252,872	160,657	126,621
Sixth "	178,226	216,635	103,391	107,271
Second "	119,704	180,644	107,753	81,522
Harlem.....	82,882	130,180	70,604	131,803

The increase of passengers on the Third Avenue is the largest, being over 20 per cent; that of the Eighth is 11 per cent; Sixth, 16 per cent; Second, 15 per cent; and Harlem, 14 per cent. The average is 15½ per cent. At this rate of increase there will be, in a year or two, required double the quantity of street railway accommodation to do the passenger business between the two ends of the island.

RAILWAYS OF CONNECTICUT.

GENERAL STATEMENT OF THE LENGTH, COST, AND OPERATION FOR THE YEAR 1859, OF THE RAILWAYS OF CONNECTICUT.

Name of railway.	L'gth in Conn.	Cost.	Total debt.	Revenue.	Net income.
New York and New Haven....	47	\$5,330,486	2,184,621	\$992,404	\$359,183
Hartford and New Haven.....	66	3,320,702	964,000	723,469	381,267
Norwich and Worcester	50	2,613,694	729,077	351,689	139,565
Providence, Hartford, and Fishkill...	96	*4,205,966	2,161,691*	349,505	157,163
New London, Willimantic, & Palmer..	57	1,573,568	1,052,000	129,554	†.....
Housatonic Railway	74	2,430,775	328,730	289,860	35,230
Naugatuck Railway.....	57	1,578,301	316,391	241,330	104,772
Danbury and Norfolk.....	24	386,715	89,600	73,825	27,991
New Haven and Northampton.....	55	1,400,000	500,000	141,641	‡74,933
N. Haven, N. London, & Stonington..	62	1,454,040	879,842	107,837	15,649
New York, Providence, and Boston..	6	2,158,000	306,500	276,434	114,563

Totals and averages 594 27,461,247 9,512,452 3,668,545 1,410,116

The eight miles of the Boston and New York Central Railway in Connecticut are not included in the above length.

* According to the report of the preceding year.
 † The New London, Willimantic, and Palmer Railway went into the hands of the trustees of the first mortgage bond holders in January, 1859.
 ‡ The revenue given is \$141,641, the expenses \$66,708; but the net, \$52,813; how such a difference is made we do not see; the arithmetical difference being \$74,933.

JOURNAL OF MINING, MANUFACTURES, AND ART.

TIN—ITS USES AND COMMERCE.

There are thousands of persons who have no further knowledge of tin than that of beholding it in the form of common pails and pans. Well, to use an expressive Irishism, "such tin is no tin at all." It is simply thin plates of iron coated with tin metal, the proper name of which ought to be *tinned sheet-iron*. Tin is one of our most useful metals, because it is employed for a great number of purposes. We propose to give some information respecting it, which will be new to most of our people, and interesting, we think, to all.

Tin is one of the most ancient metals—that is, it was well known to the ancients; and it is very well established as a fact that the Phœnicians, those olden masters of the sea when Tyre was in her glory, made voyages to Cornwall, and obtained tin from the mines in that district, long before Britannia was known to the Romans. It was this tin, alloyed with copper, which formed the old bronze armor of the Asiatic warriors; and it may have been furnished also by the renowned Hiram, King of Tyre, the great architect and friend of Solomon, for the building of the first and unapproached Jewish temple. In appearance, this metal resembles silver when first polished; but it sooner becomes dim, because a thin coat of oxyd forms early on its surface when exposed to a moist atmosphere. It is quite ductile, and may be rolled out into very thin sheets, called *tin-foil*. When undergoing this rolling operation, it is kept at a temperature of about 212° Fah., at which heat its malleability is greatly increased. A common method of making tin-foil is to form ingots of lead and tin—the former in the heart of the ingot, the latter on the outside—and to roll these out into foil. By this process, the tin is retained on the outside, however thin the ingots may be rolled out, while the poisonous lead is kept inside; and by this means the cost of the material is not one-half what it otherwise would be if made entirely of pure tin. A patent has been secured for this invention, and by the reduction caused by it in the price of foil, the latter is now employed for a hundred purposes, such as wrappers for tobacco, labels on bottles, etc., for which paper and other substances were formerly used.

Tin is also extensively employed in the chemical arts, such as by calico-printers and dyers, for making what are called "spirit mordante" and "stannate salts." It is this metal which gives its brilliant hues to the rich crimson shawl and the azure-blue robe of the fashionable lady; and it forms the basis of many other colors on silk, cotton, and woolen fabrics. For this purpose, the metal is commonly dissolved in an acid, such as hydro-chloric or nitro-muriatic, which, in a diluted state, forms the chemists' "spirits." Instead of dissolving it as an acid for such purpose, as was exclusively done in former years, it is now combined with an alkali, and forms the stannate of soda, a salt resembling pearlsh. In this form it is now extensively employed in Europe, and the writer of this has had some of it in his possession for more than a year, but has endeavored in vain to make some of our practical chemists appreciate its advantages. Tin

dissolves in some acids like white sugar in hot water; but the action which takes place in the former case is chemical—in the latter, merely mechanical.

The tinned-plates employed by our "whitesmiths" for making milk-pans, pails, and such like articles, are all imported from England, to which country their manufacture is confined. We also import great quantities of this metal in pigs, called "block-tin." It is principally used for making bronze alloys for machinery and "white metal," formerly called "Britannia metal," which is an alloy composed of tin, copper, and antimony. Very small portions of the latter two metals are used in the alloy—only a sufficient quantity to render the tin hard, and at the same time retain its ductile quality. A very great amount of this metallic alloy is employed in the manufacture of tea-table ware. It is first made into sheets; these are afterwards spun in lathes into the forms of tea, coffee, and milk-pots, cups, flacons, and urns, of tasteful designs; after which they are electro-plated with silver, and become beautiful in appearance. Twenty years ago all our pewter and Britannia ware was imported from England; now very little, if any, comes to us from abroad. We manufacture all we use at home. Skillful English artisans introduced the art among us, and there are very large manufactories for making this ware in Waterbury and Meriden, Conn., Taunton, Mass., and several other New England towns. Very great advances have been made of recent years in the designs or forms of articles formed of this ware. The old pewter tea-pots and their adjuncts were models of ugliness in comparison with the same class of articles now manufactured. The adoption of classic models has wonderfully improved the tastes of our people, and such has been the progress recently made in this art that elegant articles of such ware, with surfaces of dazzling pure silver, can now be purchased lower than the old pewter-pots thirty years ago.

ENGRAVING ON GLASS.

The *Scientific American* translates from *L'Invention* the following account (by Mr. GUGNON) of a new process of engraving on glass, for printing the patterns for embroidery, netting, crotchet, etc., by which it is said that the labor of a month in this kind of engraving can be performed in one day. The process consists in etching by means of hydrofluoric acid which, as our readers are aware, has the remarkable property of corroding glass:—

1. *Substances Employed.*—It is known that certain fatty and resinous substances are not soluble in hydrofluoric acid. Among these substances the author chooses the bitumen of Judea, to which he adds one-sixth part of gum mastic (mastic in tears;) he then reduces the whole to an impalpable powder.

2. *The Design.*—The design is cut in stencil, either in paper, parchment, or metallic plate, in a way to cover those portions of the glass which are to be attacked by the acid, and to leave exposed those parts which are not to be attacked.

3. *The Application of the Process.*—The glass is placed horizontally and varnished with a very thin coating of any fatty substance (the author prefers the essence of turpentine;) and the stencil plate is laid on the varnish while it is fresh. The asphaltum powder is then sifted through a very fine sieve over the surface of the stencil plate and the glass, and the plate is carefully removed, thus leaving the powder upon the glass in figures corresponding to the

open parts of the plate. The glass is next exposed to gentle heat which causes the essence of turpentine to combine with the asphaltum and the gum mastic, and the mixture, in melting, fixes itself to the glass.

4. *Treatment by Acid.*—The pattern is surrounded by a ridge of soft wax prepared for the purpose, and hydrofluoric acid, diluted with one-third its volume of water, is poured over it. In about 40 minutes the etching is completed.

MANUFACTURE OF ROOM OR WALL PAPER.

The manufacture of wall paper is carried on to a great extent in Philadelphia, and gives employment in some half-dozen establishments to 1,800 men and boys. The quality of the paper made there has a reputation which extends over the entire Union, and in many instances it is preferred for beauty and tasteful designs to that imported from France. Until within the last few years, all wall paper was made by hand; but now very pretty and cheap paper is produced by machinery in two of the Philadelphia factories. The mode of making paper by machinery and by hand is as follows:—The paper in the rough state, when taken to the manufactory for printing, is first coated with white clay, obtained from New Jersey. This clay is ground very fine and then made soluble. The paper is then passed over a revolving drum, the mixture being put on by a large brush, which revolves very rapidly. The paper, as it comes from the drum, passes into a heated box, which extends the entire length of the building, which completely dries it by the time it reaches that portion of the room. The factory of HOWELL & BROTHERS is 350 feet in length. If the paper is to be glazed, it is passed through rollers made of stiff bristles. This mode of preparing the paper is practiced in all establishments. It is then ready to receive the colors and figures which fancy may dictate. If the paper is to be printed with machinery, rollers having the figures, flowers, or any other design to be printed, fixed on them with small brass pins, the interstices being filled with felt, are placed in their proper places on the cylinder of the press, some eight feet in diameter. As many as ten different colors can be put upon the paper at one time, so accurate does the press work, and the registering apparatus being so perfect in all its details. There are two of these presses in the factory of HOWELL & BROTHERS, each one being capable of printing, 13,500 yards of wall paper per day. The paper passes up a plane and then under the press between that and the rollers which are to give it the various colors, after receiving which it passes through the heated boxes, and is then cut into pieces nine yards in length, ready for use. In other rooms the finer kinds of paper are made by hand. One is devoted to the making of velvet paper. Here the colors are put on with flat blocks, the workmen having a lever, moved by a treadle with the foot, to press the block so as to make the impression on the paper. It is then passed through a covered box, while the ink or color is yet wet, in which is a quantity of wool, ground very fine. A boy, by striking the bottom of the box with a stick, causes the paper to be covered with the wool, and when it is removed, the portions to represent velvet are nicely covered. In gilding paper, the same process, so far as printing is concerned, is followed. The gold is placed upon the damp portions of the paper by boys, and the particles which are brushed off are collected

together and ground up for the purpose of making a powder, to be used in the manufacture of bronze paper. In making wall paper by hand, as it is termed, a block is necessary for color and shade to be placed upon the paper, and as these blocks have to be cut by artists, our readers may have some idea of the cost necessary in producing paper which is purchased at so small a sum. The paper made to represent oak and marble is furnished by men who pursue only this branch of the business, the demand for it being so limited that it would not justify the regular manufacturers to go to the expense necessary for its production. There is no branch of this business but what is successfully carried on in Philadelphia; and so expert have the manufacturers become in the business, that a great deal of the paper sold to wholesale dealers in New York is resold by them as the production of Frenchmen.

R A G S .

England is discussing at the present time, the interesting topic of rags. This article would be of little account if we had no printing presses, but the enormous increase of printed matter render rags a material of first rate importance throughout the civilized world. The repeal of the excise duties on paper and of the tax on newspapers will increase the consumption of rags very much in England, and the English, fearing a great scarcity, begin to look around for the means of supplying the demand, and are complaining of the prohibitory export duty of France. It was expected that under the new treaty, French rags, the exportation of which has been absolutely prohibited, would be exported free, but a duty has been laid upon their exportation which amounts to prohibition. This has caused great excitement among the English paper manufacturers, and negotiations have been actively commenced with other ragged countries of Europe, Holland, Germany, Belgium, Spain, and Portugal, which prohibit the exportation of their worn-out garments.

There are now about seven hundred paper mills in England, and from seventy to eighty in Scotland, besides no inconsiderable number in Ireland. The annual value of the paper manufactured, exclusive of the tax, is from £1,600,000 to £1,700,000. The Scottish mills are much more extensive than the English, for while not more than one-tenth in number, they pay a sixth part of the paper revenue. Until a very recent period the tax on paper amounted to more than three times as much as the total wages paid to the workpeople employed.

The English writing papers are made of their own rags, but printed paper is made chiefly of rags imported from the tattered cities of the continent—Hamburg, Bremen, Bostock, Ancona, Leghorn, Messina, Palermo, and Trieste.

With the increased activity of the printing press under the free system adopted in England, they must increase their purchases, and as the supply was short previously, the British Government are extremely anxious to remove the obstructions to free trade in rags throughout Europe, and they naturally complain of the difficulties that beset them. The editor of *Bell's Life in London* ought to pitch into LOUIS NAPOLEON vigorously for the want of "fair play" he has shown in this contest for rags.

It is probable enough that the price of rags, and consequently of paper, will

be increased in this country when paper-making is materially increased in England under their new system, and our own government should bring their diplomacy to bear upon those countries who refuse to part with their rags, in order to induce free exportation if possible. We consume enormous quantities of printing paper in this country already, and the consumption is increasing, year by year, and it will become a question of great importance within a few years how we are to be supplied with rags. We manufacture the best paper machinery in the world, the original design having been stolen by a Yankee mechanic who worked in a paper mill in England several months, and obtained drafts of the machinery and the secret of heating the revolving cylinders by steam. The original machine was immensely improved by the Yankees when they began to make paper by machinery, and they soon began to export to England the improved machines, the rough model of which they had stolen from that country. The Yankees ought now to help the world out of this rag difficulty by inducing those countries which refuse to abandon their "old habits" to export rags without restrictions. They may exercise some diplomatic influence, without doubt, on the other side of the water, in concert with England.

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COTTON SPINDLES.

The following is a table of the recent increase in the number of spindles in cotton factories at the East :—

INCREASE OF SPINDLES SINCE SEPTEMBER 1, 1859.

|                          |                     | Spindles. | No. | Pounds<br>per day. |
|--------------------------|---------------------|-----------|-----|--------------------|
| Fall River.....          | Linen mill*         | 30,000    | 30  | 4,000              |
| Sprague .....            | Print cloth         | 10,000    | 32  | 1,250              |
| Williamsville, R. I..... | Fine shirting       | 5,000     | 35  | 536                |
| Masonville, R. I.....    | " "                 | 5,000     | 36  | 521                |
| Slater, R. I.....        | Fine, coarse, fancy | 2,000     | 14  | 857                |
| Ashland.....             | Light sheeting      | 5,000     | 21  | 1,190              |
| Fall River.....          | Print cloth         | 13,000    | 30  | 2,000              |
| Fall River, Robeson..... | " "                 | 6,000     | 30  | 800                |
| Taunton, Dean & Co.....  | " "                 | 9,000     | 28  | 1,336              |
| T. J. Hill, R. I.....    | Fine sheeting       | 6,000     | 36  | 625                |
| Edward Harris, R. I..... | Fancy               | 20,000    | 18  | 6,111              |
| Harmony, Cohoes.....     | Print cloth         | 6,000     | 36  | 625                |
| Ogden, Cohoes.....       | " "                 | 4,000     | 32  | 500                |
| Warren st., R. I.....    | Fine sheetings      | 10,000    | 36  | 1,042              |
| Indian Orchard.....      | Sheetings           | 18,500    | 28  | 2,808              |
| Hamilton M. Co.....      | Print cloth         | 12,000    | 33  | 1,454              |
| Everett.....             | Fancy               | 15,000    | 14  | 6,423              |
| Pemberton.....           | " "                 | 20,000    | 14  | 8,571              |
| Pembroke.....            | Print cloth         | 12,000    | 32  | 1,600              |
| Blodget Paper.....       | " "                 | 15,000    | 30  | 2,000              |
| Amoskeag.....            | Fancy               | 8,000     | 16  | 2,750              |
| Androscoggin.....        | Sheetings           | 40,000    | 25  | 7,200              |
| Total.....               |                     | 273,500   |     | 54,234             |

Many other extensions are projected—among them by the Neamkeag Manufacturing Company, about 33,000 spindles—also Wamsutta, Blackstone, Pacific, etc., about 70,000 spindles more.

\* Changed to print cloths, and now in operation.

## SILVERING LEAD TUBING.

Many attempts have been hitherto made to silver the interior of lead and other tubing employed in mineral water apparatus and for other purposes, by the voltaic process, but it has hitherto been found impossible to effect a uniform deposition beyond a short distance from the ends of the tubing. The object of this invention is to obtain by such process a uniform deposition of the silver on every part of the interior of a piece of tubing of any length, and to this end the invention consists in the employment as the bath or decomposition cell of the tube itself; also in the use, for the purpose of conducting the galvanic current and for replenishing the supply of the coating metal, of a rod or wire passing through the tube in the direction of its length; also in the extension or stretching of the tube and central conductor by means of screw threads and nuts, or their equivalents attached to their ends, for the purpose of keeping them straight, and thereby providing for the more ready insertion of the central conductor within the tube, and for the prevention of metallic contact; also in the use of non-conducting supports between the interior of the tube and the exterior of the central conductor, for the purpose of preventing the conductor coming in contact with the tube, and preserving a uniform distance between them in all parts; also in providing for the movement of the central conductor and its non-conducting supports within the tube to permit the deposition of the metal on all parts of the interior of the lead pipe, which could not take place if the supports were stationary; and lastly in connecting the poles of the battery at opposite ends of the tube and central conductor to insure uniformity of deposit throughout the whole length of the tube.

## GAS-LIGHT COMPANIES OF THE UNITED STATES.

The *American Gas-light Journal* has the following interesting returns:—

The annual tables of gas-light companies will be found in this issue, the most noteworthy features of which are the decrease in the price of gas in several of the cities, and a slight increase in the number of gas-works in operation, as follows:—

|                                                       |              |
|-------------------------------------------------------|--------------|
| 381 American companies .....                          | \$47,911,215 |
| 23 Companies in British provinces.....                | 2,112,040    |
| 19 Cuban, Mexican, and South American companies. .... | 6,500,000    |
| -----                                                 | -----        |
| 423 companies; aggregate capital .....                | \$56,523,255 |

There is no question that the lower the cost at which good gas—of say twelve candles or higher brilliancy—is furnished, the greater will be the consumption, and necessarily the greater the profits to the manufacturers. This is beginning to be understood by gas companies, and the sooner it is acted upon, the better we are sure it will be for themselves. The paucity of gas-works on this extended continent must strike every reader. Take New York for instance—the Empire State of the North American Confederation, with its area of 46,000 square miles, or 30,030,000 acres, of which 15,000,000 are improved; its extreme length nearly 480 miles, and its breadth 310 miles; with a population of at least 4,000,000, distributed in nearly 800,000 of families, occupying, perhaps, 600,000 dwellings, in 45 counties, with 71 gas-works to light them up. That is not much more than a gas-work to every county in the State.

New York is filled with populous and thriving cities, towns, and villages, every one of which—we need hardly except one, whose inhabitants number 500

persons—can support gas-works. Look at Pennsylvania, with an equal area of territory—46,000 square miles, or 29,440,000 acres, of which some 10,000,000 are improved, and about 4,000,000 of population. Pennsylvania has 63 counties and but 48 gas-works, and yet we believe the actual capital in gas-works owned in Pennsylvania is greater than in any other State, not excepting New York.

Massachusetts has 49 gas-works, with a territory to light up of 8,000 square miles, or 5,000,000 of acres, of which, perhaps, 2,500,000 are cultivated, and a population of about 2,000,000.

Illinois has 55,400 square miles of area and 13 gas-works. No State in the Union is more blessed with jaunty little towns and enterprising people. Everybody goes to Illinois to work, and it is time they set to work at striking a light.

Ohio measures, in area, 40,000 square miles, and numbers 87 counties. She has 30 gas-works, but then, Ohio is full of pigs, and it would be a reflection upon that useful branch of illuminating material to slight their well tried ability to keep the wick-ed portion of the community from utter darkness; we do not propose, therefore, to grumble at Ohio.

Great Britain, on the other hand, has 88,000 square miles and about 1,100 gas-works. Why is it that Great Britain, with not twice the area of territory contained in the single State of New York, should have fifteen gas-works to our one, and three times as many on her little island as there are in the whole United States combined? We have, surely, plenty of money and abundance of enterprise. The subject of extending the area of gas dom in this country is beginning to attract the attention of moneyed men, and they may rely upon it that a more sure and profitable investment is not to be found here or elsewhere. A hundred thousand dollars invested in three or four village gas-works will yield revenue enough for any reasonable man during his sojourn here below, and be a neat little monument to leave to his affectionate heirs when his own light shall have been extinguished by the waves of relentless Time. We repeat that, in order to moderately light the various towns on this continent, there are not less than twenty thousand gas-works yet to be built, and, instead of concentrating the interest in mammoth corporations, they should be of moderate size and extent, economically built, honestly managed, and, by the reasonable price at which they furnish light, they should and inevitably will become the only means of meeting that universal want.

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#### THIMBLE MANUFACTURING.

The process of manufacturing thimbles with the latest improvement, is as follows:—

Sheet iron, one twenty-fourth of an inch thick, is cut into strips of dimensions suited to the intended size of the thimbles. These strips are passed under a punch press, whereby they are cut into disks of about two inches diameter, tugged together by a tail. Each strip contains one dozen of these blanks, and these are made red hot, and laid upon a mandrel nicely fitted to their size. The workman now strikes the middle of each with a round faced punch, about the thickness of his finger, and thus sinks it into the concavity of the first mandrel. It is then transferred successively to another mandrel, which has five hollows of successively increasing depth, and, by striking it into them, it is brought to the proper shape. This rude thimble is then stuck into the chuck of a lathe, in order to polish it within; it is then turned outside, the circles marked for the gold ornament, and the pits indented with a kind of milling tool. They are next annealed, brightened, and gilded inside, with a very thin cone of gold leaf, which is firmly united to the surface of the iron by the strong pressure of a smooth steel mandrel. A gold fillet is applied to the outside, in an annular space turned to receive it, being fixed by pressure at the edges into a minute groove formed on the lathe.

## COOLING OF METAL CAUSING IT TO HEAT ITSELF.

It is generally known that the cooling of one end of a piece of metal generally cools other parts of the same piece of metal, by the power which the metal has of conducting heat from the warmer to the cooler parts. But when some metallic substance, as steel, cools to some certain temperature, which is different for different substances, some change in the structure of the substance commences at some point or points, which change generates heat; and this change extends from the point or points of beginning, through other parts, and heats other parts of the substance. The temperature at which this spontaneous heating commences in steel, is that at which the steel appears only a little reddish on a cloudy day. This rise of temperature depends on the portions and state of the iron and carbon which compose the steel. Prof. HORSFORD says he used an iron rod, and did not perceive that one end of his rod was warmed by the cooling of another part. Common wrought iron does not contain enough carbon to produce much of this spontaneous heating. But the portion of carbon which exists in common good steel, is large enough to produce a rise of temperature sufficient to be perceived without any thermometer, by the following process. This is seen by using a bar of steel about one-eighth of an inch thick and one inch or more wide. Heat one end of such bar nearly white hot, without warming its other end much, as blacksmiths heat steel, by keeping it somewhat screened from the air while in the fire, to prevent much oxide from forming on it, next move it from the fire into a dark place. After some parts cool from light red to dark red, they will reheat to light red. Such spontaneous heating may be shown less perfectly by heating a knife blade in a common fire, and suddenly moving it into a dark place.

## THE AMERICAN PUMP.

"Necessity" is said to be "the mother of inventions;" be this as it may, Americans are an inventive people, as is shown by the fact that nearly 29,000 patents have been issued by our government; of this vast number, only a small proportion have reached a handsome remunerative eminence. Among those of real merit and general utility, may be placed "*The American Pump*," owned by Mr. JAMES M. EDNEY, 147 Chambers-street. Though in its infancy, it has gained a wide and durable reputation, not only in America but abroad. The *Patrie*, a daily Paris paper, gives a very flattering notice of this pump, one of which had been tried by several scientific gentlemen near Paris; it says, "the unanimous opinion of the entire party was, that it was the most perfect pump ever invented, being unequalled in simplicity, economy, and durability." A leading London house has given an order for that market, and the proprietor has just sent one to a town in Turkey of 30,000 inhabitants, where a pump was never seen. Cuba, California, Central America, are ordering it for general use by hand and power. Every State in the Union has more or less of these pumps at work. *It is a double-acting force pump*, and the whole construction is such as to entitle it to pre-eminent merit, for while it is the simplest, it is the most powerful, either to raise, force, or throw water to any desired height or distance, and is adapted to almost every purpose, and economical in price.

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**STATISTICS OF AGRICULTURE, &c.**


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**VINYARDS OF FRANCE.**


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The value of land in the valley of the Loire varies considerably throughout Touraine. At Pitiuviens, for instance, which lay on our left, the price per English acre is £35, and the produce £8 per acre; at Chambord, £25 per acre, and the produce £8 8s.; while at Amboise the produce usually reaches £5 12s. per acre, and the price of land £43. At Chambord, near Blois, we find about two thousand acres of vinery, and all under the eye at once upon a blowing sand. Quitting Orleans, the railway conducts us along the right bank of the Loire. The valley is broad through which we run, varied by moderate high hills, and the scenery to Tours is charmingly sunny.

The slopes to the Loire are covered with vineyards, and its waters being thrown into strong currents here and there by the presence of islands, has hollowed out the yellow cliffs that confine them. The best wines produced in the Orleanois are to be found near St. Ay. Leaving Blois, with its historic castle, impregnable, on one steep slope, and passing Amboise, the eye, wandering over a dead level, is attracted by what appears to be the towers of a vast cathedral, rising alone and solemnly. The imagination becomes active, and at last a city fills the space, which to our fancy had seemed the precincts of a solitary temple. It is Tours; and as we look about amongst its stately streets we are reminded of what we have read of this éradle of the French monarchy.

Proceeding to Poitiers, it is noticeable that the lands are cultivated by oxen in pairs, without either driver or reins. Poitiers is a picturesque town, abounding with antiquities. On we go, through vine-clad slopes and fertile country, yet well manured by many a gallant army massacred in the name of ambition or religion; run very near the thriving Angouleme, perched upon a hill top; cross the Dordogne, a large tidal river, at Liburne; intersect the tongue of land entitled "Entre Deux Mers," which is a fertile district, chiefly laid out in vineyards and corn-fields, and scattered over with country seats; and finally glide into Bordeaux along the right bank of the Garonne, the wooded and vine-clad heights of Floirac forming a striking picture.

Here we are, then, at the seat of what we term in England the "claret" wines, a particular manufacture, and which consists of adding to each hogshead of Bordeaux wine three or four gallons of Alicant, and a small quantity of Hermitage. Bordeaux, the second seaport of France, containing 124,000 inhabitants, is well situated for carrying on a trade, principally in wine and hemp, with North and South America, the French colonies, and Great Britain. From 50,000 to 60,000 tuns of wine are exported annually. Nearly half the best quality is sent to Great Britain, and very little of it is consumed in France. Amongst the "lions" of Bordeaux are the cellars of the banking wine merchants, the MM. Burton and Guestier. They are two stories in height, and commonly contain from 8,000 to 9,000 casks of wine.

The vineyards of the Cordelais extend between the 43d and 45th degrees of latitude, and consist of one million of acres, which produce an immense quantity of wine of all qualities. Be it remembered that the French people, in thus supplying their own beverages, are not using their best soils—their corn soils—as

we do in England, but soils that sometimes, owing to position, and always to quality, will not produce anything else. Such soils as support the vine in France are in England quietly given over to furze and rabbits.

The growths of the Bordelais may be divided into Medoc, Graves, Palus, and Vignes Blanches, which furnish wines of prime quality. To these may be added those of the Territories known as Entre-deux-mers, Bourgeois, and St. Emillion, the growths of which are of secondary order.

Medoc, in the department Gironde, which we find contains 350,000 acres of vinyard, cultivated by 80,000 proprietors, and yielding an annual produce of 56,000,000 gallons, is a long tongue of land, nowhere more than two miles broad, extending northwards between the Garonne on the east and Bay of Biscay on the west.

The vines of St. Estephe, and those of Lafitte, both on the same soil, produce wines to which very different values are attached in the market. The qualities of wine are, too, very dependent upon seasons. The goodness of a season will sometimes raise a secondary to prime wine, or its unpropitiousness, on the other hand, may debase a premier quality to the rank of a third or fourth. When they are not reputable, so necessary is it to maintain the character of the various vinyards with the best customers, that exportation to England ceases, and Holland takes them, or they are retained in France. So well is this understood, that some years back "the proprietor of the vinyard La Rose used to hoist, on a flag-staff above his house, the English flag in good years, the Dutch in middling years, and the French in bad years."

The vine begins to produce at five years of age, and will, when the soil is deep and congenial, continue to flourish with unabated vigor two hundred years. Its roots have been known to descend, in pursuit of nourishment, to a depth of from twenty to thirty feet. The best species of the red grape is the *verdote*. Those cultivated for white wines are *sauvignon*, *reznol*, and *semillon*.

The value of land in this district rises from £60 to £200, the produce in some cases £15 per acre, and the average profit seven to ten per cent, which is decidedly more than, under the present system of cultivation, is yielded on the best lands of France by corn cultivation.

#### AMERICAN AGRICULTURE.

Mr. IRVINE, of the British legation at Washington, in conformity with instructions, has made a report to authorities at home, upon the state of agriculture in this country. He notices the small crops produced here in comparison with the amount of cultivable land and our large population, and reasons upon these things, as follows:—

The immense extent of territory, and the comparative scantiness of the population, have induced a good deal of carelessness in the cultivation of the soil. The price of land being low, the proprietors have found it more economical to work out their land than to expend their capital in manures and other means for preserving its productive qualities; and when the soil has become exhausted, the owners have left it for some new settlement. The consequence of this has been that, instead of full and abundant crops, in many parts of the older settled portions of the country, the fields do not yield at present half as much as formerly, and in many localities not a third, nor even a quarter, as much; and that, notwithstanding the advantages of climate, the facility of transport to available markets, and the lightly taxed condition of farmers and planters, the ratio of increase in agricultural products of the United States is not in proportion to the increase of population.

## SUGAR ESTATES OF CUBA.

The Cuban *Messenger* gives the following account of the principal sugar estates in the island :—

|                                                                                 | Size in acres | Crop in boxes | Slaves |
|---------------------------------------------------------------------------------|---------------|---------------|--------|
| Acana, jurisdiction of Matanzas, proprietor Don José E. Alfonso.....            | 1,491         | 7,000         | 360    |
| Aguica, or Santa Teresa, jurisdiction of Cardenas, proprietor Count Fernandina  | 2,944         | 6,900         | 380    |
| Alaya, jurisdiction of Cardenas, proprietor Don Julian Zulueta.....             | 4,882         | 20,000        | 600    |
| Armonia, jurisdiction of Matanzas, proprietor Don Miguel Aldama.....            | 2,204         | 6,000         | 350    |
| Asuncion, jurisdiction of Mariel, proprietor Don Lorenzo Pedro.....             | 8,313         | 6,500         | 400    |
| Atenas, jurisdiction of Sagua, proprietor Don Ignacio Ecbarte.....              | 2,000         | 6,000         | 300    |
| Conception, or Echeverria, jurisdiction Cardenas, D. Francisco Pedro y Herrera  | 3,014         | 17,000        | 412    |
| Flor de Cuba, jurisdiction of Cardenas, proprietors Messrs. Arrieta.....        | 3,081         | 18,000        | 729    |
| Guina de Toto, jurisdiction of Trinidad, proprietor Don Justo G. Cantero.....   | 6,295         | 6,000         | 400    |
| Intrépido, jurisdiction of Cardenas, proprietor Don Miguel Cardenas y Chavez.   | 1,921         | 8,000         | 382    |
| Monserrate, jurisdiction of Cardenas, proprietor Count Santavenia.....          | 2,000         | 7,000         | 360    |
| Narciso, jurisdiction of Cardenas, proprietor Count Penalver.....               | 3,578         | 10,000        | 400    |
| Ponina, jurisdiction of Cardenas, proprietor Don Fernando Diago.....            | 2,235         | 15,000        | 500    |
| Progreso, El, jurisdiction of Cardenas, proprietor Marquis of Aroes.....        | 5,965         | 8,500         | 590    |
| San Martin, jurisdiction of Cardenas, proprietor D. Francisco Pedro y Herrera   | 7,286         | 15,000        | 452    |
| San Rafael, jurisdiction of Matanzas, proprietors Messrs. Ruiz & Adelantado.... | 5,890         | 6,000         | 380    |
| Santa Rosa, jurisdiction of Matanzas, proprietor Don Domingo Aldama.....        | 2,000         | 8,000         | 330    |
| Santa Susana, jurisdiction of Cienfuegos, proprietors heirs of Parejo.....      | 11, 90        | 16,000        | 866    |
| Tingüaro, jurisdiction of Cardenas, proprietor Don Francisco Diago.....         | 1,878         | 18,000        | 560    |
| Trinidad, jurisdiction of Matanzas, proprietor Don Estiban Santa Cruz de Oviedo | 1,509         | 7,000         | 350    |
| Union, jurisdiction of Matanzas, proprietors Messrs. Fernandez.....             | 4,288         | 10,000        | 490    |
| Victoria, jurisdiction of Cardenas, proprietor Don Simon Perez de Teran.....    | 2,010         | 7,000         | 320    |
| Urumea, jurisdiction of Cardenas, proprietor Señor de Zuasubar.....             | 2,010         | 10,000        | 400    |

According to the preceding table, the production averages twenty-three boxes per negro, or 10,000 pounds; but, in the greater part of those estates, where the modern machinery has not been introduced, only eleven boxes, or 4,750 pounds of sugar, can be reckoned per negro. There are above 2,000 sugar estates in the whole island, and the number increases almost daily. In 1775, there were, in all the islands, 473 sugar estates. The first sugar estate was established in 1535.

## FORESTS—THEIR DECREASE.

A rough estimate, made on the data of the census of 1850, shows that the decrease of forests has been, since 1790, at a rate averaging 6 per cent every ten years; but as it began much slower, it must now be fully 10 per cent, which in thirty years will reduce the *available timber lands* of the United States and Canada to an average of 30 per cent of their surface. (Wood for fuel is left out of the estimate entirely.) But if it took ninety years or more to cause a dearth of timber, we must consider that that time at least is requisite for the growth of a timber tree, and should adopt means for carefully preserving the trees now growing, as well as to raise more for future generations. Our own time is likely to see that scarcity, now limited to the older settled or woodless regions, become *general*.

From the experience of centuries in Russia, it has been estimated that a country requires a percentage of  $37\frac{1}{2}$  of its surface timbered, in order to be *richly* supplied; if it has under this amount, but over  $22\frac{1}{2}$  per cent, it is *moderately*, and if under 22, *poorly* wooded. In Russia the circumstances of forest growth were originally similar to those of this country, except that the "steppes" or plains of Russia lie in its south and east portions, from which they extend into the deserts of Tartary. Russia has indeed a larger total population than the United States, but no portion of equal extent within it is so densely settled as Massachusetts, which had, in 1850,  $127\frac{1}{2}$  to the square mile, while Russia Poland had but 123, and other districts less.

But when Russia had much less population, 1649, it was found necessary to

pass laws for the preservation of growing timber, though nearly all the country north of latitude 60° was originally almost an unbroken forest, and much of it still is so, (trees grow in Europe up to latitude 70°.) In 1750, laws were passed and means commenced for *cultivating* forests; German foresters were employed, but after a few years were found inferior to native Russians in the business, as the circumstances of climate were quite different in the two countries. As much of the woodland belonged to the government, the results of the system were found so profitable, that it was gradually enlarged in its plan and consequent importance, until it became one of the most valuable branches of government economy. Large schools were established, where everything relating to the subject is taught, such as surveying, botany, chemistry, meteorology, and many minor branches. It was found, in time, that the increase in productiveness of the forest *alone* covered all expenses of enlarging the plan. The importance of the work in 1850 may be judged by these facts, viz.: 24,500,000 of woodland have been surveyed, inventoried, and their value estimated; 49,000,000 acres more have been surveyed only; 4,500,000 put under strict protection, and 30,000 drained; 5,250,000 trees had been planted, 1,984 pound of tree seed sown. The value of timber saved from fires by careful surveillance was estimated at over \$500,000, (that amount being lost previously in some seasons.) The art of causing trees to grow on the woodless steppes had been completely established. In the shifting sands of the desert of Aleschki, over 4,000 acres had been converted to a thriving forest, supporting nearly 5,000,000 trees. Other large tracts are gradually being planted to provide for a succession of crops in future. Planting these steppes, and, indeed, any extensive tracts, was found to need government assistance, being too costly for individual profit, as in that dry climate coniferæ require 120 years and foliaceous trees an average of 60 years.

Though considered so important a subject there, the income of the country from exportation of lumber is far less than here, averaging, about 1850, \$2,500,000 per annum, while here it was \$1,800,000 in 1821, and rose to near \$5,000,000 in 1853. But the later years show a falling off in the increase of its export from here, probably because it had become scarcer near our seaports. And it deserves more consideration here when we consider that we have (with Canada) the best and greatest variety of timber trees in the world, far excelling in that view the forests of the old temperate world. East of the Rocky Mountains, (omitting the more tropical forms of Florida only,) we have over 190 species, of which at least 25 have no representatives in Europe or Northern Asia, and 12 others have their allies only in Japan and China. Besides these, we have an unequalled variety of species of pines, firs, oaks, birch, elm, ash, and others of the most useful trees.

Between the eastern base of the Rocky Mountains and the Pacific coast there are about 100 more species, and nearly all of the 300 species of the country could be cultivated over at least two-thirds of its area with advantage.

#### PARCELING OF LAND IN FRANCE.

The inconvenience of parceled morsels of landed property strike the eye at once. They are most visible in the fertile regions, where the possibility of obtaining a living by spade labor has availed itself most largely of the law of equal

partition. The soil of the entire country is said to be departed into 126,000,000 parcels. Calculating the population at 30,000,000, there are three parcels and a half to each person! What is this but another phase of what may still be seen in Ireland, where, in the difficulty of apportioning a small farm equally on the death of the holder, his children have endeavored to satisfy equity by allotting each other several pieces of various quality; so that no one's lot is all together, but scattered up and down and here and there. The French now seek some remedy at the hands of their Legislature against this indefinite process of morcelling, and in the hope of seeing how their neighbors, similarly afflicted, may contrive—not, indeed, to turn the patched coat of their country into a new garment, yet to effect some consolidation of the patches—they look eagerly for an initiative to the neighboring States of the German Rhine, which are suffering from the same evil and are seeking to heal it.

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#### THE JAPANESE SILK WORM.

This species, which Mr. GUERIN MENEVILLE has naturalized in Central France, is reared in the open air, and its food, the leaf of the Japan varnish tree, prospers in the poorest soils, capable of producing no grains, vines, nor grapes for pasture. The worm demands very little care; it is exposed with impunity to violent storms, has not been affected by the epidemic so fatal to the silk culture in Southern Europe, and may be destined to furnish for Western countries, as it has for many centuries in China, the silk of the people. At the Chateau de Leygouttier, the residence of Mr. AIGUILLON, a distinguished agriculturist of Toulon, a part of these worms were raised in a close cabinet, another set in a green-house, well aired both day and night, and a third division in the open air upon hurdles left out doors, and on trees merely covered with a netting for protection against birds.

At the Chateau de Coudray-Montpensir, also Count LAMOTTE BARACE has had these silk worms reared in the open air on magnificent clumps of the Japanese varnish tree, twelve to sixteen feet high. The cocoons obtained from those kept exposed to all weathers are larger and richer in silk than from those which have been protected or confined; and at Toulon, as at Coudray, the worms have undergone several violent storms, with beating rains and furious gusts, without appearing to suffer in any way. At Coudray, after a hurricane, July 20 and 21, 1859, which broke or tore up many trees and carried away the suspension bridge of Langeais, over the Loire, they were found next morning with the rain flowing over them, eating and weaving their cocoons on the trees where they had maintained themselves safely.

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#### SILK OF ZURICH.

The report of the silk industry of Zurich gives the number of pounds exported for the six months ending June 30, 1860, at 655,640, against 561,592 lbs. last year—an increase of 15 per cent.

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#### FLAX AND SILK IN GREAT BRITAIN.

The quantity of flax used in Great Britain in 1859 was 4,716,867 cwts., the value being £7,257,875. Of silk, 9,290,276 pounds, value £9,754,779.

STATISTICS OF POPULATION, &c.

EMIGRATION FROM THE BRITISH ISLES.

The emigration movement commenced in 1815, on the close of the great European convulsions, and since that date it is calculated that 4,920,574 persons have migrated from the British isles. Of these, 1,186,735 went to the North American colonies, 2,960,706 to the United States, 686,899 to the Australian group of colonies, and 86,234 to other localities. The annual average from 1815 to 1859 was 109,347, and for the last ten years 248,958, illustrating the well known fact that of late emigration has proceeded in a greatly accelerated ratio. It cannot fail to strike every one who glances at these figures that we have succeeded somehow in diverting, by the excessive prices demanded for colonial land, the great bulk of our emigration to the United States, although this was formerly not the case. Thus, from 1815 to 1834, the emigration stream flowed more freely into British America than into the United States, the emigrants to the former regions having been 402,681, and to the latter 268,633, while from 1834 to the close of last year the emigration to Canada amounted to 784,054, and that to the United States to 2,692,072. In short, the extraordinary fact appears that Canada is not so attractive an emigration field now as it was thirty years since, the emigration thither having amounted to 6,680 last year, and to 13,307 in 1829, while the total emigration was 120,432 last year, and only 31,198 in 1829. The emigration to Australia also reflects the disastrous policy of charging £1 per acre for land 15,000 miles from Great Britain, while it is to be had in the United States at 5s. per acre, 3,000 miles off. Thus, the emigration to Australia reached a total of 32,625 in 1841, and in the following year, when the £1 an acre was first insisted on, it fell to 8,534; in 1843, to 3,478; in 1844, to 2,229, and in 1845, to 830. The depression of the home agricultural interest again forced up the figures to 32,191, in 1849, and 16,037 in 1850, and the gold discoveries have since largely increased the emigration; but it is nevertheless evident that Australia has flourished, not in consequence, but in spite, of the policy adopted toward her.

PENNSYLVANIA CITIES.

The census returns of Pittsburg and its suburbs, it is estimated, will foot up 130,000. In the year 1850, the same territory had 88,312. Pittsburg proper has fifty-five thousand; the population on the south side of the river, including South and West Pittsburg, Birmingham, East Birmingham, Monongahela, and Temperanceville, will reach eighteen thousand; Alleghany City thirty-five thousand, and the rest is in the incorporated suburbs and adjacent townships. We have now most of the leading Pennsylvania cities and towns, as below:—

|                   |         |                   |        |
|-------------------|---------|-------------------|--------|
| Philadelphia..... | 650,000 | Pottsville .....  | 13,000 |
| Pittsburg.....    | 130,000 | Scranton.....     | 12,000 |
| Reading.....      | 24,000  | York .....        | 10,000 |
| Lancaster .....   | 18,000  | Easton.....       | 10,000 |
| Harrisburg .....  | 14,862  | Allentown.....    | 8,047  |
| Norristown .....  | 13,500  | Wilkesbarre ..... | 7,989  |

## RUSSIAN EMANCIPATION.

We translate from the *Gazette du Nord* the following bases of emancipation, which that journal announces as having been adopted by a majority of the deputies of the nobility, and upon which the final ukase will be issued during the course of the present autumn :—

1. The immediate grant of individual liberty to the serfs is the more indispensable, both to the landholders and to the serfs, because both consider it as having existed in fact since the ukase which laid down the general principles of emancipation.

2. The official promulgation of the individual liberty of the serfs fixes two years as the term of probation, at the end of which time their emancipation will be complete.

3. During these two years, the landholder shall have power to make contracts with the serfs, as they may agree, either to sell him land in fee simple, or to lease it to him ; but this lease shall not be for a less period than six years.

4. In case the landholder shall not have been able to come to a satisfactory arrangement with his serf at the expiration of the two years, the government shall intervene to give to the serf the desired amount of arable land on the existing bases of the economic condition of the serfs, giving them, however, the option of taking a less amount of land than they now occupy.

5. A local commission, appointed for the purpose, and divided into an original and an appellate jurisdiction, shall be established to appraise, according to present prices, the lands which are to be granted to the serfs.

6. The sum which shall thus become due to the landholder as the purchase money of his land, shall be reimbursed by the government, either in cash or in bonds, bearing five per cent interest.

7. As to the manner in which the government will collect these amounts, the landholders need have no concern about it, for this will be accomplished without their participation, and as the government shall hereafter determine.

8. Finally, as soon as the serf shall become a citizen, in consequence of emancipation, the power of the landholder over him entirely ceases.

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 IMMIGRATION INTO THE WEST INDIES.

The immigration into the West Indies, to supply the deficiency of labor existing there, has been prosecuted on a very considerable scale of late years, more freely than is, perhaps, generally supposed. Thus, since 1848, 5,557 immigrants have been introduced into Jamaica, 17,165 into Trinidad, 38,921 into British Guiana, 1,674 into St. Lucia, 895 into St. Vincent, 2,034 into Granada, 1,213 into Antigua, 852 into St. Kitt's, and 292 into Tobago, making an aggregate of 68,603. The immigration has been derived from the following sources :—Darien, United States, 32 ; Great Britain, 22 ; Havana, 276 ; Saba, 23 ; Sierra Leone, 6,543 ; Kroo Coast, 273 ; St. Helena, 7,181 ; Rio de Janeiro, 619 ; Madeira, 12,670 ; Azores, 164 ; East Indies, 36,091 ; China, 2,806 ; Cape Verds, 1,198. Since 1848, no fewer than 192,992 immigrants have also been introduced into the great sugar-producing colony of the Mauritius, nearly the whole of them, 191,996, having been drawn from the East Indies. The transport of the immigrants from the East to the West Indies has been attended with a rather heavy mortality. Thus, in the case of 2,927 immigrants dispatched to British Guiana from Calcutta and Madras, in the season 1858-9, only 2,714 were landed, exclusive of seven infants born on the voyage. Of 8,713 immigrants into Trinidad, dispatched from the same ports, only 8,418 were landed, exclusive of eighteen infants born on the voyage ; and of 344 persons shipped from Calcutta to Granada, only 299 were landed. The mortality, in fact, was

about seven-and-a-half per cent on the whole number of immigrants embarked, while in the case of British emigrants to Australia in 1856-7-8-9, the deaths were only about one per cent. At the same time, every care appears to be taken to secure the health of the immigrants to the West Indies, by means of efficient ventilation, exercise in the open air, cleanliness of berths and decks, inspection of food, due supply of medicines, and surgical aid. The constitution of Asiatics (who are almost unaccustomed, in remote villages, to even a sight of the great deep) seems to be more feeble than that of Europeans, and less fitted to endure changes of climate. The immigrants are engaged for five years, and are hired at a fixed sum of four dollars per month; but if, on their arrival in the colonies, they prefer to be paid by the day, in the same way as non-contract laborers, the necessary alteration is made in their contracts, and they are placed on the same footing as to remuneration. The immigrants are provided with a free passage, and, if any one desires it, an advance of twenty dollars is made to him, repaid, subsequently, by deductions from his wages. Women, when they accompany their husbands, are unfettered by any conditions.

POPULATION OF MARYLAND IN 1782.

The Baltimore *American* contains the following interesting paper:—

A RETURN OF THE NUMBER OF INHABITANTS IN THE STATE OF MARYLAND, TAKEN MARCH, 1782. NUMBER OF WHITE INHABITANTS AND FREE MALES ABOVE TEN YEARS OF AGE IN THE SEVERAL COUNTIES OF THE STATE AS TAKEN IN MARCH, 1782.

| Counties.       | Free males above 10 years. | Number of white inhabitants. | Counties.           | Free males above 10 years. | Number of white inhabitants. |
|-----------------|----------------------------|------------------------------|---------------------|----------------------------|------------------------------|
| St. Mary's..... | 1,773                      | 8,459                        | Baltimore....       | 3,165                      | 17,878                       |
| Somerset.....   | 1,598                      | 7,787                        | Anne Arundel....    | 2,229                      | 9,570                        |
| Calvert.....    | 894                        | 4,012                        | Worcester.....      | 733                        | 8,561                        |
| Montgomery..... | 2,160                      | 10,011                       | Harford.....        | 2,243                      | 9,377                        |
| Washington..... | 2,579                      | 11,488                       | Cecil.....          | 2,000                      | 7,749                        |
| Queen Anne..... | 1,742                      | 7,767                        | Frederick.....      | 3,785                      | 20,495                       |
| Caroline.....   | 1,293                      | 6,230                        | Prince George's.... | 2,259                      | 9,861                        |
| Kent.....       | 1,394                      | 6,165                        |                     |                            |                              |
| Talbot.....     | 1,478                      | 6,744                        | Total.....          | 35,268                     | 170,688                      |
| Dorchester..... | 828                        | 8,927                        |                     |                            |                              |

E. E. DANL. JENIFER.

NUMBER OF NEGROES IN THE STATE OF MARYLAND, TAKEN BY THE ASSESSORS IN MARCH, 1782.

|                                            |        |
|--------------------------------------------|--------|
| Negroes under 8 years of age.....          | 27,626 |
| “ males and females, from 8 to 14.....     | 13,399 |
| “ males, from 14 to 45.....                | 16,246 |
| “ females, from 14 to 36.....              | 13,832 |
| “ males, above 45, and females, above 36.. | 12,259 |
| Total.....                                 | 83,362 |

Test—DANL. JENIFER, Sept. 13, 1785.

We are thus shown that, according to this census, Maryland, in 1782, had a population of 254,052. The compendium of the United States census of 1850 puts Maryland down in 1775 as having only 174,000! white of course; but our representatives in Congress, in 1774, making their estimate no doubt from the known number of taxables, placed the whole number at 320,000. This was probably too large, but from so many returning to England, fleeing to other States, slaves decoyed to the enemy, and soldiers slain in battle and lost by other casualties of war during the Revolution, all this we can well understand left Maryland with a much smaller population in 1782 than she had in 1775.

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**MERCANTILE MISCELLANIES.**


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**GOVERNORS OF CUBA.**

We find in the Cuban *Messenger* of a late date the following list of the governors of that magnificent island. Under the Spanish rule, the first governor of this island was Don DIEGO VELAZQUEZ, who received the appointment from Admiral D. DIEGO COLON, in 1511. He remained in office until his death in 1524. He was succeeded by the following :—

- D. Pedro de Barba, in 1528.  
 D. Gonzalo Nuno de Guzman, 1532.  
 D. Juan de Rojas, (conjointly with Doña Isabel de Bobadilla,) 1538.  
 D. Hernando de Soto, 1539.  
 D. Juan de Avila, (lawyer,) 1545.  
 D. Antonio de Chavey, (lawyer,) 1547.  
 Dr. Gonzalo Perez de Angulo, 1549.  
 D. Juan de Hinestrosa, (*ad interim*,) 1550.  
 D. Diego de Mazariegos, 1554.  
 D. Garcia Osorio, 1655.  
 D. Diego de la Rivera y Cepero, 1567.  
 Dr. Francisco de Zayas, (*ad interim*,) 1568.  
 D. Pedro Menendez de Avilés y Marquez, 1568.  
 Capt. D. Pedro Vazquez Valdez Coroado, 1570.  
 D. Juan Alonso de Navin, 1571.  
 D. Sancho Pardo Osorio, 1574.  
 D. Gabriel de Montvalo, 1576.  
 D. Diego de Soto, 1577.  
 Capt. D. Francisco Carreño, 1578.  
 D. Gaspar de Torres, (lawyer,) 1580.  
 D. Gabriel Lujan, 1584.  
 D. Pedro Vega de la Guerra, 1586.  
 D. Juan de Tejada, 1589.  
 D. Juan Maldonado Barnuevo, 1596.  
 D. Pedro Valdez, 1602.  
 D. Gaspar Ruiz de Pereda, (first Captain-General,) 1608.  
 D. Sancho Alquiza, 1616.  
 D. Geronimo Quero, 1620.  
 D. Francisco Venegas, 1620.  
 D. Damian Velazquez Contreras, 1625.  
 D. Lorenzo Cabrera y Corbera, 1636.  
 D. Juan Beitrian Viamonte y Navarro, 1630.  
 D. Francisco Riaño y Gamba, 1634.  
 D. Alvaro de Luna y Sarmiento, 1639.  
 D. Diego Villalba y Toledo, 1647.  
 D. Francisco Gelder, 1650.  
 D. Pedro Garcia Montañes, (military governor,) 1654.  
 D. Ambrosio de Soto, (civil governor,) 1654.  
 D. Juan Montaña, 1655.  
 D. José Aguirre, 1656.  
 D. Juan de Salamanca, 1658.  
 D. Rodrigo de Flores Aldana, 1663.  
 D. Francisco de Avila Orejon y Gaston, 1664.  
 D. Francisco Rodriguez Ledesma, 1678.  
 D. José Fernandez de Cordova Ponce de Leon, 1681.  
 D. Andres de Munive, (military governor,) 1685.  
 D. Manuel de Murguía y Mena, (civil governor,) 1685.  
 D. Diego de Viana de Hinojosa, 1687.  
 D. Severina Manzaneda y Salinas, 1689.  
 D. Diego de Cordova Lazo de la Vega, 1695.  
 D. Pedro Nolasco Benitez de Lugo, 1702.  
 D. Luis Chacon, (military governor,) 1703.  
 D. Nicolas Chirino de Vendabad, (civil gov.,) 1703.  
 Marshal D. Pedro Alvarez Villarin, 1706.  
 Marquis de Casa Torres, 1708.  
 D. Luis Chacon, (military governor,) 1714.  
 D. Agustin de Arrolla, (civil governor,) 1714.  
 D. Pedro Horruttiner, (civil governor,) 1714.  
 Marshal D. Vicente de Raja, 1716.  
 Lieut.-Col. D. Gomez de Maraver Ponce de Leon, (*ad interim*,) 1717.  
 Brigadier-Gen. D. Gregorio Guazo, 1718.  
 Brigadier-Gen. D. Dionisio Martinez de la Vega, 1724.  
 Marshal D. Juan Francisco Güemes de Horcastas, 1734.  
 D. Diego de Peñalosa, 1745.  
 Marshal D. Juan Antonio Tineo de Fuentes, 1746.  
 Marshal D. Francisco Cagigal de la Vega, 1747.  
 D. Pedro de Alonso, (*ad interim*,) 1760.  
 Marshal D. Juan de Prado Portocarrero, 1761.  
 Dr. D. Pedro José Calvo de la Puerta, and D. Gonzalo Recio de Oquendo, as civil governors for Spanish population during the British occupation, 1762.  
 Lieut.-Gen. Count de Ricla, (as extraordinary commissioner,) 1763.  
 Marshal D. Diego de Manrique, 1765.  
 Brigadier-Gen. D. Pascual Jimenez y Cisneros, (*ad interim*, as second in command,) 1765.  
 Lieut.-Gen. D. Antonio Maria Bucarely, 1765.  
 Marshal D. Felipe Fons de Viéla, (Marquis de la Torres,) 1771.  
 Lieut.-Gen. D. Diego José Navarro Garcia y Valledares, 1777.  
 Lieut.-Gen. D. Juan Manuel Cagigal, 1781.  
 Marshal D. Juan Daban, (*ad interim*,) 1782.  
 Marshal D. Luis Unzaga, 1782.  
 Lieut.-Gen. Count de Galvez, 1785.  
 Marshal D. Bernardo Troncoso, (*ad interim*,) 1785.  
 Brigadier-Gen. D. José de Ezpeleta, (*ad interim*,) 1789.  
 Brigadier-Gen. D. Domingo Cabello, (*ad interim*,) 1789.  
 Lieut.-Gen. D. Luis de las Casas y Aragon, 1790.  
 Lieut.-Gen. Count De Santa Clara, 1796.  
 Lieut.-Gen. Marquis de Someruelos, 1799.  
 Lieut.-Gen. D. Juan Rius de Apodaca, 1812.  
 Lieut.-Gen. D. José Cienfuegos, 1816.  
 Marshal D. Juan Maria Echeverry, (*ad interim*, as second in command of army,) 1819.  
 Lieut.-Gen. D. Manuel Cagigal, 1819.  
 Marshal D. Juan M. Echeverry, (*ad interim*,) 1820.  
 Lieut.-Gen. D. Nicolas Mahy, (died here,) 1822.  
 Brigadier-Gen. D. Sebastian Kindelan, (*ad interim*,) 1822.  
 Lieut.-Gen. D. Francisco Dionisio Vives, 1828.  
 Lieut.-Gen. D. Mariano Ricafort, 1832.  
 Lieut.-Gen. D. Miguel Tacón, (Duke de la Union de Cuba,) 1834.  
 Lieut.-Gen. D. Joaquin Ezpeleta y Enrile, 1838.  
 Lieut.-Gen. Prince of Anglona, 1840.  
 Lieut.-Gen. D. Gerónimo Valdez, 1841.  
 Lieut.-Gen. D. Francisco Javier de Ulloa, (*ad interim*,) 1843.  
 Lieut.-Gen. D. Leopoldo O'Donnell, 1843.  
 Lieut.-Gen. D. Federico Roncetti, (Count de Alcoy,) 1848.  
 Lieut.-Gen. D. José Gutierrez de la Concha, 1850.  
 Lieut.-Gen. D. Valentin Cañedo y Miranda, 1852.  
 Lieut.-Gen. Marquis de la Pezuela, 1853.  
 Lieut.-Gen. D. José Gutierrez de la Concha, (Marquis de la Habana,) 1854.  
 Captain-Gen. D. Francisco Serrano y Dominguez, (Count de San Antonio,) 1859.

## TRADING TOO MUCH.

The rush, the strain, the excitement, and the fevered anxiety of those who enter the great sweepstakes of business life for the purse of success, have been the frequent subjects of the pen of the moralist, but still all hobbies are ridden at full speed, under the lash, and with spurs driven into the rowels! Men will jostle each other and overcrowd their own strength and energy. Money is the great aim of all, and is as hard to obtain as the purse sometimes put at the top of a greased pole in European countries, when hundreds fail to secure it before one is shrewd enough to put sand on his hands and feet before he attempts to climb. Too much effort—too much expansion—too much business—is as fatal as supineness or over-caution. Hence there is a great deal of force in the following article from the Cincinnati *Times*, of a recent date:—

We are not disposed to croak and cavil over the times—hard though they may be. It is a good thing to have the money market tight for it makes men prudent and cautious. More men are ruined by doing too much business than by too little. Trading and talking are the great American characteristics, both of which we are apt to indulge in excessively. Now and then, very rarely, a man may talk himself into a fortune, but oftener he talks himself out of one. In prosperous times men enlarge their business, are tempted into new operations, and generally carry more sail than they can bear; consequently they very soon run into breakers—strike, founder, or go down! This is the brief career of more than one merchant in our own community. We do not need to cite examples in New York or Philadelphia. To be a good merchant requires coolness and calculation. It is a wise man who knows when he has done enough. It is a prudent man who takes advantage of rising tides, and watches well the ebb.

Long credits are a serious damage. All credit is unsafe. No man can trust out his goods, and get along by hiring money on the street. Debt in the city and debts in the country are different things. In the city men are prompt. Notes *must* be paid on the day of their maturity. In the country this promptness of business is unknown. The country trader feels no compunction if his paper is overdue a week or so. Perhaps he forgets that the note, being indorsed and in the bank, is liable to protest. The city merchants are *compelled* to give credit, they say! Formerly there was a competition in cash trade; now the idea seems to be who can get rid of the most goods "on time."

We need more producers. As old John Unit says, a "population consuming and not producing, can never be made to pay," and John is right. The real wealth of a nation is its labor. A country may abound in natural gifts, but the hand of toil must bring them forth. There are too many traders in the United States already, and they trade too much. The balance is against us over the water. Our corn and wheat, and beef and pork, will not pay for our articles of imported luxury, which we would be better off without. If we would trade, we must have capital, and capital must be *worked out* from the earth. Therefore we require more farmers, more producers, more toilers. Trading on credit is a fallacy which men sooner or later find out to their sorrow.

It is the easiest matter in the world to trust out goods to country merchants, but the work of collecting is an intolerable nuisance! Debt is a hard master. He is intolerant and slow to be satisfied. How he dogs a man's footsteps like some hungry shadow. Debt is reciprocal. If country customers do not pay up prompt, our merchants cannot pay their Eastern debts without borrowing, which is the worst business that ever a human being engaged in. "He that goes a borrowing goes a sorrowing," says Poor Richard. Almost any business man now-a-days can testify to the truth of the maxim. Great troubles come from the feverish haste to get rich, evinced by the American people. Thus they over-trade, and run into wild speculations, make great strikes now and then, but where one succeeds ten go to the bottom. Too much trading is bad business—*it don't pay!*

## THE COST OF RECOVERING A DEBT.

A Western paper gives the following illustration of the operation of law upon debt :—

A gentleman was leaving the city for a brief period, and gave a black boy, to whom he was indebted, an order on a friend for the amount of the debt—six dollars. The boy knew nothing about orders, and never presented it. When the gentleman returned he was surprised by a summons to be and appear at the office of a certain justice to answer the aforesaid claim of six dollars. On the morning appointed for the trial he appeared and found the court ready to proceed—the plaintiff grinning behind the back of a young attorney, and a brace of constables armed with big clubs ready to knock down and drag in witnesses by the score if they were needed. He cut short the matter at once by acknowledging the justice of the claim, and offering to pay, provided the suit was withdrawn. The black boy grinned and nodded, but this proceeding did not suit the court. The gentleman swore he would not pay any cost, and as he was one who carried his estate in his pocket, the court knew he was in a condition to keep his word. But the “court knew herself,” and after a little cogitation rendered judgment for the debt against the defendant, and for costs against the plaintiff. The six dollars was received and credited on the docket, and the darkey has been ever since sweeping out the room of the young lawyer who collected the debt in payment of his fee.

The Boston *Transcript*, of a similar date, has the following very appropriate remarks in the same direction. Tribunals of arbitration and adjustment must soon supersede this expensive kind of “game of chance,” which is spread like a net to swallow the profits of business :—

We have no disposition whatever to bring our courts into disrepute with the people ; they are a necessary evil ; they certainly are a benefit ; they restrain much vice on the criminal side, and do something in the way of justice on the civil side. But from the very nature of the human reason, they are unreliable sources of power, and men, if they have differences, had better exercise a spirit of compromise towards each other, than trust to any court on the face of the earth. The habit which the vulgar indulge in of abuse of the lawyer, is altogether without justification. By the “vulgar” we mean those persons who know nothing of science, and the great difficulties in the way of arriving at anything like harmony in the pursuit of knowledge. The lawyer has his bread to earn—he has passed through (if he is a lawyer) an amount of thinking which entitles him to a living ; if a case offers for which he sees any chance with a judge or jury, though it may be a “hard case,” who can blame him for making a good fee if he has the ingenuity so to marshal authorities in behalf of his distressed client, as to sustain his suit ?

When persons “go to law,” they know perfectly well, or ought to know, they have nothing to expect but *law*—and what this may turn up to be is altogether problematical in general practice, depending something on the state of the weather, and something on the digestion of judges and juries, and much on the *ability* of counsel. It is no use to litigate with a dull lawyer, on small fees—for such a fellow damages the case, if he does not lose it. Law being a game of *chance*, an *expert* only should play to win. As a game of chance, we look upon jurisprudence as an exceedingly clever institution ; it exercises the intellect of those who love disputation, and who can do less mischief in law than they would be able to affect out of it ; it is a sort of clapper on the exuberance of genius, for law is a most wholesome discipline and check to those who thoroughly comprehend it. The lawyer who is in the habit of looking at all objects, all human interests, as the law bears upon them, is from the very nature of his profession constrained to a certain degree of decorum to escape the meshes he is oftentimes only too happy to see others fall into. No lawyer of any standing would care to subject himself to a process either civil or criminal, and hence it is that, as a class, these

men are as unexceptionable as the law, which is not saying much in their behalf; still, it is much more than can be said of many other orders of men.

Let this indiscriminate abuse, then, of lawyers, so common among the middle classes, no longer obtain. Their business is to make the most of principles as their clients' interests may suggest; and if they are smart enough to manage hard cases successfully, the censure should not be visited on them, but on the fact that the human reason, in the abstract, is without any permanent and undeviating apprehension of the idea of justice. Circumstances are of such a variety of forms and shading, that they are susceptible of being worked up by a subtil genius into almost any conceivable aspect of right, and hence the difficulty of settling much in law, while circumstances are so powerful to control it.

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#### NO EXCELLENCE WITHOUT LABOR.

There is perhaps no general principle more fully established than this—that there is no excellence without labor; nothing great or noble has ever been accomplished without hard, persevering labor; no great enterprises have been carried out without labor. How did ALEXANDER become one of the greatest warriors of antiquity, the conquerer of all the then known world, who wept when there were no more worlds to conquer? How did CÆSAR extend his conquests until he made Rome the mistress of the world? How did NAPOLEON—at the mention of whose name the heart of the Frenchman even now thrills with feeling, and his eye kindles with emotion—starting in life with no friend but his sword, fight his way upward till he became Emperor of France? How did he at the head of his army, go forth to conquer and astonish the world by the number and greatness of his victories, and make Europe tremble at his progress? How did these men accomplish so much? They were ambitious, they wished to achieve for themselves a name as great military chieftains, and in the pursuit of this object they spared no labor, they underwent hardships and privations; in short, they sacrificed everything at the shrine of their idol ambition.

NAPOLEON when about to lead his army over the Alps, said to the engineer who had been sent forward to ascertain the possibility of the undertaking—

“Is it practicable?”

“It is barely practicable,” was the reply.

“Let us set forward, then,” said NAPOLEON.

They did set forward, and that extraordinary undertaking, which won the admiration of the world, was successfully accomplished. This short conversation furnishes an index of NAPOLEON'S character. It discloses the secret of his success, his indomitable energy and perseverance in whatever he chose to undertake.

With regard to intellectual greatness, it is especially true that there is “no excellence without labor.” No man ever rose from a humble position in life to that of a distinguished scholar or great man, great in the true sense of the word, without much labor. All the great men that have ever lived, men of learning and disciplined minds, became great by their own exertions. They did not hesitate to make sacrifices, to undergo hardships, to expose themselves to persecution and ridicule in the pursuit of knowledge. They felt that knowledge was a priceless gem, an immortal prize for which they were seeking, one which would not desert them at death, but which, if rightly used, would conduct them to happier worlds above; and in the pursuit of this object, they scorned whatever had a tendency to divert their attention from this, their beloved pursuit. These great men frequently met with ridicule and persecution. Their motives and conduct were not understood and appreciated by the men of their age. It remained for after generations to honor and immortalize their names, and reap the reward of their labors. To them we are indebted for all the great discoveries and inventions that have benefited mankind, and for whatever civilization and refinement we now possess.

Numerous instances might be given to show that there is no intellectual greatness without labor. NEWTON, the great philosopher, when asked how he had succeeded in making so many important discoveries, replied—“by thinking.”

By profound study and thought this great man succeeded in tracing from the trifling occurrence of an apple falling from a tree, the laws which govern the motions of the heavenly bodies. By observation and study COLUMBUS became convinced of the globular shape of the earth, and sailing westward, discovered a new world. FRANKLIN, after much observation and study, succeeded in establishing the identity of lightning and electricity, proving that lightning is only electricity on a large scale, thus adding to his fame as a statesman, that of a philosopher. What difficulties and hardships did the late Dr. KANE pass through in acquiring the admiration and renown everywhere so deservedly paid to his name. Possessed in childhood of a feeble constitution, he overcame, as it were, by the strong power of his will, his natural predisposition to disease, passed through a seven years' course of study, and at an early age graduated with high honor as Doctor of Medicine, having been characterized throughout as a thorough student. It was there that he acquired that mental discipline and well balanced judgment that so well qualified him for the duties that afterwards devolved on him as commander of an expedition to the frozen seas.

These examples are sufficient to teach us that would we ourselves become great, we must labor for it. If we would distinguish ourselves above the common mass of mankind we must labor for it. If we would acquire an education that will fit us for usefulness and distinction, we must study, study diligently, study thoroughly.

Lastly, if we are determined to obtain an education, no difficulties need discourage us. In this case difficulties, instead of discouraging us, will, by being surmounted, only strengthen our minds for further exertion. One writer has said, "The highest idea of education is the training of the mind to surmount obstacles." We are told of some ambitious young men, afterwards distinguished scholars, that they acquired their first knowledge of the classics by studying at night after their day's work, by the light of the blazing wood fire on the hearth. Let us emulate their example, and be discouraged by no difficulties; remembering always, "no excellence without labor."

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#### BENEFITS OF ADVERTISING ILLUSTRATED.

The following remarks are evidently by one who has experienced the benefits of advertising, although the anecdote rather illustrates an evil than a benefit:—

Were a group of genuine philosophers assembled for the purpose of investigating the means whereby they derived their various acquirements, the grand corollary of their deliberations would be, that the universal, and only possible process of communicating knowledge is advertising. And when we regard the fact, that the vast domain of science and art is indebted to this luminary for light and vitality, that by its effulgence was espied the subtil clue to nature's law of gravitation, and divine revelation was reflected upon the human soul, it swells into a prolific theme of momentous importance. Volumes might be filled with an enumeration of its advantages. Indeed, the same arguments might be adduced in its favor as are advanced for the diffusion of knowledge.

By long observation and experience has it been discovered that to accomplish the merchant's object at the present day, it is indispensably necessary for him to read the newspapers, and to advertise extensively an account and description of his merchandise. His main object is to procure good articles at reasonable prices, and to dispose of them as soon as possible, at a fair profit. To do this, he must know what others have for sale, and make known to them what saleable articles he has on hand. Thus, precisely as he was attracted to his particular mart for the purchase of his stock, he will attract customers to call and buy.

#### ILLUSTRATION.

A practical joke which occurred in Baltimore some time since, showed this state of facts to be true.

An advertisement appeared for "A Porter," to serve in a large mercantile

house, No. 8 Bowly's Wharf, corner of Wood-street, at a salary of seven dollars a week. The scene is thus described by a cotemporary :—

At an early hour, before either clerk or proprietor appeared, there was collected in front of the store a motley crowd, numbering over sixty persons, and more were momentarily coming. They were of all colors, sizes, nations, kindreds, and tongues. As might be expected, quite an excitement had sprung up amongst these anxious competitors for so favorable a position and liberal compensation. Some had letters of recommendation, others were backed up by their friends, and all indicated the commendable desire to be first in making application, presenting their credentials. The clerk finally made his appearance, and was no little surprised at seeing the premises so thoroughly besieged. It was with extreme difficulty he could effect an entrance, and, this done, still more annoying was it to keep the phalanx at bay. He placed himself arthwart the door and threatened violence to all intruders. Finally the proprietor himself came in sight. His eyes fell upon the unlooked-for crowd, and not being aware of the preliminaries, concluded that some terrible calamity had befallen his establishment. "My warehouse has been on fire—robbers have perpetrated their midnight depredations—perhaps murder most foul has occurred." Such were his soliloquies as his pace quickened and he reached the scene.

Necessity knows no law, and competitors in business are not very fastidious in their respect of persons. Thus, even the proprietor himself, being unknown, and looked upon with jealousy, found difficulty in pressing through the crowd. It became known, however, that he was the gentleman who had advertised for a "Porter," and simultaneously almost a hundred voices asked for the situation. A degree of surprise and consternation overcame him. He was taken all aback. He expostulated—said no such advertisement had appeared—he wanted no porter. "Here's the paper," cried twenty voices, (holding forth the document,) "and that's your number—see, number six; it is in figures, and figures can't lie." All this time "the cry was still they come," the excitement increasing, rendering confusion worse confounded. "Clear out; I have not advertised—I want no porter," were the exclamations. Finally, and with great difficulty, a breathing spell was gained, and by dint of extra eloquence the anxious seekers after employ were made to understand that some wag had played a practical and we must say rather an annoying joke upon the merchant, by inserting the advertisement without authority. At a late hour this morning applicants were still calling, and it was as much as one person, as clerk, could do to make necessary explanations, and dispatch them.

TRADE AND POPULATION AMONG THE CHIEF EUROPEAN STATES.

We give below a table showing the trade of the principal European States, up to the latest dates, compiled by M. CHEMIN DUPONTES, an able French Statist, and recently presented by him to the Ministry of Commerce for France :—

|                        | Population. | Value of trade<br>in francs. | Value of trade<br>per capita. |
|------------------------|-------------|------------------------------|-------------------------------|
| Hanseatic Towns. ....  | 500,000     | 3,110,000,000                | \$127 00                      |
| Holland. ....          | 3,451,000   | 1,600,000,000                | 88 50                         |
| Switzerland. ....      | 2,400,000   | 900,000,000                  | 72 00                         |
| Belgium. ....          | 4,585,000   | 1,819,000,000                | 67 00                         |
| Great Britain. ....    | 28,154,000  | 8,350,000,000                | 57 50                         |
| Sardinia. ....         | 5,042,000   | 843,000,000                  | 29 50                         |
| France. ....           | 36,039,000  | 5,329,000,000                | 27 00                         |
| The Zollverein. ....   | 32,700,000  | 2,200,000,000                | 13 25                         |
| Austria. ....          | 39,400,000  | 1,811,000,000                | 7 80                          |
| Russia in Europe. .... | 60,123,000  | 1,100,000,000                | 3 00                          |
| Total. ....            | 212,394,000 | 27,062,000,000               | \$24 75                       |

## TOBACCO.

The Dean of Carlisle has recently delivered a lecture in England upon the subject of tobacco, from which are gathered some interesting statistical information concerning the use of the weed in that and other countries.

In 1856, 33,000,000 lbs. of tobacco were consumed in England, at an expense of £800,000 or \$4,000,000, to say nothing of vast quantities smuggled into the country. There is a steady increase upon this consumption, far exceeding the contemporaneous increase of population. In 1821, the average was 11.70 oz. per head per annum; in 1851, it had risen to 16.36, and in 1853 to 19 oz., or at least at the rate of an increase of one-fourth in ten years.

There are 12 city brokers in London, expressly devoted to tobacco sales; 90 manufacturers, 1,569 tobacco shops, 7,380 workmen engaged in the different branches of the business, and no less than 252,043 tobacco shops in the United Kingdom. And if we turn to the continent, the consumption and expenditure assume proportions perfectly gigantic. In France much more is consumed, in proportion to the population, than in England. The emperor clears 100,000,000 francs annually by the government monopoly.

In the city of Hamburg 40,000 cigars are consumed daily, although the population is not much over 150,000; 10,000 persons, many of them women and children, are engaged in their manufacture; 150,000,000 of cigars are supplied annually; a printing press is entirely occupied in printing labels for the boxes of cigars, etc., and the business employs £4,000,000, or \$20,000,000.

In Denmark the annual consumption reaches the enormous average of 70 oz. per head of the whole population; and in Belgium even more—to 73 ozs., or 3.6 lbs. per head.

It is calculated that the entire world of smokers, snuffers, and chewers consume 2,000,000 of tons of tobacco annually, or 4,480,000,000 lbs. weight—as much in tonnage as the corn consumed by 10,000,000 Englishmen, and actually at a cost sufficient to pay for all the bread-corn in Great Britain. Five-and-a-half millions of acres are occupied in its growth, the produce of which, at two pence per pound, would yield £37,000,000 sterling, or \$185,000,000.

The time would fail to tell of the vast amount of smoking in Turkey and Persia. India, all classes and both sexes indulge in the practice. The Siamese both chew and smoke. In Burmah all ages practice it—children of three years old, of both sexes. China equally contributes to the general mania; and the advocates of the habit boast that about one-fourth of the human race are their clients, or that there certainly are 100,000,000 of smokers.

Tobacco is, next to salt, probably the article most consumed by men, in one form or another, but most generally in the form of fume or smoke. There is no climate in which it is not consumed, and no nationality that has not adopted it. In the words of Pope, on a higher subject, it may be said to be partaken of “by saint, by savage, and by sage.” The civilized European and some American nations are the smallest consumers of tobacco of any people, in consequence of its being everywhere, with them, an object of heavy taxation; of its being very generally a foreign commodity, or high-priced because raised in uncongenial climates; and, finally, its being confined in use, for the most part, to the male sex.

In New York city there are about 200,000 smokers, each using two cigars per diem, which make 400,000 every day. These will cost, for labor alone, at

\$5 per thousand, the enormous sum of \$3,760,000 annually, when made by hand.

There are imported into New York, annually, 12,000,000 lbs. of tobacco, distributed at follows:—Connecticut, 10,000 cases of 400 lbs each; Pennsylvania, 6,000 cases, 400 lbs. each; Ohio, 10,000 cases, of 370 lbs. each. From New York to Massachusetts, 5,000 cases of 400 lbs. each. We also import 6,000,000 lbs. from Havana, and a quantity from other Spanish ports; and we are told that, on an average, 20 lbs. of tobacco are required for every 1,000 cigars, and we can easily calculate that there are 900,000,000 cigars made in the city of New York alone in a year.

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#### ONE PRICE.

But few things are more galling to human pride, or our self-respect, than the consciousness of being cheated. Not so much for the value of the loss we sustain as for the resentment we feel at being victimized—at being the object of spleen, malice, or cupidity; and whether the injury sustained affect our pocket, our reputation, or our person, the result is the same. If we fall on the ice, or slip down on the pavement, we may be hurt, but with an unruffled temper we gather ourselves up and make the best of it. If we drop a dollar in the river, or lose the amount by bad speculation, we soon forget the loss, and are happy. Not so, however, if we are pushed down, or if we are robbed or cheated of the sum in any way. This treatment gives rise to resentment, which rankles in our hearts until time and other cares obliterate the event from our memory. And even these results arise not so much from the actual malice of the perpetrators, as from our conception of the motive. We are unhappy because we believe our neighbor intended to injure us, and as soon as we are convinced to the contrary, our resentment ceases; we looked upon the whole thing as an accident, and all is over.

Well, what has all this to do with the "one price" system? Simply this, that every salesman ought to study human nature enough to know how to approach his customer, and the effect he has upon it.

"O had some power the gift to give us,  
To see ourselves as others see us,  
It would from many a trouble free us,  
And foolish notions."

Could the seller see himself as the buyer sees him, it would be of more value to him than many dollars; and the true way to accomplish this is to study his own nature. In doing this thoroughly he learns the whims and oddities of those he deals with.

Now, although the legitimate sphere of our Magazine is the counting-room rather than the church—commerce rather than religion—profits rather than morals—mammon rather than God, still we wish to show that even in point of profit and gain only, the one price system is better than any other—that it will secure and retain more customers, and such as are worth retaining, than any other course that can be adopted; we wish to show that the opposite course is as delusive as it is dishonest, and its legitimate effects will, sooner or later, recoil on those who adopt it. While it is true that "the fools are not all dead," it is also true that there is a very general aversion among honest men to pay more than others for what they purchase. The man of pure intentions has not the heart to suspect that a double price is asked for the article he is buying, and is therefore more apt to pay it than the sharper who deals upon the same principle. The general customer desires to deal where he will not be robbed on account of his poor judgment; and will avoid the man who will overcharge for an article as he would a pestilence. The thought that he has been "sold" by a man in whom he had placed confidence, will rankle in his heart for years, and he will not only avoid the place, but prevent others from purchasing there. Thus it is, that as water will find its level, so a man's true character will at last be appreciated by the world, and he will lose or gain accordingly.

## THE RESTLESS AND DISSATISFIED.

The following is, says the Philadelphia *Inquirer*, no doubt a true picture. It illustrates in a forcible manner the restless and dissatisfied spirit which exists in the minds of many of our young men. They are impatient, impulsive, and eager for change, and hence they wander from place to place, and rarely fix upon a permanent home. Enterprise is every way commendable; but a disposition to change upon every trifling occasion, is fruitful of much care, anxiety, and misfortune:—

A young man of moderate fortune and ability goes West, finds a field for speculation, makes an investment, soon fancies himself in need of a partner to share his fortune—in *prospect!* returns to the land of continuance, holds up in bright array the beauteous landscape gilded by the imaginary lucre which comes between the organ of vision and every object the speculator beholds. The lady catches the inspiration, is ready to be endowed by all his worldly goods, and soon sets about preparing to leave a home that has never known change since she was born. Happy is she while musing upon the brilliant and glittering life that awaits her “out West.” Poor creature! “Ignorance is bliss” in her case, at least. She leaves the land of her birth, and is soon set down in one of our western towns. A nice little house is soon fitted up with the most assiduous care; the grounds around their dwelling laid out and planned, perhaps by herself, little dreaming she is planting trees for stranger hands to rear. Time rolls on; each nook and corner has become dear by some fond association. The taste and elegance displayed have only served to attract the eagle eye of some later speculator who has been attracted thither and already marked it for his own.

Soon the gold is offered; the husband hesitates; more gold is offered; the bargain consummated, and away go house and home! “Possession given immediately,” so says the contract. The furniture is huddled into one corner to make room for the new proprietor; the wife, sent to the nearest hotel, is shown a room scarcely large enough to contain a bed, and there she may stop and *take breath*, while her husband looks around. Rumors reach his ear that away off in some other town, perhaps further west, is a fine chance to make a fortune! He thinks best to sell off the heaviest articles of his furniture, as they will be cumbersome to move. She must quietly acquiesce, even if her dear piano and all things else, however dear, are put under the hammer of the auctioneer. She is then left *board*, while he goes in search of a new location. After a few months have elapsed they again become settled, to remain a few weeks or months, as the case may be. Thus it is one continual change. Perhaps a flock of little ones are gathered around her; if so, when the house is sold, the wife and children are sent east to afflict their friends with a six months’ visit; and, after spending a few hundred or thousand dollars, going here and there, back and forth, she returns to her husband only to hear that “business is dull; he will go and try it somewhere else.” And thus it is, year after year.

And now, I would ask, how long must we suffer this? Can you not suggest some means whereby we may fix their minds and induce them to have more stability? Or must we give up, and allow *speculation* to fill every corner of their heads, however large?

## FREAK OF TRADE.

The Charleston *Mercury* states that the steamship Nashville, from New York, on Thursday morning, brought to this port, as part of her cargo, two hundred bales of upland cotton, consigned to Messrs. HALL & Co. The same house expect to receive shortly three hundred bales cotton by a schooner from the same place. The five hundred bales are to form part of the cargo of a Spanish bark now loading at this port for Barcelona. In consequence of the lowness of the stock of cotton on hand here at present, we are informed that an article similar in quality to the above cannot now be purchased here, and that this unusual state of our market has caused the above singular course of trade. Messrs. HALL & Co. have also dispatched three Spanish vessels from this port to New York within the last few weeks, caused by their inability to purchase at this point a cargo of cotton of the proper kind for the Barcelona market.

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**THE BOOK TRADE.**


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- 1.—*Memorials of Thomas Hood.* Collected, Arranged, and Edited by his Daughter, with a Preface and Notes by his Son. Illustrated with copies from his own sketches. 2 vols., 12mo., pp. 310, 327. Boston: Ticknor & Fields.

Lovers of poetry will ever treasure in memory "The Song of the Shirt," and the gentle heart and open hand that sketched it. A friend to the suffering, to the careworn, and the needy; to the victims of cruel greed, and to all that are desolate and oppressed—HOOD, the generous, kind, and true. Of all the fragments ever written, there have been none more popular than this. At the time of its first publication it was the talk of the day, and has since been translated into French and German, printed on cotton pocket-handkerchiefs for sale, and parodied times without number. These memorials, now presented to the public by his children, consist principally of his letters, with explanations, amplifications, and anecdotes of his every-day life. The volumes are also illustrated by sketches, and two fac similies, one being a sheet containing the "Song of the Shirt" as it was first written out, and the other a sketch of his own monument drawn just before death. Authorship has long been known as a hand-to-mouth business, and among the many who have set up in it and achieved eminence—those bright geniuses whose lines have fallen in pleasant places and become immortal—few have escaped from the hands of the reviewers, in appraising the particulars as to the birth, parentage, education, life, character, and behavior with little short of those grave charges of improvidence, want of principle, and offences against morality and religion we see daily brought against literary character. How much of truth or falsehood is usually involved in these, we are not prepared to say; but we have never so much as heard a syllable against he whose memorials fill these pages. That the life of THOMAS HOOD was not closed in regret and dire uncertainty, the following stanzas, the last lines of poetry ever written by him, will suffice:—

"Farewell life! my senses swim;  
And the world is growing dim;  
Thronging shadows cloud the light  
Like the advent of the night—  
Colder, colder, colder still,  
Upward steals a vapor chill;  
Strong the earthy odor grows,  
I smell the mould above the rose?

Welcome life! The spirit strives!  
Strength returns, and hope revives;  
Cloudy fears and shapes forlorn  
Fly like shadows at the morn;  
O'er the earth there comes a bloom,  
Sunny light from sullen gloom,  
Warm perfume for vapors cold;  
I smell the rose above the mould."

- 2.—*History, Theory, and Practice of the Electric Telegraph.* By GEORGE B. PRESCOTT. 12mo., pp. 468. Boston: Ticknor & Fields.

This handsome volume, as its title indicates, is devoted to the history and description of the several systems of telegraphy which are or have been made use of in this country, including as well descriptions of the systems in use in Europe, with the most approved theories of the savans of Europe and our own country, upon the various phenomena connected with electricity, and cannot but prove both interesting and valuable to operators and others connected with the manipulations of the telegraph.

- 3.—*A Run Through Europe*. By ERASTUS C. BENEDICT. 12mo., pp. 552. New York: D. Appleton & Co.

This, so the title designates, comprises the record of a hasty vacation tour made by the author through England, Scotland, Ireland, Germany, France, and Italy, including also the Gothic and Sclavic peoples of southern, eastern, and central Europe. Whatever may be said of the profusion of books of this kind, comprising "ground made dusty by the footsteps of many generations of travelers," Mr. Benedict has this advantage over many of his *comfreres*, in being a careful observer and graphic narrator. He knows apparently what to see, and how to see it, and in what manner to set forth the results of his observations—desiderata possessed but by few of the many who go abroad and come back with enlarged views, and minds opened to a much larger horizon after having helped to feed the current over the great highways of travel—possessed of that *cacoethes scribendi*, which though not always profitable, has the tendency of letting much of the gas out of our conceit, and hyperbole out of our vanity.

- 4.—*Course of Ancient Geography*. Arranged with special reference to convenience of recitation. By H. J. SCHMIDT, D.D., Professor in Columbia College, author of "History of Education," "A Treatise on the Eucharist," etc. 12mo., pp. 317. New York: D. Appleton & Co.

This little work, designed for the recitation room of our higher grade of institutions, constitutes what may be properly termed classical geography, or that portion which the student needs in his classical reading. The interest which attaches to the geography of the ancient world arises not only from the historical, but perhaps still more from the mythological, legendary, and literary associations connected with different regions and localities. These, therefore, fill up much the larger space of the volume. In order to obtain the object had in view—that of furnishing a text-book arranged with special reference to convenience of recitation—the matter has been broken up into short paragraphs, which are all numbered; and questions referring to these, and marked by corresponding numbers, are given in the lower margin. This arrangement will greatly facilitate the acquisition of the lessons by the pupils, as well as contribute much to the saving of time in recitation.

- 5.—*A New Practical and Easy Method of Learning the Spanish Language*, after the system of F. AHN, Doctor of Philosophy and Professor at the College of Neuss. First American edition, revised and enlarged. 11mo., pp. 149. New York: D. Appleton & Co.

- 6.—*A Course of Exercises in all parts of French Syntax*, methodically arranged after POITEVIN'S "Syntaxe Francaise," to which are added Appendices, designed for the use of Academies, Colleges, and Private Learners. By FREDERICK T. WINKELMANN, A. M., Professor of Latin, French, and German in the Packer Collegiate Institute of Brooklyn, N. Y. 12mo., pp. 366. New York: D. Appleton & Co.

- 7.—*Virgil's Æneid*; with Explanatory Notes. By HENRY S. FRIEZE, Professor of Latin in the State University of Michigan. 12mo., pp. 594. New York: D. Appleton & Co.