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HUNT'S

# MERCHANTS' MAGAZINE

AND

## COMMERCIAL REVIEW.

NOVEMBER, 1858.

### Art. I.—CONSIDERATIONS IN REGARD TO STEAM ON THE ERIE CANAL.

THE STATE POLICY—WHY STEAM HAS BEEN IGNORED SO LONG—THE LARGE, FULL, DUCK-BREADED BOW, WITH THE DIMINUTIVE PROPELLER-BLADES, IS AS UNFIT FOR MARINE LOCOMOTION AS THE DOG IS FOR SWIMMING—THE INCREASED DUTY OF A PROPER MECHANICAL SYSTEM OF PROPULSION—WE NEED TO KNOW THE WANT OF MECHANICAL FITNESS—THE FULL EFFICIENCY OF THE SMALL QUANTITY OF POWER BY HORSE—A GIVEN QUANTITY OF POWER BY HORSE COSTS MANY TIMES THE SAME QUANTITY BY STEAM—THE CHIEF OF THE POWER OF THE STEAM IS NOW ANTI-MECHANICALLY WASTED—THE GREAT REQUIREMENT FOR CANAL PROPULSION—SYSTEM REQUIRED FOR CANAL TRANSPORTATION—THREE CLASSES—FIRST AND SECOND CLASSES MUST HAVE BUILDS BETTER CONSTRUCTED FOR SPEED—RELATIVE MOVING POWERS AT DIFFERENT SPEEDS—STEAM IS A FINANCIAL NECESSITY TO THE STATE—LIMITATION IN LIVING ABILITY OF NEW YORK CENTRAL RAILROAD TO CARRY FREIGHT—HYPOTHESIS UPON WHICH THE STEAM SYSTEM IS CLASSIFIED—THE SUCCESS BY CANAL STEAMERS IS THUS FAR UNDER THE UTILIZED POWER OF ONE-FOURTH TO ONE-THIRD OF THE STEAM—INFIDELITY AS TO THE PRIMARY STEPS OF TRUE PROGRESS—ESTIMATE OF PROFITS ON THE BASIS OF FLOUR BY STEAM AT PRICES BELOW THE LIVING ABILITY OF RAILWAYS—RELATIVE PROFITS BY HORSE AND STEAM—THE HYPOTHETICAL INCOMPLETENESS DOES NOT INVALIDATE ITS RELIABILITY—STEAM CAN ACCOMPLISH WHAT IS HERE SET FORTH.

The most immediately important subject touching the great internal commercial interests of this State, as the gateway between the Atlantic and the Northwestern Lakes, has been presented to the public by recently occurring events in the trials of steam upon the canal, and which is an initiatory step of commanding importance, more by virtue of drawing attention to the subject, which attention will carry it forward to success, than by virtue of the actual attainments yet made by the trials by steam, which trials are more valuable for showing what they cannot do, than for showing what they have done or can do.

It is one of the singular events of commercial history that the great outlet of the commerce of the Northwestern Lakes has withstood the progress of steam, and forbade it its waters so long, and that capitalists and the State have enjoyed the advantages of steam on all other thoroughfares, than upon that one which alone floats more freight between tide-water and the "great water-shed" of the Northwest than all other

State resources by far; and than upon that one which alone could hold its being with a breath of vitality, drawing such breath by the slow, costly, incompetent, and inefficient tread of the horse and the mule, as day and night they have these long years, outnumbering a generation of commercial men, toiled to bring to this city its life-giving necessities, and the chief support of its immense commerce.

It is the more strange that steam has been ignored for the canal, because of its universal notoriety for cheapness of motive power, the economy of which, in such of the useful arts as have used it under the most perfect mechanical development, for a single one hundred pounds of coal, has done the equivalent work of ten horses for eight consecutive hours. The costs are, therefore, as 100 pounds of coal to the keeping of 10 horses per day.

The State policy of the past is now written stupid and shortsighted for incompetency to put steam successfully upon the canal, and for suffering steam overland—by virtue of steam over horse and mule power—to encroach upon the rights of the canal, by bringing from the lakes in years just passed, as regards shipments from Buffalo, nineteen-twentieths of the flour, and to soon claim wheat and corn also by scores of millions of bushels. But the canal has a birthright inheritance which should not be slothfully and shamefully sacrificed by the State to foster the prejudices due to the favor of some ten thousand horses and mules, instead of superseding them by some two thousand engines, which can do from 50 to 100 per cent more work, at less than present cost, and in much less time of transit. The encroachments by the several competing routes to the Atlantic having already compelled large reduction in rates of toll per ton, in order to save to the canal, by thus soliciting freight, a living revenue, are also dictating terms to the State and canal interests generally, in regard to the great carrying trade of the West.

These facts, with the recent enthusiasm properly engendered by the instructive tendencies of the few canal steamers, coupled with the fact that the railways are now carrying large quantities of freight at prices per ton considerably below the amount charged in their reports for three years past to their expense account for freight, call loudly upon those who will nurture and sustain the immense constructive expenditure by the State, and its increasing liability for its enlargement, to control the present and the increasing demands of the inter-commerce of the West and the Atlantic, by the proper substitution of the economy of steam for the expensive motor now used.

The true cause why steam has been ignored so long, is because the mechanical means of applying it has not been such as to bring out and establish its true and highest economy; for the common paddle-wheel, whether upon the sides or at the stern, or screw propeller, has not been so constructed—and because they are, neither of them, adapted to such construction—as to give an area of retrograde action upon the water nearly approximating to a sufficiency for a fulcrum from which to move the boat—the full duck-breasted bows of a canal-boat, five feet or more under water, requires a large and adequate fulcrum action upon the water, in order to cause the bow displacement.

It is not far from a correct, common-sense view of the case, to look at the submerged bow of a full loaded boat, and then at the diminutive blades of the screw of the Cathcart or those of the Sternberg, and say, what can-

not be evaded by science and fact, that she is but little better adapted, mechanically, to locomotion than a dog is to swimming; and therefore, though she has a superabundance of the power of steam, she may puff away and expend her power, just as the dog will work hard, pant, and tire at a slow swim, because he has no fulcrum for his locomotion. When upon land he can do with ease at a few jumps more than he can do with long minutes of hard struggling in the water.

The want of mechanical adaptation to marine propulsion by paddle-wheels or screws upon ships or river steamers, is treated of, somewhat at length, in the September number of *Hunt's Merchants' Magazine*; and the principles and laws there examined are forcibly applicable to the want of adaptation to the canal.

With a small engine, the full sized boat for the canal will have the motive power relatively equal to that of the dog, and like him she will have little utilized in her propulsion; but if by the new system, the "outlines" of which are so briefly given in the article referred to, *she can be provided with a fulcrum such as she needs, and such as she must have to be properly useful*, then she will have the perfect control of a single full loaded boat at six miles per hour, at half the towing cost per horse power; or of another in tow at four miles, at three-eighths the towing cost per horse at horse rate; or of two or more in tow at two or three miles per hour, at 30 per cent of the cost now submitted to.

The chief washing of banks by a screw steamer, will be by the swell raised by her bows, as she forces the water forward of and laterally therefrom, whilst the radial rotation of the screw leaves the water acted upon by it in a screw-like rotatory commotion, which, commingling with the replacement current, will not injure the banks. The Sternberg leaves two screw-like currents, turning inwardly from the banks, as "right and left" screws to the boat. The Lone Star, so far as her description has been published, will throw the water acted upon by her respective wheels so as to face the replacement current, and with a tendency to lessen it.

Mr. Norcross, in the *Syracuse Journal*, makes the cost of a ten-horse engine by estimate  $6\frac{3}{4}$  cents per mile at three miles per hour, but this is at a much lower cost than the published statements by the Sternberg and Wack show in practice. The uncertainty in the use of steam is not in its economy of motive power, for a *given quantity of power* generated by the combustion of a ton of coal costs comparatively very little to the *same quantity of power* generated from hay and grain through the digestive and muscular functions of the horse; but in the ability to use it without wasting the larger part of it, and the great difficulty to be overcome is, the want of mechanical competency to impart the motive power to the movement of the boat, instead of wastefully expending from two-thirds to three-fourths of the power, in order to impart the residue to the movement of the boat; the wasted power having *no more resultant effect in the motion of the boat* than if the same amount of steam escaped through the safety-valve.

What we need to know, as practical men of correct knowledge, is, that the Sternberg, which, under high bridges, can carry over two hundred tons fully loaded, is but little better adapted to economize her power than the dog is his in swimming, and that, if she has a quantity of motive power actuating her piston equal to the tow of 50 good horses, her want of mechanicability to transmit the same from the piston to the motion of

the boat is such that she does not exceed in the run of the boat the tow of 12 to 17 horses' power. This is a truth which no mechanic, scientific or practical man, *can disprove*, and it is highly important to know it as a truth, for such knowledge is the corner-stone upon which we shall establish a successful mechanical system, and render horse power as unknown upon the canal as it is upon the railways. To steamers we ordinarily underrate the quantity of motive power existing in the functions of the steam, and we do this the more readily when we cannot, by the unaided observation, trace the developments which are wasted and measure them; yet which, from accurate practical facts, are by scientific analysis as perfectly measured as the quantity which produces the movement of the boat, and is obvious to the eye. The full examination of these expenditures which are wasted, and that which is utilized, cannot here be given, and as the laws and relations, as applicable to steamships, are given somewhat at length in the *Merchants' Magazine*, I may refer to that article for a general examination; but they may be illustrated in part thus:—*To an effective horse-power function upon the piston, the Sternberg (and I allude to her as a good specimen of the class of propellers) has not over 80 square inches of retrograde fulcrum surface by her propeller blades upon the water*; and when she draws five feet or more, by seventeen feet, she has over 12,000 square inches of displacement by her bows; hence, her retrograde fulcrum action is, by a large disproportion, incompetent to properly develop the power of her steam usefully; and to put a horse power of steam to propel a bold, heavy, resisting volume from a fulcrum of 80 square inches, is as far from common-sense mechanical adaptation as to put nine men to row a boat proportioned to them with a single common-sized oar blade, or as for a single oarsman to row his boat with only one-ninth of an oar blade.

How different with the horse upon the tow-path! He has, in dry weather, a perfect fulcrum for locomotion, and his power acts upon the boat in the best possible direction—qualified by the slight obliquity of the tow-line and the consequent slight obliquity of the rudder—for boatmen understand that they must throw the stern towards the tow-path a little in excess of the tendency of the bow-line, as in navigating the canal the bow is the pivot around which the rudder throws the stern to right or left to give new direction to the bow.

It is true to the nature of the case that we cannot anticipate developing the power of the steam with near the mechanical perfection that we can the power of the horse, but the cost of the power of a horse is so many times greater than the cost of the same quantity of power of steam, that even though we waste considerable in mechanically imparting it to the movement of the boat, we may yet have a large economy in favor of steam.

That these considerations may not be misconstrued, I state briefly—

1st. That a given quantity of motive power derived from horses and mules costs many times more than the same quantity of motive power generated by fuel in steam.

2d. That the power of the steam, under the present means of mechanically developing it, as by the wheels or propellers upon the canal, is wasted in extravagantly large quantities; and that to the Cathcart, Sternberg, Wack, or Lone Star, not less than two-thirds, and varying from two-thirds to three-fourths, of their motive power is absolutely wasted, so

that it has no resultant effect whatever in the motion of the boat. This is wasted just as the power of a pair of horses is wasted, which, when hitched before the stage, can take only twelve to eighteen passengers from the Astor House to the Crystal Palace with a given ease and speed, but hitched before the car they can take the heavier car and three or four times as many passengers with the same ease and speed. Thus, the difference in the loads moved is the difference in the mechanical developments of the same quantity of power by the same horses in the same time, so that, just as in the steamer, this difference wasted has no effect in the motion or transit of the load, it being the residuary or mechanical resultant of the power that effects the horizontal motion; and the difference arises from the want of mechanical adaptation in the pavement as compared to the mechanical adaptation of the rails.

3d. The development of the power of the horses in towing is as perfect as it is practical to attain.

4th. That when the power of the steam shall be mechanically developed, with but a partial waste of power—there being necessarily some waste to locomotion from a yielding fulcrum like water—it will cost but a small part of the present expense of towing.

5th. The great requirement for canal propulsion is a mechanical means by which to avoid—to as large a degree as practicable—the present wasteful expenditures. Such means should be sought for, because, when found and substituted for the present mechanism, it constitutes just such an advance in the useful arts as has ever met the necessities and produced the progressive eras of the past.

In an article on "Marine Steam Propulsion," (*Merchants' Magazine* for September,) "three essential features of mechanical adaptation to propulsion" are given, as—

1st. "Direct action of the motive power perpendicular to the lever of transmission."

2d. "An adequate resisting surface in immersed action upon the water as a fulcrum of propulsion."

3d. "Action upon the water in a retrograde direction parallel to the run of the boat, and upon the vessel in the line of its direction."

But neither of these three *essential* features exist to the Fultonian System or to the screw propellers, as both these systems embody *every possible obliquity to the crank twice per stroke of piston*—as if the pull of a rowman acted through a semi-circle of 180°, instead of its arc of about 60°, or 30° each side of perpendicular. Also the immersed areas to side-wheel ships, steamers, and propellers, is notoriously inadequate, producing a very rapid cycloidal slip in the case of steamships, an impulsive, rapid retrograde slip to river steamers, and a very rapid, radial, rotatory slip to the propellers. Also six-sevenths of the action of the "Collins" wheels upon the ships are more or less oblique, and the whole action of the propeller blades is oblique upon the vessel.

The principles, rules, and expenditures pertaining to these three desiderata are given in the magazine article referred to, and also the "outlines of a new system," combining the three essential features of mechanical adaptation as before given; and which are peculiarly well adapted to the towing purposes of the canal, and reliable examinations of which will draw out and induce a more correct knowledge of the true state and relations between steam and horse.

The present conditions of canal transportation, and as related to the other competitive lines for freight, demand a proper system of steam propulsion, such as may be given under three classes.

FIRST CLASS—DISPATCH FREIGHT.

This class should compete with the railways as approximately as it can for the "fast freight," and which for miscellaneous freight is always the highest priced—and by an efficient mechanical system of propulsion, a steamer, with easy bow and stern lines, can freely make six miles per hour on the canal, and eight on river; and by having priority at locks and other places, as the passenger packets used to have, it can make the passages between Buffalo and New York, each way, regularly in four days.

SECOND CLASS—A STEAMER AND FULL FREIGHT BOAT IN TOW.

This class can freely make four miles per hour on canal, and six miles on river, and having priority over third class, can make the passage between Lake Erie and this city (New York) regularly in six days.

THIRD CLASS—A STEAMER WITH TWO OR THREE BOATS IN TOW.

This class can freely run from two to three miles per hour on canal, and four miles per hour on river—and as steam will wholly supersede horse power, this class will be delayed at times by the first and second classes, and will make passages variably from eight to twelve days.

It is a matter of common judgment, that the construction of the bow and stern "lines" of the hull to the first class, or six-mile steamers, should be made easier, and improved from the present "duck-breasted" bows and full sterns, to give them easy and gradual displacement and succession of waters, instead of the large, abrupt, forward movements and stern suction tendencies. The duck-like bow at four miles per hour will wash the banks more than "easy lines" at six miles per hour—and the quantity of power for a duck-bow at six miles per hour over one of easy lines will cost far more than the slight difference of tonnage. The necessity for easy lines in the build, compared to the present common build, increases as the square of the increased velocity shall exceed the square of the horse power speed. Thus, if two horses can take a boat drawing four feet of water two miles per hour, it would take eighteen horses to take the same boat six miles per hour, *with the same ease or intensity of exertion*, ( $2^2 : 6^2 :: 2 : 18$ .) but as the eighteen will accomplish the given distance in one third of the time, they only expend in the aggregate three times the quantity—as the quantity of power to twenty-four miles in twelve hours by two horses is represented by  $2 \times 12$  or 24, and twenty-four miles in four hours by eighteen horses is represented by  $18 \times 4$  or 72, or the rates are as one is to nine; and the quantities as one is to three. The law of these relations is, that as the boat at six miles per hour has three times the velocity of that at two miles—it strikes three times as many particles of water per minute, and each particle three times as quick, in order to effect its sufficient displacement, and which makes ( $3 \times 3$ ) nine times the rate; or the resistances are as the squares of the velocities, ( $2^2 : 6^2 :: 1 : 9$ .) and the powers must, of course, be as the resistances.

But if the bold bow and stern are varied to easy lines, the velocities of displacement and replacement at six miles per hour may not exceed two-thirds these velocities at the same rate per hour when not varied; and in such case eight horses would tow as fast and as easy as eighteen with the

duck bows, as ( $1^2 : \frac{2^2}{3} :: 18 : 8$ .) The Canal Board have recently enacted that steamers drawing over four feet of water shall not exceed the rate of five miles per hour, but to a first-class dispatch boat properly built, and so propelled that the fulerum water will have very little commotion, and less swell at six miles per hour than now at four to five miles, this enactment would be readily amended.

Hence, the class of freight and rate per hour required of the steamer should dictate to practical men the best model for the best economy, and they should bear in mind that the best model for the highest economy, when towed by horse at  $1\frac{1}{2}$  to  $2\frac{1}{2}$  miles per hour, is not the best model for such economy when towed or propelled at six miles per hour.

The constructive lines for the second class should be a proper mean between the first and third classes, whilst to the third class the existing models may well be used.

Under financial considerations that make this subject an important one on the part of the State, and of her public officers, many facts might be deduced from the annual State reports of highly instructive character; and as the State is responsible, in a profit or loss account, for the good or bad management of the scores of millions herein invested, and as the State has also in her proper liberality granted protected rights to different overland competitors, which are now patronized liberally in the freight department, and which they can compete for and obtain simply and only on the ground that the State is "old foggy" and slow, and will stick to its proclivities for the overloaded horse and its consequent snail-like pace, whilst its competitor's whistle toots in its ears, and is away out of sight by virtue of the cheap and efficient power of steam, and its admirable mechanical adaptation to the rail; it truly becomes the canal officers of the State to know above, and in progress beyond, former prejudices and deceptive opinions and experiences, the reason why steam has been ignored so long from this great State institution. And the State should profit by trials at different times in the past, which have taught with unexampled plainness how they can waste, in the most prodigal manner, the power of the steam, and that the mechanical means, by which it has been done, *is not the means by which they are to rise above all former objections*, and superior to their competitors by railways, and by which they are to be competent to meet the full demands of the public, both as to expedition, regularity, and certainty of transit; and at so low rates, with profitable margins, as that the railways and other routes cannot infringe upon the rightful jurisdiction of this enlarged work, to that mass of all the products of the West which may naturally centralize to this great channel. To the recent enthusiasm engendered by the enterprise of a few parties who have broken loose from the stereotyped practices and thoughts of the past, and have caused in this short time some several different mechanical means of using the power to be applied, or which are in process of application, for early trials, credit is due: and to the most meritorious, or to such as shall, *in the best practical manner, use the power of the steam*, all encouragement should be given.

Upon the railways there are preferred classes of freight, and to all freight there are many consequent delays, as at turnouts in subjection to passenger trains and necessary conditions of time tables; hence, to their freight that is not perishable, express, or carried with preferred dispatch, they cannot add any important advantages over four-day trips by dispatch steamers.

It should be borne in mind that the railways are "up to time" under

the shrewdest competitive management, whilst the canal managers and forwarders have stuck like leeches to the tow-path, until they have sucked the financial blood from this great artery, so that she requires powerful stimulants in loans to reinvigorate her; hence, it wants an energetic and expeditious policy to meet the activities of the railways and redeem her from the sluggish habits of the past.

The New York Central Road carried during the last healthy business season (1856) in tons one mile, the equivalent of 474,700 tons of through freight between Buffalo and Albany, and at an aggregate expense account of \$4 29 per ton; and upon that quantity which was through freight she received \$8 26 per ton, so that the difference between the expense and receipts were nearly four dollars per ton, of which a considerable part must be required for "permanent repairs" to track, as due to the wear and tear of such freight; hence, the full cost of carrying this freight exceeds \$4 29 by a considerable part of the four dollars per ton excess; hence, also, \$4 29 *per ton is considerably below her living ability to carry through freight.*

This same road is now bringing flour from Lake Erie to this city at forty-five cents per barrel or \$4 21 per ton, shipping by barges on the river, in the average time of about six days; and these rates, irrespective of the river deduction, *is below the actual cash expenses of the same to the road.*

Consequently, if canal forwarders can carry dispatch freight at \$4 21 per ton, at present tolls between the lakes and this city, as regularly as the railways can, by four or six day lines, and make large profits, or can carry at still lesser rates and make liberal profits, then, since the railways must and do pay in cash more than such price per ton, besides the wear and tear of track, interest, and depreciation, it is very evident that they must resign competition for the natural flow of freight from the lakes to tide-water on the introduction of a mechanical system adapted to steam locomotion on the canal.

Also, if forwarders can perform this hitherto unknown feat, then they will very largely *increase their capacity of carriage*, for the first class will make two full round trips per month, whilst now they make but one; and the second class will make one-and-a-half round trips per month instead of one trip; the third class taking nearly the same time as now taken; and they will *very largely increase the aggregate income to the State* by virtue of the chief of that freight now diverted to routes north of, parallel with, and south of, it; which will naturally flow to this thoroughfare, except for the slow, tedious, and uncertain horse system; and when the large quantities of freight, now flowing over other artificial channels, shall be as naturally and fixedly turned into this great channel as the rivulets of the valley into their great trunk river, then again the canal fund will fill up and liquidate its present embarrassments, and thus be an independent and enriching tributary to the State.

The considerations given, and the conclusions drawn, bring us to the hypothesis, which is the corner-stone of prosperity to this great public work, viz.:—If forwarders can establish first-class dispatch steamers to make only four days' time, and second class steamers to make only six days' time, and third class steamers to make from eight to twelve days' time, and each class at prices with large margin for profits, and at prices below the possibility of railway competition.

In the preceding remarks and reference to proofs in article in *Merchants' Magazine*, I have shown that the existing mechanical systems *are not well*

*adapted to canal propulsion*—though I am far from saying that, bad as they are by their prodigal waste of power, they are not far better than the slow tread of the horse, and it is plain that the present experiments can be greatly improved and economized—but as the mechanical designs are radically bad from the ever-varying obliquities of action upon the crank, the diminutive fulcrum surfaces, and the obliquities by the wheels and screw blades, to their diminutive resultant power traceable to the movement of the boat, I can do no greater injustice to individual or public interest than to cloak these truths and encourage these systems *for what they are not*—though they are the best which have been publicly tried, just as the splendid “coach and six” was the best overland source of travel until their superior in the railway was publicly tried, through the perseverance of “Stephenson” against a mountain of prejudices.

The positive knowledge that the canal steamers that have triumphed so as to reach a speed of about four miles per hour, with about half freight under crowded fires and steam, or better if better results have been attained, have done it by virtue of from one-fourth to one-third of their power, is not readily made plain to all, because in the absence of an efficient system already in practice by the effects of which we might judge, we have now to trace the expenditures by scientific analysis from the known facts, and it is difficult to satisfy persons of these truths just as it would have been to have convinced them before the use of rails that only one-third of the draft of the horses before the stage was expended solely in the horizontal movement of the load, but when the natural eye sees that it takes three pairs of horses by stage to take the load of one pair on rails by their side, the judgment is assisted and analysis confirmed.

Also, it may be difficult to satisfy some, who have not confidence in their own analysis to trace inductively the advances of science beyond practice, that any system should utilize from the same quantity of steam from two to three times the useful effect now obtained, and this, too, simply by change of mechanism, though it be just as the useful effect is increased two or three times to a pair of horses when the mechanical rail is substituted for the irregular stone in our avenues.

But this difficulty is the fault of an insufficient conception of truths and not of the thing presented, and the deficiency is in the understanding and not in the thing to be understood.

I am, also, conscious of not doing justice to the full merits of the subject, because the “outlines of a new system,” as referred to in the Magazine article, are insufficiently given to illustrate, without drawings or miniature applications by models, the mechanical harmony of adaptation to required duty. But the mechanical design is natural to its purpose, whilst the existing means are anti-mechanical in the extreme, just as a rough pavement is anti-mechanical, whilst the design of the railway is natural to its purpose. I refer to the railway and pavement because *the same elementary laws of science are involved in the oblique actions of the radii of the wheels of the stage to the irregular surface, as are involved in the oblique actions of the steam to the crank, and of the paddle-wheels and propeller-blades to the boat*, and because the obliquities to the crank and boat, and the utterly inadequate fulcrum surfaces, are in no sense either scientific, practical, or economical, one iota better adapted to propulsion upon the canal, than the rough pavements are to propulsion overland.

Again, it is not so important at the introduction of any important reform

to fully present the new system upon which it should be based, however great its superiority of merits, as to break through the infidelity of men to the advances of science, for so long as they possess supreme confidence in the familiar systems of practice that they are the best possible to attain, however deficient in merit, they cannot be impressed with the idea that any other system can possibly possess superior merit. Such infidelity is very common, and it obstinately resisted Watt, Fulton, Stephenson, and Field; and it also took a bold front against the practicability of steam for transatlantic navigation by an eminent committee of the British Parliament, after a series of experiments on the Mediterranean, conducted for the instruction of such committee, and in our own Congress we fell short of unanimity of belief that Professor Morse could do what *he knew he could do*—intercommunicate intelligence between Washington and Baltimore.

It is the more important to break through the Sebastopol walls of scepticism in order that reform may enter, because these fortifications are the rule, and reliable knowledge of the platform of reform is the exception.

For such reasons I present the following statements of what can be done, *reserving to another time* the more full presentation of how it will be done, or of the simple principles of mechanics which must be incorporated into practice in substitution for the present complex, compound, and wasteful developments of power—developments which are now so complicated that a person who *can fully trace them correctly from the piston to their respective ultimate effects* is very seldom to be found, as it requires a research beyond the mechanical authors of the past, and so elementary in character as to correct the errors of the past.

From the forwarders' petition to the Canal Board we are instructed that a first-class boat, fully loaded with flour, can carry upon the enlarged canal 2,320 barrels, or 248 tons, of flour, drawing 6 $\frac{2}{3}$  feet of water.

The Central Railroad is now bringing flour from Buffalo to New York, by barges from Albany, in the average time of about six days, at 45 cents per barrel, or \$4 21 per ton, so that the 2,320 barrels costs the merchant \$1,044.

But we have shown from reports of this road that this is below their actual cash expenses pertaining to the freight:—

ESTIMATES OF COSTS BY ENLARGED CANAL.

By horse power we may assume the same per ton to the canal as the railway price, since it is now below their living ability to carry freight; or, 248 tons of flour, at \$4 21..... \$1,044

Cost of same—

Toll of four mills per ton per mile is \$1 41 6 per ton through, and 248 tons is.....	\$351	
Toll on boat.....	7	
The present price for towing to about 4 feet draft is 20 cents per mile, and to the draft of 6 feet and over it cannot be less than 30 cents, and 364 miles at 30 cents is.....	109	
Towage on river, at present price.....	30	
Captain, men, and expenses of boat at \$120 per month, the average time of which per trip, covering stay in port, will not be less than 15 days, equal.....	60	
	—	557
		—
Forwarder's net to down trip .....		\$487

If we estimate to return trip half down trip's gross receipts, we have \$522

Cost on same—		
Toll on freight, estimated.....	\$150	
Toll on boat.....	7	
Towage on river.....	30	
Towage on canal.....	73	
Captain, men, and expenses, half month.....	60	
	—	320
		—
		202
Forwarder's net to round trip, per month.....		\$689

ESTIMATE BY STEAM WITH THE NEW SYSTEM OF PROPULSION.

*First Class.*—To make proper dispatch by steam, which shall carry fast and high priced freight, the engine should give six miles per hour on canal and eight miles per hour on river. To do this, the buoyancy surface will be reduced about 8 per cent, or 20 tons on 248 tons, to give space for mechanical movements upon each side of the stern. To weight of competent engine space, fuel, &c., 20 tons, and to easy running lines we may allow 8 tons, or 48 tons in the aggregate to 6 $\frac{2}{3}$  feet draft. The above is a large allowance.

Although this class will compete with railways for all fast freight, excepting perishable articles, express freight, and live stock, I may present this estimate on the basis of flour and the losing railway prices. We have, then—

200 tons flour, at \$4 21 per ton.....		\$842
Cost of same—		
Toll on 200 tons, at \$1 41 6 per ton.....	\$283	
Toll on boat, \$7; do. extra for priority, \$7.....	14	
Coal and expenses of engine from Buffalo to New York, in 78 hours running time, or 4 days gross.....	50	
If we allow 3 days in port, we have 7 days full time, and captain, men, and expenses, as per horse-boat, at \$120 per month, 7-30ths of a month.....	28	
Two engineers, at \$30 per month, 7-30ths of a month.....	14	
	—	389
Forwarder's net per 7 days.....		\$453

For up freight, this class will not draw from freight now carried by boat, but from that carried by railway at high prices per ton; and as they can carry for two-thirds the railway prices, they may not fail to average in gross receipts per up trip..... \$600

Cost of same—		
Toll, estimated.....	\$150	
Toll on boat, \$7; do. extra, \$7.....	14	
Coal and expenses of engine.....	50	
Captain, men, and engineers, as to down trip.....	42	
	—	256
Forwarder's net to up trip, per 7 days.....		\$344
Forwarder's net to round trip, or 14 days.....		797
Forwarder's net to two round trips per month.....		1,594
Forwarder's net excess over horse-boat per month.....		905

*Second Class.*—Composed of first class steamer with one full freight boat in tow, with capacity reduced by easy lines from 248 tons to 240 tons. Estimate on the basis of flour, as before, and we have—

542 *Considerations in regard to Steam on the Erie Canal.*

Steamer....	200 tons.	} 440 tons, at \$4 21 .....	\$1,852
Boat in tow.	240 tons.		
Cost of same—			
Toll on 440 tons, at \$1 41 6.....			\$623
Toll on two boats, \$14; do. extra, \$14 .....			28
Coal and expenses of engine at four miles per hour on canal and six miles per hour on river, six days gross time, or 114 hours running time.....			75
If we allow for two boats 4 days in port, we have 10 days full time of trip, and captain, men, and expenses at \$120 per month each boat, for 10-30ths of a month, is.....			
Two engineers, at \$30 each, for 10-30ths of a month .....			80
			20
			826
Forwarder's net for two boats, ten days.....			\$1,026
For up freight this class will draw from railways and from best freight now carried by boats; and will probably average to both boats gross receipts. \$1,200			
Cost of same—			
Toll, estimated.....			\$300
Toll on two boats, \$14; do. extra, \$14 .....			28
Coal and expense of engine.....			75
Captain, men, and expenses, 10 days.....			80
Two engineers, 10 days .....			20
			503
Forwarder's net for two boats up.....			\$697
Forwarder's net for round trip of 20 days.....			1,723
Forwarder's net for average of 1½ round trip per month .....			2,584
Forwarder's net excess over two boats per horse power.....			1,206
<i>Third Class.</i> —Composed of a first class steamer and two full freight boats in tow of present maximum tonnage build. This class will carry slow freight, miscellaneous produce, lumber, &c., &c., not in necessity for dispatch; but we may put this class also on the basis of flour, to the better comparison with the first and second classes and with horse power. We have—			
One first class steamer of 200 tons and two freights in tow, each 248 tons, or 696 tons, at \$4 21 .....			
			\$2,930
Cost on same—			
Toll on 696 tons, at \$1 41 6.....			\$985
Toll on three boats, without priority, as steam will supersede horse, and these will be the slowest craft, excepting rafts.....			21
Coal and expenses of engine, at the rate of 2½ miles per hour on canal and 4 miles on river, or 9½ days running time, and 9 or 10 days gross .....			94
Captain, men, and expenses, 10 days passages and 5 days in port, or one-half month to each boat.....			180
Two engineers, one-half month each.....			30
			1,310
Forwarder's net for three boats down, or 15 days .....			\$1,620
For up freight, this class will take same as is now taken, and we take same estimates as per horse power; and we have—three boats, with gross receipts of \$522 each.....			
			\$1,566
Cost of same—			
Toll on each, estimated at \$150.....			\$450
Toll on three boats.....			21
Coal and engine expenses.....			94
Captain, men, and engineers, as per down trip.....			210
			775
Forwarder's net for three boats up trip.....			\$791
Forwarder's net for round trip of one month .....			2,411
Excess over three boats per horse power.....			344

The third-class trips will be made in two days less running time than by horse power to same draft of water.

SUMMARY.

By horse, net per month, 1 boat.....	\$689		
By steam, 1st class, per month, 1 boat ..	1,594	Excess per boat.....	\$905
By horse, per month, 2 boats.....	1,378		
By steam, 2d class, per month, 2 boats..	2,584	Excess, \$1,206; per boat....	603
By horse, per month, 3 boats.....	2,067		
By steam, 3d class, per month, 3 boats..	2,411	Excess, \$344; per boat....	114
Or the net per boat by horse equals 43	per cent	the net by 1st class steamer.	
“ “ “	53	“ “ 2d	“
“ “ “	86	“ “ 3d	“

It will be observed that the gross receipts to the up freight, to first and second class steamers, is put at \$78 excess per boat above receipts per horse-boat, whilst the tolls are given equal; but this does not convey properly the advantages accruing to four and six day passages for up freight, either to the forwarders or to the State, for they can make large profits at half the railway prices on up merchandise, and in such case can command the chief of the up freight, and add its tolls to the exchequer of the State, now unknown there.

The comparison of the respective classes all being based upon flour and tolls at same rates, forwarders and merchants will observe that this statement is not intended as an estimate of charges or of profits—but as an estimate of the capabilities of steam canal transportation compared to railway expenses for freights; and as an estimate of the relations of steam to horse transit on the enlarged canal, and as an estimate of the respective classes by steam to each other. Hence, they will observe that it is not material to the object, that the precise difference should be given between the primary expenses by steam on railway and on canal, so long as there is an extravagant margin in favor of steamers; neither is it necessary that a full detailed specification of the different kinds of freights, prices, tolls, and respective quantities should be given to the different classes by steam on canal, as it is fully sufficient if they are relatively reliable.

This statement shows that the first class freight by steamers is the first in financial merit, nevertheless, the other classes must exist or this preference cannot exist, any sooner than we can have super-extra brands of flour without the lower brands; and experience will control the number of boats to each class.

This statement also shows the complete and undisputable superiority of economical transportation, by a proper steam system, over the living ability of railways to carry freight, as they can make extravagantly large profits at prices at which the railways would make large losses.

I repeat, as before stated, that there is a hypothetical condition to these statements, predicated simply, yet substantially, upon the adaptation of mechanism to develop the chief of the power of the steam expended by the “Cathcart,” “Sternberg,” “Charles Wack,” “Lone Star,” and the Syracuse adjustable side-wheel steamer without utility in transportation, in useful duty. The proofs that this hypothesis is understandingly made, and will become a true, reliable, practical condition of transportation, are reserved for another presentation of the subject; and until presented this condition of the statements cannot be adjudged, neither comparatively nor abstractly, no more than the public could adjudge the telegraph when

Professor Morse was demonstrating here in the University the science and operations of it, and unknowingly whilst unknown compare it with the old "signal telegraph," or abstractly pronounce it meritorious or without merit.

This incomplete condition of the subject does not effect the merit of this investigation, because all commercially interested parties should know the mechanical incompetencies of the present systems of marine propulsion, before they can aspire above them, or supersede them; and as all know that nothing better has ever been publicly developed, and that these have had the best adaptations of the experience of many years, and since millions of persons may say that they cannot be superseded, these facts should not stifle knowledge or investigation—and if after so many years of experience these systems are so extravagantly incomplete, *the fact solicits knowledge* in place of false opinions; solicits simple mechanical developments of the power in place of those now made that are so complex, that they are very seldom correctly understood, and solicits the substitution of economical and efficient mechanism, be its novelty what it may.

The introduction of a well adapted-system will at once throw into profitable activity canal-boat builders, engine builders, and open a wide demand for engineers, for the canal requires some two thousand engines—not to do the business now done, as it is now done, consuming to the passage by the weary-worn horse the ordinary time from here to Europe by steam—but to do a largely increased business, and in such reduced times as that it shall not be disrespectful to the enterprise of the age; and as canal forwarders, for the last season coupled with this, have suffered greatly by the enterprise of the railways, conjointly with the revulsion of trade the last, and its dormant state this, season—which facts conspire to condemn the sluggish manner they now do business, consigning to a cargo and return cargo a month of time, by which they elevate by contrast the activity of steam that takes their profits from them, if perchance it does not consign them to grievous losses—they should feel compelled, as a means of self-preservation, to elevate their craft to the dignity and efficiency due to steam—else steam on other great routes will draw closer and closer the bondage which they now feel, until they shall travail in pains for delivery at last by steam.

It may not be said by readers, or steamboat men, or engineers, that these things cannot be done, for whilst it is safe for them to say what they cannot do, it is not safe for them to say of others, where there is a remarkable opening for something remarkable to be done, that some other talent cannot meet the demand, for it required but one Watt, one Fulton, one Henry Bell, one Morse, and one Field, that each in their sphere should triumph over the cant-do's of the world beside them—and a single person with knowledge of what he can do is worth more in the progressive eras of usefulness than thousands beside of "cant-do" men.

*Steam can accomplish what I have set forth for it on the canal, and as when steam embarked upon the Hudson, and upon the broad stormy Atlantic, we saw not its rapidity of growth and successive expansions, and its invaluable contributions to commerce, so when steam shall embark upon the enlarged Erie, clothed with a mechanical fitness for its duty, we may not now see its rapidity of growth and successive expansions, and its invaluable contributions to commerce, but we shall see that its blessings are incalculably great.*

## ART. II.—SUGAR: ITS PRODUCTION AND CONSUMPTION.

GENERAL STATE OF TRADE—EFFECTS OF EXCHANGES—INTRODUCTION IN EUROPE—ITS DISSEMINATION—TRANSPLANTED TO AMERICA—GROWTH IN THE ISLANDS—BRAZIL AND LOUISIANA—TWO CHEMICAL SUGARS—SEVERAL SORTS OF EACH—CANE SUGAR, ITS TOTAL PRODUCT—PALM SUGAR—MAPLE SUGAR—BEET-ROOT—BEET-ROOT PRODUCTION IN FRANCE—TOTAL PRODUCT OF SUGARS—PRODUCTION OF CANE AND BEET-ROOT SUGARS—BEET-ROOT IN THE ZOLLVEREIN—BEET-ROOT SUGAR IN FRANCE—YIELD OF CANE AND BEET SUGAR PER ACRE—PHILIPPINE ISLANDS—MAURITIUS—BOURBON—WANT OF LABOR—SORGHO—CONSUMPTION OF SUGAR—EXTENSION IN FRANCE—CHEMICAL SUGAR—MARKETS FOR SUGAR—LOUISIANA—FLUCTUATION—CONSUMPTION IN THE UNITED STATES—PRICE—IMPORT AND DOMESTIC GROWTH—CONSUMPTION PER HEAD IN GREAT BRITAIN, FRANCE, AND UNITED STATES—FUTURE CONSUMPTION.

THIS trade, from various causes, has received an enormous development within the past few years, and was last year, from its peculiar relation to the foreign exchanges of the United States, a prominent cause of the derangement of the finances. The consumption of sugar in Europe and the United States has, during the present century, received a great development, and has in the last few years exerted an increasing influence upon the trade of the world. The taste for sugar spread in Europe as a consequence of the crusades. It was introduced in the ninth century by the Saracens into Rhodes, Cyprus, Sicily, and the south of Spain. The plant followed the conquests by southern Europeans, passing with the Spanish and Portuguese into the Canaries and Madeira; and when the Spaniards, established in America, transplanted the cane thither, they became astonished at its great production in St. Domingo as compared with Andalusia. The efforts of the Portuguese in Brazil were, however, crowned with the most marked success, and Lisbon drew great wealth from that source. In the middle of the seventeenth century the Brazils gave 75,000 tons; but there were but three sugar works in Jamaica at the same period, when England took it. The plant from that time spread rapidly to all the West India islands, as well as to Mexico. The possession of the sugar islands became the bone of contention between France, England, and Spain, and at the date of the French revolution St. Domingo was the most successful of all in that respect. The cane was introduced into Louisiana in 1751, and M. Dubreuil established the first plantation in 1758. His success stimulated others, until, in 1803, the number reached eighty-one; but in the last twenty years it has there received its greatest development. In Europe, latterly, cane sugar has encountered a serious rival in the beet-root sugar of Europe; of other sugars the success is not great.

Chemistry distinguishes two sugars—one, that furnished by the cane, is found to be identical with that yielded by many other vegetables. Of these, certain trees of the palm family, the chesnut, the maple, the stalk of Indian corn, and some roots, of which the beet is the most important. The other sugar is contained in grapes, in pears, apples, and most species of fruits. This species of sugar will not granulate, or crystalize, like that of the cane, but it is made in considerable quantities for certain uses, particularly for mixing with grape juice, in order to augment the quantity of alcohol in wine. This article does not, however, come under the head of sugars known to commerce.

The production of the sugar from canes has undergone great changes in the last fifty years. Hayti, which produced 93,573,000 pounds in 1789,

produced but 2,020 pounds in 1825, being the effect of a change of policy. On the other hand, the Mauritius, which produced 1,034,274 pounds in 1814, exported 280,000,000 pounds in 1856. The Island of Cuba has come to be the largest source of supply. The quantity of cane sugar produced in the world, in average years, is as follows. The total quantity given, in 1838, was 738,000 tons, showing an increase of 420,000 tons in twenty years :—

## AVERAGE SUGAR PRODUCT OF THE WORLD.

East Indies.....	tons	148,500
British West Indies and Mauritius.....		203,000
Cuba, Porto Rico, and Philippines.....		325,000
Brazils.....		200,000
Java and Surinam.....		65,000
French West Indies.....		64,667
Danish colonies.....		7,500
United States.....		136,486
Spain.....		7,500
Total.....		<u>1,157,653</u>

The East India production embraces 70,000 tons, which finds its way to Persia and Tartary. Nearly the whole of the remainder is transported from the place of production to find consumers. There remains in each producing country a quantity which is consumed on the spot. Thus, it is estimated that thirteen pounds per head, or 600,000 tons, is consumed in India; and other producing countries, it is estimated, consume 300,000 tons, which gives a total production of 2,057,653 tons of cane sugar. The consumption of sugar in Cuba is very large per head of the population, since it enters into the preserves of all kinds of fruits, which form a considerable item on every table.

It is estimated that the production of palm sugar in the Indian Archipelago, in the Kingdom of Siam, southern Sumatra, Ceylon, and Java may reach altogether 100,000 tons. Maple sugar is made in the United States and Canada from the sap caught from old forest trees, and reaches about 20,000 tons per annum. In this last year it was estimated to have reached 38,000 tons. Beet-root sugar is made mostly in France and Germany. It was born of the continental system of Napoleon, and the discovery of the value of the beet-root manufacture was received with the greatest favor by the government. In 1810, there already existed two hundred beet-root factories, yielding 2,000,000 pounds per annum. The product is now over 200,000 tons. From a forced culture, to produce a substitute for the colonial product in time of war, it has grown to be a formidable rival, even supplanting cane on equal terms, and, in some cases, sustaining adverse legislation. Nearly all the States of the center and north of Europe have entered into the culture with great spirit and success. There are in France 341 sugar factories; Belgium, 40; in the Zollverein, 231; Austria, 171; Russia, 360; Poland, 40; and the product will average 250,000 tons. The production in France is the greatest, but that of the Zollverein is not far behind. The production of beet-root sugar in France did not much increase up to 1828, probably in consequence of the general exhaustion of the country consequent upon the long wars. It enjoyed, however, a great protection, being free of import, while colonial sugar was charged 50 francs per 100 kilogrammes, equal to 4¼ cents per pound. This stimulated the beet-root production to a great extent, inducing large investments in machinery. It resulted that

the home-made sugar so far supplanted the cane that the government revenues began to suffer, and the colonists raised a great outcry about the loss of the market, demanding that the beet-root sugar should be suppressed by the purchase of the interest by the government. During the agitation of this matter the beet-root sugar interest languished, because its future was uncertain. Finally, in 1843, a tax was imposed upon it, to be enhanced annually for five years, when it would be the same as the duty on cane sugar, viz., 49f. 50c. per 100 kilogrammes. In face of this onerous tax the interest took a new start, and many improvements were introduced, not only in the cultivation of the cane, but in the mode of extracting the sugar. Of the 10 per cent of sugar which the roots contained, the new process raised the proportion obtained from 7 to 8, and now nearly 9 per cent. The political difficulties of 1848 interfered with the production, but it was also stated that a new and simple mode of extracting sugar had been discovered, by which the expensive machinery would be done away with. These fears were found to be exaggerated, and the manufacture progressed. It has been since checked by the failure of the corn crops, which, inducing high prices for grain, curtailed the extent of the root culture, and again by the grape failure, which induced the distillation of alcohol instead of sugar.

The provisional government of 1848 also maintained the duty on beet-root sugar at 50 francs, and reduced that on cane from the West Indies to 44 francs, and on Bourbon to 41 francs. The 3 francs were supposed to compensate for the longer voyage. The duties are now equalized on all. In Germany, mostly in the Zollverein, beet-root sugar is protected against cane sugar by a duty of 25 francs per 100 kilogrammes, 2½ cents per pound. But the mode there in use, of levying the duty on beet root sugar, is said to be better than that of France. In the latter country, the duty is on the weight of sugar made. This exposes the factories at all times to the inconvenient visits of the government officers. In Germany, on the other hand, the duty is on the weight of beet-roots delivered at the factories. This mode dispenses with all surveillance upon the manufacturing process, giving the German manufactories a great advantage. The production of sugar in the other countries of Europe has been progressive, but in a smaller ratio. If we enumerate the quantities of all those sugars that are produced annually, the result is nearly as follows:—

Cane sugar..... tons	2,057,653	Beet-root sugar ..... tons	164,822
Palm sugar.....	100,000	Maple sugar.....	20,247
Total.....			2,342,722

But the quantity of sugar from which the United States, England, Europe, and the Mediterranean is to be supplied, reaches only 1,273,000 tons. Thus, for the 300,000,000 souls who are dependent on it, it gives but about eight pounds per head, while the consumption in England is triple that quantity, and in the United States twenty pounds per head. The use of sugar in the world is rapidly increasing. In France it has doubled in thirty years. It has increased more than 50 per cent in England in fifteen years. In the Zollverein it has quadrupled. The cane is that which chiefly enters into commerce, and rivals beet-root only in the countries of its production. There is imported into California about 10,000,000 pounds of sugar per annum, from China mostly; also from Batavia, Peru, Sandwich Islands, and Mexico. This seems to be a grow-

ing trade. The following is a table of the production of cane and beet-root sugar for a series of years:—

		PRODUCTION OF SUGAR.									
		1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	
Cuba.....	tons	220,000	250,000	320,000	310,107	331,204	349,502	375,475	357,347	369,610	
Porto Rico . . .		43,600	48,200	49,500	47,981	39,202	40,107	41,058	53,377	35,660	
Brazils . . . . .		121,009	113,271	141,685	106,672	152,601	114,509	113,754	105,603	125,000	
United States....		98,200	120,400	103,200	118,273	160,967	224,662	173,317	115,713	36,903	
W. Indies, French		56,300	47,200	50,000	65,252	71,102	78,780	81,713	110,000	106,686	
“ Danish		7,900	5,000	6,000	8,011	9,000	10,000	9,711	11,204	12,212	
“ Dutch		13,000	14,200	15,000	13,100	14,101	17,102	16,701	18,291	19,000	
“ British		142,200	129,200	168,000	153,134	141,538	172,215	146,498	147,911	146,925	
East Indies.....		73,400	67,300	66,000	78,280	79,112	40,121	37,104	58,383	57,822	
Mauritius.....		44,700	50,200	58,000	68,066	80,000	101,000	107,235	115,000	110,000	
Java.....		90,000	82,000	82,000	86,297	85,109	74,771	59,210	68,240	72,911	
Manilla.....		20,000	23,189	26,806	25,912	39,270	41,908	46,210	48,422	42,210	
Total cane.....		915,300	936,700	1,022,000	1,083,085	1,203,206	1,264,677	1,207,986	1,209,491	1,134,959	
France.....		38,000	61,000	75,000	69,110	74,910	76,951	44,669	92,197	83,126	
Belgium.....		5,000	6,000	8,000	7,121	9,200	8,760	9,000	9,180	10,101	
Zollverein.....		33,000	38,000	49,000	62,111	85,000	70,821	73,981	80,753	87,319	
Russia.....		13,000	14,000	15,000	17,525	16,201	17,192	18,192	21,207	22,208	
Austria.....		6,500	10,000	15,000	16,101	15,611	14,211	17,111	19,102	19,892	
Total beet-root.		95,500	129,000	162,000	171,968	200,932	187,935	162,953	222,439	222,646	
Grand total....		1,010,800	1,065,700	1,184,700	1,255,053	1,404,138	1,452,612	1,370,939	1,431,930	1,357,605	
Av. price of sugar at Amsterdam..	£	53	59	58	58	60.50	60.95	66.15	67.15	69	

The development of the sugar culture has been under the spur of the rising prices, as indicated in the average at Amsterdam as the leading central market. Under the head of Brazils is included the neighboring sugar crops, and the French West Indies includes Bourbon.

The production in the Sandwich Islands, in 1858, is 1,000 tons; the average is about 600 tons.

The quantity of beet-root used in the Zollverein has been as follows:—

	No. factories.	Cwt. beet-root used.		No. factories.	Cwt. beet-root used.
1840.....	145	4,820,734	1857.....	241	26,138,309
1851.....	184	14,724,309	1858.....	251	28,409,674
1852.....	220	17,831,406			

The quantity of beet-root used in the several countries, which compose the Zollverein, for 1858, was as follows:—

BEEET-ROOT IN THE ZOLLVEREIN IN 1858.

Prussia.....	cwt.	24,312,925	Saxony.....	cwt.	118,738
Brunswick.....		1,293,352	Hanover.....		84,346
Baden.....		1,139,735	Hesse.....		20,028
Wurtemberg.....		935,325			
Bavaria.....		377,166	Total, 1858.....		28,409,674
Thuringia.....		225,853	Total, 1857.....		26,138,304

The beet-root sugar manufacture in France is shown in official reports for the season of 1857–58, to the end of the month of August. It appears from it that there were 341 factories in operation, which is an increase of 58 on the previous year. There were 146 of them in the department of Nord; 54 in Aisne; 62 in Pas de Calais; 34 in Somme; 21 in Oise, and 24 in fourteen other departments.

	1857.	1858.	Increase.	
Number of factories.....	283	341	58	
Made.....	kilo.	83,126,618	151,514,485	68,387,817
Consumed.....		78,071,137	111,877,112	33,805,975
Stock, August 31st, in factories.....		4,344,483	16,067,330	11,722,847
“ “ in warehouse....		5,684,390	10,106,737	4,418,347
Total stock.....		10,028,873	26,174,067	16,141,194

A kilogramme is equal to 2.20 pounds; hence, a thousand kilogrammes is very nearly one ton, and the increase of production is 68,387 tons.

There is a great difference in the production of land per acre in cane sugar as well as in beet-root, and land, formerly productive, has much degenerated. The British and French West Indies formerly gave 6,000 pounds of sugar to the acre; they will now hardly average 2,000 pounds. The Mauritius, before the use of guano, gave about 2,000 pounds to the acre; the use of that fertilizer brings it up to 6,000 pounds, and relatively the production is as follows:—

Mauritius.....lbs.	6,000	Vera Cruz.....lbs.	1,900
Brazil.....	5,000	Martinique.....	1,700
Cuba.....	4,000	Bengal.....	1,600
Isle of Bourbon.....	3,300	St. Domingo.....	1,100
Guadaloupe.....	2,000	Louisiana.....	1,000

The production of sugar in Bourbon has also undergone an immense development by reason of the use of guano. The product has increased from 23,000,000 pounds in 1851 to 56,000,000 pounds in 1856. These are very gratifying results, but the product of beet-root in Europe is, under the circumstances, as good—an acre of land will give 20,000 pounds of beet-roots. These contain 10 per cent of sugar; of this, 8 per cent is extracted, and it is said it will be raised to 9 per cent, equal to 1,800 pounds of sugar. This is worth, in France, 128 francs per 100 kilogrammes, against 118 francs per 100 kilogrammes for colonial, a difference of 18 per cent in favor of beet-root sugar over and above the cost of transportation and ocean freight. It has been the case, however, that the production of cane sugar has greatly progressed in the last few years in some localities. This has been the case more particularly in the Mauritius, in the Philippine Islands, and in the French Island of Bourbon. In the first-mentioned place the crops had doubled in ten years under the joint influence of improvements in manufacture, increase of laborers, and the use of guano; and some 300 sugar estates are now cultivated. The number of Coolies is 142,534, and about 15,000 tons of guano are used per annum, and the product of sugar is limited by the number of hands that can be obtained. In the present year we have advices to the 1st of August. The weather was fine, and the crops had commenced on several of the estates. The sugar crop is expected to reach 120,000 tons, the largest ever made. Immigrants had arrived in large numbers, and food, notwithstanding its reported scarcity in India, had been received in considerable quantity.

The French islands are better situated in that respect, and the sugar product increases rapidly. With cane sugar the great difficulty is want of hands, as well in Cuba as in the Brazils and in eastern countries. The undoubted growing demand for sugar is checked by that want, and its consequences are manifest in many ways. With beet sugar, on the other hand, no such restriction is felt. It has now become a fixed culture in northern and middle Europe. It maintains itself not only unassisted, but in face of restriction, and appears to be of a more certain crop than cane in some quarters.

The cultivation of sorgho was extensively entered into in France, but its ability to yield sugar has not answered the expectation entertained of it. It has been discovered, however, that it will yield alcohol nearly 30

per cent cheaper than beet-root. It has followed that numbers of beet-root factories, particularly in the north of France, have abandoned distillation and resumed sugar making.

The consumption of sugar in France, Great Britain, and the United States for several years, has been as follows, comparatively :—

TONS OF SUGAR, DOMESTIC AND IMPORTED, CONSUMED ANNUALLY IN FRANCE, GREAT BRITAIN, AND THE UNITED STATES, SHOWING THE ANNUAL AVERAGE PRICE, AND THE POUNDS PER HEAD.

	ENGLAND.				FRANCE.			Total in tons.	UNITED STATES.				
	Tons.	Lbs per head.	Price in s. d.	Price in bond.	Foreign.	Col-onial.	Beet-root.		Imported.	Louisiana.	Total in tons.	Lbs pr Cts.	pr lb.
1801..	114,542	30.5	8	.....	.....	.....	.....	21,376	.....	.....	.....	.....	
1811..	169,611	29.4	46	10	.....	.....	2,000	24,791	.....	.....	.....	.....	
1821..	170,612	19.3	33	2	.....	.....	.....	26,672	.....	.....	6	.....	
1831..	203,912	19.0	23	8	545	81,105	10,000	91,651	44,178	35,000	79,178	13	.....
1841..	203,200	17.0	30	8	12,042	74,515	27,162	114,719	65,601	38,000	103,601	13	44
1842..	193,823	16.0	36	11	8,210	77,443	35,070	110,723	69,474	39,200	108,674	13	3
1843..	204,016	17.0	33	9	9,605	79,455	29,155	118,215	28,854	64,360	93,214	11	3
1844..	206,000	17.0	33	8	10,209	87,382	32,075	129,626	83,801	44,400	128,201	15	3
1845..	242,831	20.0	32	8	11,542	90,958	35,132	137,632	88,336	45,000	133,336	15	4
1846..	261,932	21.0	33	2	15,185	78,632	46,845	140,662	44,974	83,028	128,005	14	4
1847..	290,295	23.0	27	8	9,626	87,826	52,369	149,821	98,410	71,040	169,450	18	4
1848..	299,421	25.0	23	5	9,540	48,371	48,103	106,014	104,214	107,000	211,214	22	3
1849..	309,041	24.0	25	2	18,979	63,335	43,793	126,107	103,121	99,180	202,301	20	3
1850..	310,391	25.0	25	2	23,862	50,996	67,297	142,155	160,210	141,600	301,810	29	3
1851..	329,715	27.0	25	2	19,223	50,170	61,847	131,240	201,493	120,331	321,824	30	3
1852..	344,943	29.0	22	10	14,882	32,030	67,445	114,357	196,558	118,659	315,217	29	3
1853	363,641	30.0	25	00	15,044	32,541	87,120	185,005	200,610	172,379	372,989	30	3
1854..	401,437	34.0	21	5	18,943	40,113	85,825	144,981	150,854	234,444	385,298	34	3
1855..	359,957	30.0	26	9	49,822	45,373	52,902	148,097	192,607	185,145	377,752	31	3
1856..	341,673	28.0	27	7	16,456	46,767	78,071	141,294	255,292	123,468	378,760	30	4
1857..	355,719	29.0	32	10	25,689	42,466	111,877	180,032	241,765	39,000	280,765	23	5

The consumption of sugar in Europe is susceptible of great extension with the amelioration of the condition of the people. Thus, in France, it is estimated that 20,000,000 persons do not even now use sugar. In the interior of Europe the numbers are also large, and, with the cheapening value of sugar, while the general welfare of the people improves, the demand for sugar increases far faster than the labor-restrained culture of the cane can supply. Science is also busy, and it is asserted the chemists, M. Braconnet, of Nancy, among others, has succeeded in transmuted certain woods, straw, hemp, and flax, by the use of concentrated sulphuric acid, into the description of sugar called glucose, pound for pound. It is not probable, however, that immediate important results will flow from this process.

The markets have fluctuated largely in the last few years. The crops of 1853, in Louisiana, although produced from a diminished number of plantations, turned out to be very large, reaching 449,324 hogshheads. As a consequence, prices were very low, assisted by a financial pressure, which diminished the consumption of sugar, particularly refined. This discouraged many planters, who turned their attention to cotton. In the following year the consumption of sugar was everywhere enhanced, as well by increasing population as the disease in the vines in Europe, causing the low-priced sugars to be distilled. The result was a considerable rise in prices, which was aided by the decline in the crop of Louisiana. This deficit counteracted the diminution in supply, which might have been looked for from high prices. Those high prices, however, stimulated production, but a further serious decline took place in the domestic cane. The low prices of 1854 had reduced the number of sugar-houses from 1,481 to 1,299, as stated by M. Champomier; and, at the same time, the agitation of a reduction of duty added to the discouragement of planters. Efforts were made by Congress to introduce new cane-cuttings, and great hopes were excited by the promise of "sorghum," or Chinese sugar cane.

Nevertheless, the Louisiana sugar crop fell to the small figure of 39,000 tons, causing an immense demand for the foreign article, and inducing the import of a new article, "melado," of which about 70,000 hogsheads were imported, equal to 23,400 tons of sugar. The operation was not supposed to be successful. As far as sugar-making goes, "sorghum" is a failure; although, in France, alcohol is extracted from it much cheaper than from beet-roots, and the distillation of the latter has been stopped. The "sorghum" may serve to prevent cane from being distilled on occasion of the failure of the vines, but will not supply much sugar directly. The high prices of sugar stimulated the production of maple sugar to an unprecedented extent, and the crop was more than double that of any former one.

The same agency induced great exertions in raising the Louisiana crop by planting more land and improving the cultivation, but an early frost and other circumstances reduced it to 279,697 hogsheads. The introduction of the bi-sulphite of lime in the manufacture of sugar has a very important influence upon the Louisiana crop. First-class sugar, it seems, or sugar which brings the highest prices, cannot now be made without the use of the bi-sulphite, and this has been brought to great perfection by Mr. Bonnabel, of New Orleans. It is producing quite a revolution in the Louisiana culture, since with it fine sugar is produced even from frost-touched cane. The import and consumption in the United States, as made up for the New York *Shipping List* annually by leading brokers, have been for six years as follows, in tons of 2,240 pounds each:—

IMPORT, EXPORT, AND CONSUMPTION OF SUGAR IN THE UNITED STATES.

	Stock, tons.	Receipts, tons.	Exports, tons.	Foreign.	Consumption, Domestic.	Total tons.
1850 .....	.....	.....	.....	160,210	141,592	301,802
1851 .....	.....	.....	.....	201,405	120,331	321,736
1852 .....	.....	.....	.....	196,558	118,659	315,217
1853.....	18,212	212,746	16,318	200,610	172,379	379,989
1854.....	14,030	165,925	22,636	150,854	234,444	385,298
1855.....	6,465	205,064	12,972	192,607	185,145	377,752
1856.....	5,950	275,662	9,501	255,292	123,468	378,760
1857.....	16,819	269,180	28,705	241,765	39,000	280,765

Total, six years..... 2,110,781

These quantities require to be corrected by the estimated use of molasses, maple sugar, and the California and Oregon consumption, as follows:—

	Consumption as above.	Made of molasses.	Maple sugar.	California and Oregon.	Total U. S., tons.
1854.....	385,298	12,633	12,300	4,700	414,931
1855.....	377,752	11,160	14,500	5,500	408,912
1856.....	378,760	11,875	14,500	7,000	412,135
1857.....	280,765	10,300	35,000	6,000	332,065

The average prices for the year in New York has been as follows:—

	New Orleans.	Havana.		Manilla.	Brazil.
		White.	Brown.		
1851.....	5.49	7.48	6.05	5.	5.25
1852.....	4.84	7.07	5.75	4.17	4.39
1853.....	5.45	7.37	5.95	5.12	5.04
1854.....	4.99	7.00	5.88	5.02	5.00
1855.....	6.25	7.66	6.54	6.54	5.97
1856.....	8.33	10.23	8.90	8.05	7.84
1857.....	9.04	11.87	9.69	8.68	9.74
1858, January.....	6.87	9.12	7.12	6.50	.....

The large Louisiana crop of 1854 checked slightly in New York the advance in prices, which had previously taken place all over the world. But the subsequent diminution of the crop gave a new impulse to values. The crop of 1858 has turned out 279,697 hogsheads, or 307,666,700 pounds, and has, probably, netted more money than any previous crop.

If we compare the above figures of supply and consumption in the United States with the annual returns of the Treasury Department, we have results as follows:—

	Imports.	Exports.	New Orleans crops.	United States consumption.
1852..... lbs.	456,774,133	12,655,469	260,201,700	704,320,364
1853.....	463,529,559	29,056,317	354,127,400	738,600,642
1854.....	455,178,995	65,861,289	494,256,400	883,574,106
1855.....	473,548,714	48,509,186	331,298,500	806,338,028
1856.....	543,956,655	34,600,471	254,569,700	763,925,884
1857.....	776,149,999	21,594,164	81,373,600	834,711,257
Total in six years, in tons.....				2,134,585
Total in six years, in tons, as above.....				2,110,781

The export is attained by taking the foreign and domestic refined exported in its equivalent raw, added to the weight of raw exported. The year for the returns are to June 30th, while that of the above figures are to December 31st. The single years would not, therefore, correspond. Reducing the pounds to tons we have for the Federal returns 2,134,585 tons consumed in six years, and, according to the brokers' returns, 2,110,781 tons consumed in the same period—a variation of 23,804 tons in six years, which is not large when we consider the circumstances of the returns; and the imports into California from Asia, included in the government returns, would more than account for that difference. It may be, therefore, assumed that the two different modes of arriving at the same result nearly agree as far as cane sugar goes. The actual quantity so given is swollen by the molasses and maple sugar to an average of 392,000 tons per annum.

If we now compare the consumption of France, Great Britain, and the United States, we have results as follows:—

	Population.	Average consumption, tons.	Equal to lbs. per head.
France.....	36,000,000	150,000	9
Great Britain.....	28,400,000	360,000	28½
United States.....	27,000,000	392,000	31½

In Prussia the consumption is six pounds, and in Belgium fourteen pounds, per head; such is the enormous difference between the two countries. Allowing the estimate that 20,000,000 of French people never eat sugar, there would remain twenty pounds per head for the 16,000,000 persons who do use sugar, a quantity still very far below the American standard. Great numbers of people in Great Britain also do without sugar, and in the interior of Europe the same state of things exists to a greater degree. It is obvious that the more extensive use of sugar, through the improved general condition of the nations, would make serious demands upon production, which cannot be met by cane sugar in the present condition of labor applicable to it.

## Art. III.—CAUSES OF THE RECENT COMMERCIAL DISTRESS.

WITH REFERENCE TO THE LAWS FOR REGULATING THE ISSUE OF BANK NOTES.

CURRENCY QUESTION—LAW OF 1819—LONG DISCUSSION—A SOVEREIGN—FIXING VALUE—NATURE OF A PROMISE—BANK OF ENGLAND CHARTER—COMMITTEE ORDERED—NAMES OF COMMITTEE—REPORT—INCREASE OF GOLD IN EUROPE—REMISSION OF DUTIES—INCREASE OF CIRCULATION—SMALL NOTES—SILVER COIN—LARGE NOTES—JOINT-STOCK BANKS—SMALL DEPOSITS—FOREIGN TRADE—IMPORT OF GOLD—ECONOMY OF CAPITAL—BULLION IN BANK—EXPORTS OF 1853—RUSSIAN WAR—GOLD HOARDED IN THE EAST—ACT OF 1844—COURSE OF TRADE—AFFAIRS, AUGUST, 1857—AMERICAN NEWS—SUSPENSIONS IN NEW YORK—BANK FAILURES—ALARM IN LONDON—BILL-BROKERS—1847 AND 1857—AFFAIRS OF THIRTY HOUSES—ABUSES OF CREDITS—FAILURE OF FIVE HOUSES—INDIVIDUAL INCAPACITY—NORTH OF EUROPE—MONETARY ALARM—GOVERNMENT ACTION—NO SYSTEM OF CURRENCY PERFECT.

THE currency question in Great Britain has been one fruitful of discussion, since the bank restriction act at the close of the last century imposed one kind of currency on that nation for nearly a generation, to be succeeded by another, when the bank, by the act of 1819, was forced to resume its payments in specie. The whole question, embracing its influence upon prices, and consequently upon the value of property, has been thoroughly discussed, yet it seems to be no nearer a settlement than before. It appears on its surface to be very simple in its relations to the precious metals. Thus, gold is a commodity, of which the value is universally recognized. Every individual, who produces any article whatever, is eager to exchange it for gold, and the quantity he gets is called "price." If an individual expends two-and-a-half dwts. of gold in producing an article, and he can get five dwts. for it, he has increased his stock of gold, but he expresses it by saying for what cost him half a sovereign he has obtained a whole sovereign. This arises from the fact that the government, in order to relieve individuals of the trouble and risk of testing and weighing gold, has assayed and weighed it out into pieces of five dwts., 3,274 grains troy each, and has called those pieces "sovereigns." This is only another name for a weight of gold. It follows that all notes of hand, and other certificates of indebtedness, express on their face a promise to pay so many sovereigns instead of a certain weight of gold. A note reads, "I promise to pay four sovereigns," instead of saying, "I promise to deliver one ounce of gold nine-tenths fine." It is, of course, beyond dispute, that if a man solemnly promises to deliver a certain weight of flour, of iron, of gold, or any other commodity for a consideration, he is legally and morally bound to do it at all hazards. It is not valid for him to say, "I know I promised to deliver a ton of iron, but I find it inconvenient; to get the iron will cost me all my property, which I have acquired by multiplied promises to deliver iron in exchange; but I will give you molasses." What is called an "increase of credits," is only a limitless number of promises to deliver gold. Exchanges of promises are made, and cancelations by offset take place, but finally there is a quantity of promises that must be met in gold according to their tenor. Then steps in a class of financiers who say the difficulty is with the government. These people have not promised more than they can or wish to perform, but the government has "fixed the price of gold." A man who has promised a sovereign is compelled to find five dwts., 3,274 grains of gold. The inference is, that if the government had not

"fixed the price of gold," that the man who had promised a sovereign might give his creditor one dwt. of gold, or any other quantity, and assert that to be a sovereign. This seems to be the idea which prevails with a large class of persons; those who contend for aid and help in time of difficulty, and who now direct their arguments against the present charter of the Bank of England as being too restrictive. The occasion of every difficulty, like that of the last year, in the money market, is made use of to renew the attack. This is more particularly the case now, as the period approaches for a readjustment of the bank charter act. Under these circumstances the House of Commons, December 11th, 1857—

"*Ordered*, that a select committee be appointed to inquire into the operation of the Bank Act of 1844, (7 and 8 Vict., c. 32,) and of the Bank Acts for Ireland and Scotland of 1845, (8 and 9 Vict., c. 37 and 38.)"

"*Ordered*, that it be an instruction to the committee to inquire into the causes of the recent commercial distress, and to investigate how far it has been affected by the laws for regulating the issue of bank notes payable on demand."

"HOUSE OF COMMONS, 8th of February, 1858.—*Ordered*, that the committee do consist of twenty-five members."

Committee nominated of—

The Chancellor of the Ex- chequer.	Sir Francis Baring.	Mr. Puller.
Mr. Disraeli.	Mr. Vance.	The Earl of Gifford.
Sir James Graham.	Mr. Cardwell.	Mr. Fergus.
Mr. Spooner.	Mr. Blackburn.	Mr. John L. Ricardo.
Sir Charles Wood.	Mr. Wilson.	Mr. M. Tucker Smith.
Mr. George A. Hamilton.	Mr. Weguelin.	Mr. Glyn.
Mr. Gladstone.	Mr. Hankey.	Mr. Ball.
Mr. Cayley.	Mr. Hope Johnstone.	Mr. Tite.
	Mr. Ennis.	

The report of this committee is long, and goes at length into the elements of commercial activity that were put in operation by the gold discoveries. We extract as follows:—

"The select committee appointed to inquire into the operation of the Bank Act of 1844, (7 and 8 Vict., c. 32,) and of the Bank Acts for Ireland and Scotland of 1845, (8 and 9 Vict., cap. 37 and 38,) and who were instructed to inquire into the causes of the recent commercial distress, and to investigate how far it has been affected by the laws for regulating the issue of bank notes payable on demand, and who were empowered to report their observations thereupon, together with the minutes of the evidence taken before them, have considered the matters to them referred, and have agreed to the following report:—

"1. The ten years which have elapsed since the last committee sat under the same order of reference—viz., the committee on commercial distress, which reported in 1848, have been marked by many circumstances of peculiar interest and importance. The foreign trade of the United Kingdom has in that period increased with a development unprecedented, perhaps, by any other instance in the history of the world. The exports, which before 1848 had never exceeded £60,110,000, the amount which they attained in 1845, have risen with little variation and with great rapidity; and in 1857, notwithstanding the severe commercial pressure which marked the latter portion of that year, they stood at £122,155,000.

"2. In the year 1849, the newly discovered mines of California began to add perceptibly to the arrivals of gold; and in 1851, the supply was increased by the still more fertile discoveries in Australia. The following figures, for which your committee are indebted to the authorities of the bank, will show how important an addition appears to have been made to the circulating medium of the world from these new sources of supply:

ESTIMATED INCREASE OF THE EUROPEAN STOCK OF BULLION IN SEVEN YEARS, 1851-57.

	Imports from producing countries.		Exports to the East from Great Britain and the Mediterranean.	
	Gold.	Silver.	Gold.	Silver.
1851 .....	£8,654,000	£4,076,000	£102,000	£1,716,000
1852 .....	15,194,000	4,712,000	922,000	2,630,000
1853 .....	22,435,000	4,355,000	974,000	5,559,000
1854 .....	22,077,000	4,199,000	1,222,000	4,583,000
1855 .....	19,875,000	3,717,000	1,192,000	7,934,000
1856 .....	21,275,000	4,761,000	479,000	14,108,000
1857 .....	21,366,000	4,050,000	529,000	20,146,000
Total .....	£130,876,000	£29,870,000	£5,420,000	£56,676,000

GOLD.

The total import of gold in seven years has been, say .....	£130,000,000
The exports of gold bullion and British gold coin to India, China, Australia, the Cape, Brazils, the West Indies, United States, etc., may be taken at .....	22,500,000

Which would leave as the increase to the European stock of gold... £107,500,000

SILVER.

The exports of silver to India and China have been..	£56,676,000
The imports from the producing countries.....	29,870,000

Making the amount of silver abstracted from the European stock... 26,800,000

And the estimated increase in the European stock of bullion... £80,700,000

"3. The remission of duties upon articles of necessity, and upon the raw materials of industry, and the great increase of trade to which your committee have referred, were naturally attended by a very remarkable improvement in the comforts and consuming power of the people, as exhibited in the imports; and especially in the vast increase in the clearances of those articles which enter most materially into the consumption of the working classes. It is probable that to this cause ought chiefly to be attributed the great increase which is believed to have taken place in the circulating medium of the United Kingdom. Mr. Weguelin, a member of the committee, and then Governor of the Bank, stated to the committee of 1857, that this increase was estimated by those in whose judgment the bank directors placed the greatest reliance, at 30 per cent in the six years then last elapsed. The total gold circulation is believed by him now to amount to nearly £50,000,000. The whole circulation of notes, which under the acts of 1844 and 1845 are permitted to circulate, without being represented by bullion, retained for that purpose in the coffers of those who issue the notes, is £31,623,995, of which £14,475,000 are issued by the Bank of England; £7,707,292 by the English country bankers; £3,087,209 by the Scotch, and £6,354,494 by the Irish bankers.

"4. With regard to bank notes, it is interesting here to observe, that in the smaller denominations, those, namely, which enter most into the

retail transactions of the country, the number has been considerably increased, concurrently with the increase of the gold circulation above referred to. The £5 and £10 notes of the Bank of England, which in 1851 were £9,362,000, had risen in 1856 to £10,680,000.

“5. At the same time, for a reason which will presently be noticed, a great diminution has been observable in the use of notes from £200 and upwards.

“6. The silver currency has in the same time increased as follows, viz. :—

SILVER COIN ISSUED TO THE PUBLIC IN EXCESS OF RECEIPTS FROM THE PUBLIC.

1851.	1852.	1853.	1854.	1855.	1856.	1857.
£26,307	£420,418	£554,442	£36,803	£47,754	£289,142	£242,273

“7. While this expansion of trade was in progress, and the precious metals received this remarkable addition, a new feature in the banking business of the country was observable. The joint-stock banks in London entered more and more into competition with the private banks, and by their practice of allowing interest on deposits, began to accumulate vast amounts. On the 8th of June, 1854, the private bankers of London admitted the joint-stock banks to the arrangements of the clearing-house, and shortly afterwards the final clearing was adjusted in the Bank of England. The daily clearances are now effected by transfers in the accounts which the several banks keep in that establishment. In consequence of the adoption of this system, the large notes, which the bankers formerly employed for the purpose of adjusting their accounts, are no longer necessary. The diminution in the use of these notes is shown by the following figures :—

BANK NOTES OF £200 TO £1,000.

1852.	1857.
£5,856,000	£3,241,000

“8. Meanwhile the joint-stock banks of London, now nine in number, have increased their deposits from £8,850,774 in 1847, to £43,100,724 in 1857, as shown in their published accounts. The evidence given to your committee leads to the inference that of this vast amount, a large part has been derived from sources not heretofore made available for this purpose; and that the practice of opening accounts and depositing money with bankers has extended to numerous classes who did not formerly employ their capital in that way. It is stated by Mr. Rodwell, the Chairman of the Association of Private Country Bankers, and delegated by them to give evidence to your committee, that in the neighborhood of Ipswich, this practice has lately increased fourfold among the farmers and shopkeepers of that district; that almost every farmer, even those paying only £50 per annum rent, now keep deposits with bankers. The aggregate of these deposits of course finds its way to the employments of trade, and especially gravitates to London, the center of commercial activity, where it is employed first in the discount of bills, or in other advances to the customers of the London bankers. That large portion, however, for which the bankers themselves have no immediate demand, passes into the hands of the bill-brokers, who give to the banker in return commercial bills already discounted by them for persons in London and in different parts of the country, as a security for the sum advanced by the banker.

The bill-broker is responsible to the banker for payment of this money at call; and such is the magnitude of these transactions, that Mr. Neave, the present Governor of the Bank, stated in evidence—'We know that one broker had five millions, and we were led to believe that another had between eight and ten millions; there was one with four, another with three-and-a-half, and a third above eight. I speak of deposits with the brokers.'

"9. It thus appears that since 1847 three most important circumstances have arisen, affecting the question referred to your committee, viz. :—

"1. An unprecedented extension of our foreign trade.

"2. An importation of gold and silver on a scale unknown in history since the period which immediately succeeded the first discovery of America; and,

"3. A most remarkable development of the economy afforded by the practice of banking for the use and distribution of capital.

"10. In the years which immediately succeeded the great commercial crisis of 1847-8, the natural effect of such a crisis on the minds of persons engaged in trade was exhibited, and for a time prudence and caution were the marked characteristics of the commercial world. The bullion in the bank meanwhile accumulated, increasing, with little variation, until in July, 1852, it amounted to £22,232,000. At this time the notes in the hands of the public ran to the unusually large amount of £23,380,000, yet scarcely exceeded the amount of bullion, while the reserve of notes in the banking department of the Bank of England was £12,250,000, and the minimum rate of interest 2 per cent.

"11. The consequence of such a state of things was manifested in the year 1853, when the exports, which in 1852 had amounted to £78,076,000, rose to £98,933,000. The bullion at the same time declined, and was on the 22d October of that year £14,358,000, while the reserve went down to £5,604,000, and the minimum rate of interest rose to 5 per cent."

This is a very interesting sketch of leading events, but the inference that the active exports of 1853 were a consequence of the great increase of currency in the hands of the public appears to be hardly tenable, since the increase was almost entirely to Australia, and was stimulated, not by the bank notes in England, but by the gold in Australia. The desire to send goods to that region, in order to extract its gold, caused a demand for the home currency. The bad success of the adventures to the gold country threw difficulties in the way of returning the promises. The committee proceed :—

"12. In March, 1854, war was declared against Russia, and an expenditure of nearly ninety millions is estimated to have been incurred by England on this account. The foreign payments were largely made in specie, which, to a great extent, was hoarded in the East. Foreign loans were also contracted in London for the purposes of the war. The aggregate trade of the United Kingdom varied little. The bank rate of discount was raised in May, 1854, from 5 to  $5\frac{1}{2}$  per cent, and continued at that rate till August 3, when it was again reduced to 5. On the 5th April, 1855, it was reduced to  $4\frac{1}{2}$ , the bullion then standing at £15,079,000, and the reserve at £8,580,000. The bullion continued to rise, until in June it amounted to £18,169,000, and the reserve to £11,887,000. Before the end, however, of that year, a great change occurred, and on the 27th December the bullion stood at £10,275,000, the reserve at £6,993,000,

while the minimum rate of interest had been raised on 18th October to 6 per cent for 60 days, and 7 per cent for 95 days, at which rate it stood till the following May.

"13. Down, therefore, to the close of the inquiry of 1857, the Bank of England had continued, under the act of 1844, to conduct its business without difficulty. The rate of discount had been raised, and the *echeance* of bills shortened, as the drain for bullion appeared to the directors to render these measures necessary. But neither the failure of the silk crop in Italy, with the bad harvests in France and other parts of Europe, and the commercial drain thence arising, nor the requirements of specie for the military service, nor both these causes combined, had occasioned any important derangement of our monetary system.

"The course of trade may be collected from the exports of the years referred to, viz. :—

1852.....	£78,076,000		1855 .....	£95,688,000
1853 .....	98,933,000		1856 .....	115,826,000
1854 .....	97,184,000		1857 .....	122,155,000

"These exports do not include shipments of stores in government transports.

"14. In the earlier part of the autumn of last year the trade of the United Kingdom was generally considered to be in a sound and healthy state, and in the words of the Governor of the Bank, in reply to the following question :—

"Was there, in the month of August, any circumstance which caused you to be apprehensive of any reason for raising the rate of discount? Not in the month of August; things were then pretty stationary; the prospects of the harvest were very good; there was no apprehension that commerce at that time was otherwise than sound. There were certain more far-seeing persons who considered that the great stimulus given by the war expenditure, which had created a very large consumption of goods imported from the East and other places, must now occasion some collapse, and still more those who observed that the merchants, notwithstanding the enhanced prices of produce, were nevertheless importing, as they had done successfully in the previous years. But the public certainly viewed trade as sound, and were little aware that a crisis of any sort was impending, far less that it was so near at hand.'

"15. In this state of things, the bullion standing at £10,606,000, the reserve at £6,296,000, and the minimum rate of discount at 5½ per cent, the bank, on the 17th of August, 1857, commenced a negotiation with the East India Company, which ended in a shipment of £1,000,000 in specie for the East. The general aspect of affairs continued without change until the 15th September, when the first tidings arrived of the great depreciation of railway securities in the United States, and immediately afterwards of the failure of a very important corporation, called the Ohio Life and Trust Company. Before 8th October, the tidings from America had become very serious; news of the suspension of cash payments by the banks in Philadelphia and Baltimore was received; cotton bills were reduced to par, and bankers' drafts to 105; railroad securities were depreciated from 10 to 20 per cent; the artisans were getting out of employment; and discounts ranged from 18 to 24 per cent. The transactions between America and England are so intimate, and so large,

the declared value of British and Irish produce exported in 1856 to the United States having been £21,918,000, while the amount of securities held by English capitalists in America was by some persons estimated at £80,000,000, that this state of commercial disorder there could not but produce in this country great alarm.

"16. In New York, 62 out of 63 banks suspended their cash payments. In Boston, Philadelphia, and Baltimore, the banks generally did the same. The effect of the American calamity fell with the greatest weight upon the persons engaged in trade with that country, and Liverpool, Glasgow, and London naturally exhibited the first evidence of pressure. On the 27th October the Borough Bank of Liverpool closed its doors, and on the 7th November the great commercial house of Messrs. Dennistoun & Co. suspended payment. The Western Bank of Scotland failed on the 9th November, and on the 11th the City of Glasgow Bank suspended its payments, which it has since resumed. The Northumberland and Durham District Bank failed on the 26th, and on the 17th the Wolverhampton Bank for a time suspended payment.

"17. Great alarm naturally prevailed in London, the center of all the monetary transactions of the world. Vast sums deposited with the joint-stock banks, at interest, and employed directly by themselves, or by the bill-brokers, in addition to other moneys deposited by their other customers, were chiefly held at call; and the bill-brokers are stated to have carried on their enormous transactions without any cash reserve, relying on the run of their bills falling due, or, in extremity, on the power of obtaining advances from the Bank of England on the security of bills under discount. The inevitable result of this system, at a time of commercial pressure and alarm, was, that the banks limited their discounts almost exclusively to their own customers, and began to add to their reserves, both in their own tills and at the Bank of England. It is well known that a periodical disturbance in the reserve of notes at the Bank of England regularly occurs at the time when the dividends upon the national debt are paid. Interesting information will be found in the evidence of 1857 as to the effect of this disturbance in aggravating the panic of 1847. It had no such effect last year. By the 24th October that periodical disturbance was at an end. The public deposits also were in a satisfactory state, amounting to £4,862,000. It is interesting to observe, with regard to the private deposits, that the causes to which your committee have above referred, as affecting other bankers, tend to increase the balances in the Bank of England—the bank of last resort at a time of panic. Thus, for example, the deposits of the London bankers, which, in ordinary times, average about £3,000,000, continued to rise during the commercial pressure, and amounted on the 12th November to £5,458,000. The bill-brokers were compelled to resort to that establishment for assistance, and that to so great an extent, that the principal house went to the bank to ask whether they could obtain discount to an indefinite amount, and actually received on one day, the day on which the Treasury letter was issued, no less a sum than £700,000. Two discount houses failed. Speaking of the general discount market, the Governor of the Bank stated—'Discounts almost entirely ceased in London, except at the Bank of England.'

In going into the causes of the failures of 1857 and of 1847, the committee, through the evidence they have collected, show very clearly that

an abuse of credit was common to both periods, and some of the worst failures of 1857 were those who had failed and had been helped through in 1847:—

“38. Your committee have before them the particulars of thirty houses which failed in 1857. The aggregate liability of these houses is £9,080,000; of this sum, the liabilities which other parties ought to provide for amount to £5,215,000, and the estimated assets to £2,317,000. Besides the failures which arose from the suspension of American remittances, another class of failures is disclosed. The nature of these transactions was the system of open credits which were granted; that is, by granting to persons abroad liberty to draw upon the house in England to such extent as had been agreed upon between them. Those drafts were then negotiated upon the foreign exchanges, and found their way to England, with the understanding that they were to be provided for at maturity. They were principally provided for, not by staple commodities, but by other bills that were sent to take them up. There was no real basis to the transaction, but the whole affair was a means of raising a temporary command of capital for the convenience of the individuals concerned, merely a bare commission hanging upon it. A banker's commission was all that the houses in England got upon those transactions, with the exception of receiving the consignments probably of goods from certain parties, which brought them a merchant's commission upon them; but they formed a very small amount in comparison with the amount of credits which were granted. One house, at the time of its suspension, was under obligation to the world to the extent of about £900,000; its capital at the last time of taking stock was under £10,000. Its business was chiefly the granting of open credits, *i. e.*, the house permitted itself to be drawn upon by foreign houses without any remittance previously or contemporaneously made, but with an engagement that it should be made before the acceptance arrived at maturity. In these cases the inducement to give the acceptance is a commission, varying from  $\frac{1}{2}$  to  $1\frac{1}{2}$  per cent. The acceptances are rendered available by being discounted, as will appear hereafter, when the affairs of the banks which failed come under our notice.

“39. The obvious effect of such a system is first unduly to enhance, and then, whilst it continues, to sustain, the price of commodities. In 1857, that fall of prices which, according to Mr. Neave, far-seeing people had anticipated, actually occurred. Tables have been put in by more than one of the witnesses, exhibiting an average fall of from 20 or 30 per cent, in many instances much more, upon the comparison of July, 1857, with January, 1858. It needs no argument to prove what effect such a fall must have upon houses which had accepted bills, on the security of produce consigned, to the extent of one hundred times the amount of their own capital. The witness says—

“In the case which you are now describing to the committee, these transactions had gone on to the extent of £900,000. The real guaranty was partly produce and partly bills of exchange; to whatever extent that produce was depreciated, of course the liability of the firm to failure would arise, and the capital of that firm to meet such depreciation of produce was about one hundredth part of the whole of their liabilities?—That is so.

“Do you consider that case to be a fair illustration of the recent com-

mercial disasters which have occurred?—I think it is, though I should mention that in some cases the proportion of capital possessed was larger than that which I have mentioned.

“In some cases, also, perhaps it might be smaller?—In some cases considerably smaller. In some cases I have known houses come under very large obligations, who had really no capital at all.”

“40. This practice appears to have grown up of late, and to be principally connected with the trade of Sweden, Denmark, and other countries in the north of Europe. One house at Newcastle is described as conducting before 1854 a regular trade in the Baltic. They were not great people, but were respectable people, and were doing a moderately profitable trade. They unfortunately entered upon this system of granting credits; and in the course of three years the following result ensued—viz., in 1854 their capital was between £2,000 and £3,000; in 1857 they failed for £100,000, with the prospect of paying about 2s. in the pound.

“41. For other instances of this abuse of credit, your committee refer to the evidence, concurring entirely in the opinions expressed by the witnesses, that the great abuse of credit is a feature common to the two years, 1847 and 1857, and has been, in their judgment, the principal cause of the failures that took place in those years.”

After giving the details of three banks which failed, the Borough Bank, the Northumberland Bank, and the Newcastle Bank, the committee remark:—

“52. Each of these three banks had been in peril in 1847, and though, by the assistance of the Bank of England, they were enabled to surmount it, they fell on the next occasion of severe commercial pressure, under circumstances still more injurious both to their own proprietors and to the public. Two bill-broking houses in London suspended payment in 1847; both afterwards resumed business. In 1857, both suspended again. The liabilities of one house, in 1847, were, in round numbers, £2,683,000, with a capital of £180,000; the liabilities of the same house, in 1857, were £5,300,000; the capital much smaller, probably not more than one-fourth of what it was in 1847. The liabilities of the other firm were between £3,000,000 and £4,000,000 at each period of stoppage, with a capital not exceeding £45,000.

“53. These five houses contributed more than any others to the commercial disaster and discredit of 1857. It is impossible for your committee to attribute the failure of such establishments to any other cause than to their own inherent unsoundness, the natural, the inevitable, result of their own misconduct.”

This evidence goes pretty far to show that the difficulties were not general, or the result of radical unsoundness in general business, but the results of individual incapacity, or worse, and were brought to light through the distrust which was general by the accounts from the United States, which induced everybody to “apply the touch” to his neighbor’s solvency.

The committee turn very properly to other countries, where a different rule exists in relation to the currency, remarking:—

“55. It will be instructive now to turn to the north of Europe, to survey the condition of countries where, as in Hamburg, the currency is exclusively metallic, and to compare the state of things there with that which existed here under the laws which regulate the currency in this kingdom.

" 56. In Hamburg, on the 22d of November, commercial confidence is stated to have been entirely at an end ; so that only the bills of three or four of the first houses were negotiable at the highest rate of discount. In the first instance, some of the leading houses and the banks originated a plan for relief, viz., the subscription of about £1,000,000, and the appointment of a committee to give, by indorsement, the credit of this fund to the current bills. At first it seemed that confidence was much restored, but in two days this hope vanished ; and on the 25th, the aspect of affairs was again very gloomy. On the 27th, a meeting of the *Burgerschaft* was held, and a new arrangement was proposed by the Senate for the issue of government bonds on the deposit of goods, funds, and shares, to the amount of £1,125,000. On the following day the feeling of the exchange was better in consequence of this government measure, and of the arrival of considerable quantities of silver. Yet, on the first of December, our consul writes :—'The embarrassments of the mercantile community here still continue undiminished ;' and on the 3d—'There is no deficiency of silver in the Hamburg Bank ; indeed, the amount in the cellars of the bank is now much larger than it has been at any former period, but a total want of confidence prevents its holders from parting with it.' The government bonds could not be discounted. A loan was ultimately obtained from Vienna ; but even the arrival of the amount in specie failed to produce the desired effect, until the Senate reluctantly proposed that it should be intrusted to a secret committee, to be by them lent out on good security. On December 12th, so soon as it was known that, by the aid of the government, the leading houses would fulfill their engagements, the panic ceased. Money at once became abundant, and in about a fortnight the rate of discount for the best bills fell to 2 and 3 per cent.

" 57. The information on this subject, relating to the different countries in the north of Europe, which will be found in the appendix, is most instructive. It shows the severity of the disaster there sustained, and also that the real origin of it was the undue expansion of commercial credit ; and it confirms the proof that no system of currency can secure a commercial community against the consequences of its own improvidence."

#### Art. IV.—COMMERCIAL AND INDUSTRIAL CITIES OF THE UNITED STATES.

NUMBER LVIII.

##### DAVENPORT, IOWA.

SITUATION OF DAVENPORT—RIVER CONNECTIONS—BACK COUNTRY—RAILROAD CONNECTIONS—WEALTH OF IOWA—LENGTH OF RAILROADS—BUILDINGS IN DAVENPORT—GAS—POPULATION—EXPENDITURE—AGGREGATE BUSINESS—BANKING—ANALYSIS—SALES OF MERCHANDISE—LOCAL BUSINESS—CROPS—WHEAT—BARLEY—GRAIN AND PROVISIONS—COMMISSION BUSINESS—INCREASE OF CROPS—LOW PRICES—MANUFACTURES—BOARD OF TRADE REPORT—LUMBER TRADE—FREIGHT—RIVER TONNAGE—BRIDGE—RAILROADS AND NAVIGATION—COMPARATIVE BUSINESS—THE FUTURE.

AMONG the cities of the most rapid growth in the Great West, Davenport, Iowa, is one of the most prominent. It is situated on the banks of the Mississippi, which, flowing on both sides of Rock Island, divides Davenport on the west, from Rock Island City on the eastern, bank. The great and fertile country on the western side of the Mississippi, known as Iowa, pours its wealth into Davenport for distribution by the mighty river south, and by the railroads to the East. The latter, in their capacities to carry freight, have long contended manfully with the water courses

of the West, which are so uncertain in their navigable condition; and the markets of the East are more promptly commanded by railroads than by the water communications. The rapid increase of the wealth of Iowa is indicated in the official valuations, which were as follows:—

TAXABLE WEALTH OF IOWA.

1851.....	\$28,464,550	1854.....	\$72,827,204	1856.....	\$164,394,418
1852.....	38,427,304	1855.....	106,895,390	1857.....	210,044,533
1853.....	49,540,376				

There is in the State already 256 miles of railroads, which aid in circulating its vast natural products, and in fostering the growth of the noble cities, which, like Davenport, are, so to speak, the results of the concentration of that wealth. The rapid growth of such cities of the West requires a great deal of capital to prepare for business, before the actual products of the surrounding country are ready for market. As an illustration in the case of Davenport, we gather from a condensed report on the subject, that since August 1st, 1856, there have been erected in that city over thirteen hundred houses; twenty-five squares (over two miles) of streets have been graded and macadamized; sixty-eight squares (over four-and-one-half miles) of gas pipes have been laid, and gas street-lamps placed throughout the city; one hundred and ninety-three squares (over thirteen miles) of sidewalk have been made. The population of the city is estimated at not less than eighteen thousand.

The amount of capital required thus to build a city on what was lately wild land is very large, and it is obvious can be fed only by a continued current of migration in that direction. The building of railroads has scattered a great deal of money in the country, which has aided in developing the natural wealth and promoting business.

The footings in some of the principal branches of trade for the year ending December 31st, 1857, show an aggregate for the business in the same of \$14,485,812 24. Of this amount—

Banking and exchange has been .....	\$8,539,744 28
Sales of merchandise.....	2,628,602 57
Sales of grain and provisions.....	1,158,000 00
Sales of consignments and forwarding.....	353,000 00
Manufacturing not estimated in sales.....	751,030 00
Freight and cartage.....	450,029 00
Lumber, doors, sash, etc.....	555,406 39

The banking department shows an aggregate of—

For exchange.....	\$6,616,737 34
For discounts.....	1,923,006 94

If we analyze the different branches of business which furnish the above aggregate of sales of merchandise, we have results as follows:—

SALES OF MERCHANDISE AND THE STOCK ON HAND.

	Sales.	Stock.		Sales.	Stock.
Agricultural implements	\$25,000	\$12,000	Jewelry, watches, etc...	\$27,000	\$18,500
Boots and shoes.....	72,000	34,000	Leather & saddlery....	87,000	24,200
Books, wall paper, etc..	34,000	12,000	Millinery.....	42,000	12,700
Bakery, confectionery...	8,000	3,000	Drugs, paints, oils, etc..	70,000	35,300
Clothing.....	164,700	61,000	Queensware.....	25,000	18,000
Dry goods.....	600,902	164,500	Stoves, &c.....	125,000	44,000
Furniture, mattresses, & carpeting.....	89,000	44,300	Assorted merchandise..	116,200	16,700
Groceries.....	771,800	163,000	Tobacco and cigars....	59,000	14,000
Hardware, iron, & nails.	264,500	120,500	Wines and liquors.....	13,500	7,000
Hats, caps, and fur....	34,000	14,000			
			Total stock on hand.....		818,700

The monetary difficulties which occurred so suddenly in October, 1857, caused a falling off in all branches of trade. In no department have the figures been so affected as in the banking. During sixty of the last ninety days of the year 1857, exchange was not procurable at any price, or under any circumstances, except in very small sums. Notwithstanding this, local business suffered far less diminution than was at first apprehended. When money became scarce at the East, as a matter of course every available dollar was ordered home from every point of the West, and the supply of exchange was altogether inadequate to the demand, although large sums invested in land could not be realized to send home.

With an encouraging activity in their affairs and operations, the merchants of Davenport have slowly, but steadily, met their liabilities, at home and abroad, with a manifestation of promptness that, under the circumstances, has received the hearty approbation of their correspondents, and preserved intact the high standing they had previously maintained.

Careful inquiries have developed the fact beyond dispute, that during the last few months there has been important accessions to the trade of the place, from various sections of the country hitherto tributary to other points. It is presuming very little to say, that the acquaintances thus formed cannot but be mutually advantageous.

The amount included above, third in rank, is the aggregate sales of grain and provisions. These are valued at low prices, and may be analyzed as follows:—

	Quantity.	Value.		Quantity.	Value.
Wheat .....	bush. 1,019,000	\$509,000	Potatoes.....	bush. 20,000	\$5,000
Barley.....	34,000	13,600	Onions.....	25,000	12,500
Flour.....	bbls. 175,800	879,000	Pork.....	bbls. 3,500	52,000
Ship stuff, etc....	tons 8,640	129,600	Bacon.....	tierces 1,280	32,000

Of the wheat received during the comprised period, there was manufactured into flour 879,000 bushels. The number of hogs packed was 13,000. The estimated value of the same, after allowing for the wheat, etc., manufactured, is \$1,158,000.

The commission and forwarding business, with an aggregate of \$353,000, shows an advance for freight and charges of \$150,000. The following is a list of the different branches of manufactures:—

Agricultural implements.....	\$49,000	Paints, oils, etc.....	\$4,000
Boots and shoes.....	20,000	Stove furnishing, etc.....	10,000
Book-binding, printing, etc....	108,000	Cooperage.....	105,180
Bakeries and confectionery.....	35,000	Lumber, sash, etc.....	235,154
Clothing.....	28,000	Flour, feed, etc.....	957,000
Carriages, wagons, etc.....	87,000	Hog product.....	113,750
Furniture, mattresses.....	67,000	Sundry manufactures.....	32,909
Plows, castings, and iron work.	205,000		

In no year were the crops of the country more redundant than in the past; yet, owing to the great falling off in price as compared with the former years, the receipts have fallen far short of the amount due. During the early months of the year, prices ranged at a point that offered great inducements to the producer, and large quantities of seed were planted. The exuberant crop, with a falling off in demand, followed by the financial troubles, created such a sudden and heavy diminution of price as to induce growers of grains to sell no more than they were compelled to do.

The opening year, however, offering no assurances of an improvement, there has been an increased disposition to sell, and consequently a marked improvement in receipts. The crops for the present year are large, but with the absence of all foreign demand, and a subsidence of the local demand at the West, which depended on the large railroad expenditures, prices are necessarily low, but it is an evidence of returning health in trade that the low prices are availed of.

There are few points in the West where the manufacture of flour is more largely engaged in. The value of this department alone approximates one million dollars, while the brands of the different mills enjoy an enviable reputation in foreign markets.

The crop of barley last year promised a great abundance, but the result of heavy rains at the period of early harvest was a bitter disappointment and loss to the farmers, and a greatly deteriorated quality of grain. Much of the gathering had grown or dampened, so that the prices ranged necessarily from the low quotation of twenty cents per bushel to fifty cents per bushel.

In common with other sections of the country, there has been an extensive disease among Neoshannock potatoes; pinkeyes, appearing the most healthy, have been most sought after. Large quantities were exported, but, stimulated by the excessive prices of last spring, the crop was heavy. There were many held in the country, in the hopes of advanced prices upon the resumption of navigation in the spring.

The commission and forwarding business shows an aggregate of over one-third of a million, and is rapidly increasing in importance. As the Mississippi and Missouri Railroad is extended, so may the quantity of products and the resulting business increase, and the same, whether seeking an Eastern or Southern market, must, on transshipment, give employment to a large amount of labor and means.

It necessarily follows that, at a point where concentrates the natural products of a fertile and rapidly-peopling region of country, and capital and settlers flow to take part in the sale and distribution of that produce, manufactures spring up readily to supply local wants, as well as those which the producers of farm produce require. In this connection, I. P. Coates, Esq., in his report to the Davenport Board of Trade, remarks:—

“Favored, as we are, by nature in our location, with every advantage for the convenient association of the different agencies required in the transformation of raw material into the necessaries of society, it requires only the most casual observation to discern our future importance; scarcely one stranger passes without being impressed with this great fact, while to those who give more attention to the subject, favorable results geometrically increase.

“Already we have attained importance; already we have arrested and given employment to capital seeking profitable investments. The success that has attended efforts already begun, connected with the facility of furnishing the raw material—be it lead from our own borders, copper from Superior, iron from Missouri, lumber from Wisconsin or Michigan, hard wood from Indiana, cotton from the Southern States, all of which can be brought to our door without reshipment, added to coal for fuel from meadows and fields whereon we raise abundant supplies of food for the thousands whose labor is transforming the crude materials we gather—cannot fail to favorably attract the attention of the capitalist and citizen, and induce to a citizenship among us a portion of the best talent and energy of the country. Already are we conceded the superiority of manufacturing facilities, and already is a wide area of territory dependent upon us for those supplies we can more economically produce than import. Every mile

of railroad that is completed to the West, as well as every acre of raw prairie that is broken for cultivation, increases our manufacturing importance; in no age has the march of emigration been more rapid and continual, and in no case has a larger percentage of population accumulated than in our own State. Legitimate causes produce legitimate results. No city has had a more rapid, vigorous, and continued improvement than our own, and no improvement has been founded upon a more permanent basis, viz., manufactures.

"There is scarcely a branch of this class of industry that might not be entered into successfully. Mills, machine shops, etc., are already established, yet these can be duplicated, and the supply not exceed the demand. Cotton and woolen mills, paper manufacturers, foundries, shops for agricultural implements, and all the various kinds of handicraft, will meet a welcome and support upon the occasion of their advent."

The expense of living is moderate, and the price of real estate governed by its value for actual use. The estimate for lumber shows the following aggregates:—

The receipts have been in feet.....	22,213,216
The number of lath received and manufactured.....	6,795,000
The number of shingles received and manufactured .....	5,214,750
The number of pickets manufactured .....	31,463

Of the receipts, 14,775,216 feet were by river, and 7,438,000 feet by railroad. The amount of freight and charges paid for the year was \$450,029.

Of this, the amount of railroad charges was .....	\$401,470
And the amount of river charges was.....	48,559

The aggregate exports and imports for the same time were, as nearly as can be ascertained, 93,683 tons. Of this amount, 40,584 tons are exports, and 53,099 tons imports. Of the exports, 34,157 tons were by railroad, and 6,427 tons by river. Of the imports, 47,029 tons were by railroad, and 6,070 tons by river.

Total river tonnage.....	12,497
Total railroad tonnage.....	31,186

The total number of steamboat arrivals and departures was 1,587. Of this number, 960 were boats running exclusively to Davenport, and 627 transient boats. The number of boats that passed the railroad bridge was 1,067, and the number of rafts 600. The number of collisions of boats with the bridge was 25; of which 8 sustained injury, and 17 sustained no injury. The number of rafts colliding with the bridge was 30; of which about two-thirds sustained injury, and one-third no injury. In no case was the injury sustained serious, with the exception of a few rafts.

The river opened on Thursday, February 26th, the ice moving slightly. It again became gorged on the 28th, and remained stationary until March 25th, when it again brook loose, and permitted boats to reach the landing. On the 25th of March the ferry commenced regular trips for the season. The first raft passed down the 18th of March, and the last one the 18th of November. Of the rafts passing down the bridge more than one-half were manufactured lumber.

The bridge across the river has been much complained of by the boat interest, particularly by the citizens of St. Louis, and the discussion has ended in a legal decision against the bridge. The complaints against the bridge seem, however, to partake of the nature of the complaints by canals against railroads. More than one State officer in New York, Ohio,

and Indiana have asked the several Legislatures to hamper the railroad traffic, in order to force business to remain with the canals. Railroads are a modern invention, and have been found more serviceable to business as a means of prompt and cheap intercourse. If old means of communication cannot hold their way, it by no means follows that law or custom should favor them at the expense of new routes more approved by the public. The comparative business of Davenport by river and railroad was as follows:—

RECEIVED DURING THE YEAR BY RAILROAD.

Lumber.....feet	7,435,000	Wheat.....bush.	183,297
Shingles.....No.	3,370,000	Pork.....lbs.	362,285
Railroad iron.....tons	1,593	Pork.....bbls.	3,956
Coal.....	13,095	Machinery.....lbs.	183,436
Oats.....bush.	33,843	Flour.....bbls.	4,410
Barley.....	4,688	Wool.....lbs.	18,306
Corn.....	75,834		

Of the above, the entire estimates for lumber, shingles, railroad iron, coal, and corn were received by the Chicago and Rock Island Railroad; and the entire amount of wheat, pork, flour, and wool were received by the Mississippi and Missouri Railroad. The remainder was received as follows:—

Chicago and Rock Island Railroad.....	Oats.	Barley.
Mississippi and Missouri Railroad.....	29,380	2,316
	4,463	2,372

In addition to this, there passed over the Mississippi and Missouri Railroad:—

Flour.....bbls.	29,302	Corn.....bush.	46,258
Potatoes.....bush.	2,996	Wheat.....	235,217
Oats.....	4,330	Wool.....lbs.	25,416

The total number of pounds passed over this road for the year was 130,695,566.

While the receipts by river have been large and interesting, no reliable records of the different articles exist upon which tables can be founded. The amount of lumber received in feet was 14,775,216. The following is a list of a portion of the exports by river and railroad:—

	River.	Railroad.	Total.
Wheat.....bush.	30,072	57,936	94,008
Barley.....	18,388	2,279	20,667
Flour.....bbls.	19,819	86,500	106,319
Coal.....tons	.....	5,647	5,647
Lumber.....feet	9,000	16,039,112	16,048,112
Shingles.....No.	.....	5,890,000	5,890,000

In addition to the above, there was shipped—

Onions.....bush.	18,520	Furniture.....packages	961
Barley.....	16,372	Merchandise.....	1,565
Corn meal.....	1,400	Groceries.....	860
Oats.....	376	Queensware.....	63
Ship stuff.....tons	976	Hardware.....	659
Lard.....bbls.	297	Plows.....	567
Butter.....packages	138	Agricultural implements.....	520
Bacon.....tierces	1,280	Sash.....bundles	90
Pork.....bbls.	1,372	Pork.....bbls.	254
Hides.....No.	1,713	Seeds.....sacks	100
Wagons and carriages.....	26	Wool.....	11
Fruit.....bbls.	32	Gunnies.....bales	291

If the business of Davenport, with that of other Western cities, has suffered during the past year through a collapse in the usual operations of business, the future is no less promising, since the vast and fertile plains, which have in the last twenty years been so attractive to thousands of emigrants, are each year presenting greater attractions, in the abundance of their products, the amelioration of hardships through longer settlement, and the pressure of population in the old States. If the spirit of speculation has gone too fast for the moment, it is evidently only a breathing space, when the race will be renewed with redoubled vigor.

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#### Art. V.—AN EAST INDIES TO THE UNITED STATES.

EUROPEAN POPULATION—NO GREAT WARS—MEN ABSORBED BY COLONIES—EMIGRANTS MORE VALUABLE THAN SOLDIERS—WISE GOVERNMENT POLICY—NO FIGHTING—MEN—VALUE OF COLONIES—HARDSHIPS OF THE WEST—IMPORTANCE OF ISLANDS—POVERTY OF THE PROFESSIONS—WANT OF UNITED STATES COLONIES—IMPORTANCE OF SOUTH AMERICA—BRITISH GOVERNMENT ENTERPRISE—PROSPERITY OF AUSTRALIA.

It is generally conceded that a scarcity of men in a country is a sign of its prosperity. There was a time when England could raise a much larger army than she could now, yet the increase of her population has been greater during the last forty years than it ever was before within the same time. The cessation of hostilities with European powers is the cause of this; as at this hour her finest men were picked up by the recruiting sergeant, and sent to the fields of slaughter. No others are fit to die. But although England, within the last few years, has been at war with half the human race, and crying out to 250,000,000 of people, "*no quarter*," her great wars have ceased. Within four years she has opened her batteries upon four of the most powerful leading empires of the earth, namely:—Russia, Persia, China, and India. Persia, containing a population of 10,000,000, although not at present a first-rate leading power, yet at one period she was a terror to the eastern nations. Cyrus, the Persian, conquered Babylon and the great Babylonian Empire. King Nebuchadnezzar, with all his vast armies, provinces, and powers, crumbled beneath his sway, and it is this nation that England (immediately after the fall of Sabastopol, and the greatest siege that the world ever saw) crushed into subjection. Then followed China and treacherous child-killing India, which, with all their advantages, are so far conquered that the result is known, and the news from the scenes of strife cease to be interesting.

We, in modern times, can scarcely fancy an army of 75,000 men, 10,000 cavalry, 16,000 camels, 12,000 yoke of oxen, and several thousand elephants, all moving over vast deserts, subjecting themselves to a scorching sun, thirty degrees hotter than in the United States, and a dust and thirst to many insupportable, while a flying enemy but leads them on. But it is not the wars with those distant nations that have rendered this scarcity of men in England—it is her great prosperity.

And when we read silly articles relating to England not being able to raise soldiers, and of its being a sign of her downfall, we cannot but feel surprised at the ready-made calculation, but still more justly at our own indolence in not calculating for ourselves. England's wise policy in ex-

tending her possessions over distant lands has, within the last forty years of peace, attracted the attention of her surplus population; consequently, she has had other fields and other employments for her men, and instead of shedding each other's blood they have cleared the forest away, and vast sheep and agricultural regions are now the fruits of their enterprise and labor. And so long as England has the means she will prefer hiring soldiers, ready made, to killing off her own men, who are encouraged to emigrate to new colonies, and build up new and great nations, to create a trade with their native land.

If an English soldier is worth £100, what, by the rule of three, is an emigrant worth? While, therefore, France and other continental nations will furnish bone and sinew for the battle-field, just so long England will continue to pay them, and spare her own flesh and blood for more noble, if not more glorious, purposes. No matter to what clime an emigrant ship takes her human freights of Anglo-Saxon and Celtic blood, England benefits in the end. If an English soldier costs £100, it is a matter of economy to hire the ready-made soldier, and give him a shilling a day while he is doing the *job—no fight, no pay*. Thus England has built up for herself, far away from home, great and prosperous nations, which she supplies from her factories, &c., and receives a return in gold, silver, and other productions of foreign parts. Her heretofore wise policy is now turning into her coffers countless millions. It was the policy and enterprise of the government, and not of individuals. She held, settled, and taxed the United States, but what of that. Her object is obtained. Her vast shipping has a vast country to open her commerce to, and send six millions' worth of productions to every year. Then the thousands of men employed on the seas, all contribute largely to make her the most powerful nation on the earth.

It is a boast of many leading papers, as well as individuals, that the United States could raise an army far more numerous than that of England; but let us look into this. Suppose it became necessary to send an army of 100,000 men to fight a leading European power, where would these men come from? Certainly the uniform companies, excepting a few, could not go, as they are men of family and business, and have other things to do. If the regular army could be swollen to the extent required, it would be from the ranks of the thousands upon thousands who are now drifting about the cities, professing every trade, business, and profession.

How far out of New York need a man fire off a 24 pounder to reach the ears of 150,000 idle men, who know not what to do or where to go to? This is a bad state of things, and it is an idle boast; and were it not that this dense body is composed of men of various nations, tongues, and ideas, it would unite in rebellion against the powers that be. In the event of an invasion, America might raise a large army; on the same occasion, so could England. But the invasions of England are over, those of America yet to come. America has never been called upon to raise a large army. We may talk of *the far West*, and the vast regions yet unclaimed; and why can't the surplus population go there? But this is all "*colly west*." The answer is simple—there is nothing to do.

One small island in the seas, or one small colony abroad, would create more trade and business than fifty times the same extent at home. There is a foreign field to be opened, must be opened, for the benefit of the vast army of professors, artisans, and laborers, who cannot till the ground or

bury themselves and their families in dense forests, and *live half dead* with chills and fevers. There is an army of martyrs now in the West, but no employment for the shipbuilder and the thousands of men whom the building of a single ocean steam vessel would create. It is all well enough to say to the soldier, he must plow, and the farmer, he must fight, but we cannot reverse the order of things. In a single family, we find different dispositions and turns for business, professions, and trades. Men's abilities vary; one son may work hard at his bench or plow, from sunrise till sunset, while his brother wont work at all to suit his father's ideas, and is consequently sighed for and called a good-for-nothing fellow. But in what way? Is it because he does not labor? Surely not. He may go through more *mental* labor in an hour, than his brother would in a week. He is born for something else, but his father has not yet found out what he is fit for, or has no field for his ambition. But he is on the sea-shore, and *fools* his time away scooping out little model boats. His father cultivates an island two or three miles out at sea, and it is necessary that he should have a boat and a man to sail her, so as to carry on the business, as it increases, between the little rising settlement and the main land; and *this idle, loafing, good-for-nothing son* builds boats and sails them, and in the course of time is the leading builder in the place; and were it not for the cultivation of the island, he might have remained all his life-long a tax upon society.

Thus we have the government of the United States. It is the *father*, and we are its sons. It has hundreds and thousands of idle men living on each other, not knowing where to apply for honorable employment; men of every rank, fit and capable of forming a great nation, and rearing it up to pride and power. Thousands of these men are *born citizens*. It is all boy's play—this coasting, drifting from *inlet* to *inlet*, declaring that we have resources within ourselves, and Western lands to settle and clear away. But it does not furnish employment for the millions; for those who have served their time at the *bench*, the *anvil*, the mould-loft, and the helm, besides the various professions, the possessors of which regret that their fathers had not sent them to learn trades.

The educated man in America may want. There is no field for his ambition. The whole land is overrun with students, unable to procure practice. The theological student, with a family, is offered \$500 per annum, while the tradesman, who cannot or need not read, gets \$600. It was told me by a gentleman of standing that "we are not in the habit of giving high salaries in this country; and that a clergyman, thirty miles from New York, could support a large family very well on \$500 a year, and house found him; that he had a son in New York getting \$1,000, and \$75 from some other quarter, and that it was quite ample."

Now, if a poor young man, working hard to support himself, has any right to support a minister of a country parish, composed chiefly of wealthy men, I relinquish my right to defend him; and it is no wonder that so few young men embrace the profession. Now, in the face of all this, the United States want to colonize some vast region—some East Indies must be opened to create a field for enterprise of every class. The government *must move* in it. We have a vast region within *ten days* of us, as rich, if not richer, than the Indies. This region is South America. Of its proximity, extent, past and present wealth, and future prosperity, there can be no shadow of doubt. And if there was the slightest encouragement

on the part of the government, (which must move in the matter,) there are thousands upon thousands ready to go there. Talk not of England's sloth and of American "go-a-head-a-tiveness." Look back at the settlement of England's colonies, of the United States, of Australia, for instance, to which the government sent vessels loaded down with living freight of both man and beast, and "bid them be fruitful and multiply and replenish the earth," "and it was so."

Look back at the colony seventy years ago, and look at it now. The richest known island in the seas, larger than the whole of the United States. And when we reflect upon the departure of the first English ship, with its living weight of flesh, and the arrival of the last, with its dead-weight of gold, we will discover that it was a small card in the hand, but now is a trump on the table.

South America, it is true, cannot boast of its elephants and camels, but it can of one of the richest Indian empires that the world ever possessed, and a monarch who could measure his gold by the *cubic yard* and not by the *ton*; and it is this region of gold, silver, and precious stones, besides all the productions of the tropics, that I propose opening, honestly and fairly, and making it an *East Indies to the United States*.

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## Art. VI.—GARBLINGS: OR, COMMERCIAL COMMODITIES CHARACTERIZED.

NUMBER XL\*

T E A .

CHARACTER OF THE PLANT—HOW CULTIVATED—TIMES OF GATHERING—VARIETIES OF TEA—PROCESSES OF PREPARATION—SCENTING—CHARACTER OF THE CHIEF VARIETIES—VARIETIES OF GREEN AND BLACK—USES AND CONSTITUTIONAL EFFECTS—NATIONAL USE—UNIVERSAL INFLUENCE OF TEA—CHEMICAL CONSTITUENTS—PHYSIOLOGICAL EFFECTS—NUTRITIVE PROPERTIES—THEINE—CLIMATIC ADAPTATION—SUITED TO THE UNITED STATES—COUNTERFEITS AND ADULTERATIONS—POISONS, AND HOW TO DETECT THEM.

TEA consists of the dried leaves of the *Thea Sinensis*, an evergreen shrub, belonging to the family of Camellias, which are native to China, Japan, Cochín China, and the southeastern part of Asia. It is a hardy plant, and, in the uncultivated state, grows to the height of fifteen or twenty feet, but, as cultivated in the tea-fields, rarely ever grows higher than six or eight, and generally not more than four or five feet.

The leaves are alternate, elliptical, pointed, toothed and firm, smooth, shiney, and deep green; from one-and-a-half to four inches long, and from half an inch to an inch-and-a-half wide. The flowers are white and large, borne on short peduncles, single or united in small clusters at the axils of the superior leaves.

It is generally propagated from seed, and arrives at maturity in from two to three years, when it is capable of yielding two or three crops of

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\* For No. 1, see *Merchants' Magazine* for July, 1857, (volume xxxvii., pp. 19-23;) for No. 2, see same for August, (pp. 166-171;) for No. 3, see same for September, (pp. 298-303;) for No. 4, see same for November, (pp. 542-554;) for No. 5, see same for January, 1858, (volume xxxviii., pp. 43-50;) for No. 6, see same for February, (pp. 175-183;) for No. 7, see same for March, (pp. 292-302;) for No. 8, see same for August, (vol. xxxix., pp. 164-175;) for No. 9, see same for September, (pp. 321-327;) for No. 10, see same for October, (pp. 415-420.)

leaves, and sometimes four, annually. The first gathering takes place in early spring, the second about the 1st of May, the third in June, and a fourth in August. The first gathering produces the finest variety of tea. It chiefly consists of the young leaf-buds and small leaves, from which the best *Pekoe*, and the finest varieties of black, are made.

The later gatherings consist of the larger and older leaves, which, by long exposure on the plants, have lost part of their flavor, and become less valuable. Hence, it is found that the finest teas usually consist of the smallest leaves. At the first gathering the leaves are slender, smooth and even-edged, twisted, and downy. Second gathering takes place just as the leaves begin to have veins, and their edges delicately notched. At the third gathering the venation is fully developed, the edges coarsely notched and wavy.

Until late years botanists designated several species of the tea plant, but now it is generally conceded that all the varieties of tea are obtained from one and the same plant, the differences in the tea from which depending wholly upon the soil, climate, weather, age of the leaves, and mode of preparation.

*Varieties.*—*Black* teas are mostly produced from plants growing on the slopes of hills and mountain sides, a range of which, called *Bohea* mountains, being the origin of the variety of tea known as such. On the other hand, *green* teas are generally produced from plants grown on cultivated and manured plains. Other qualities depend upon the processes of preparation, in drying, rolling, etc.

*Bohea* is usually prepared from the full-grown leaves of the third gathering, and is, therefore, the commonest and cheapest variety. Souchong, Congou, Padre-Souchong, Caper-Souchong, and *Pekoe*—which consists of the first gathering, and hence called “flowerly”—are gathered early, and of finest quality.

The principle varieties of *green* teas are, Young Hyson, Hyson, Hyson-skin, Twankay, Imperial, and Gunpowder. This last, in green tea, corresponds to *Pekoe*, in black. Imperial, Hyson, and Young Hyson are of the second and third gatherings. Hyson-skin chiefly consists of the refuse of other varieties, or is produced by a fourth gathering.

*Processes of Preparation.*—Tea leaves in their green state contain an acrid principle, which may be dispersed by heat. This is accomplished by the process of roasting, and for this purpose a large iron dish, called a *kuo*, is used. The leaves are first dipped into hot water, and after drainage they are spread upon the *kuo*, which is at first only raised to a moderate degree of heat, and only has the effect of rendering the leaves soft and pliable. They are then removed and submitted to the first rolling. For the very finest quality, each leaf is rolled separately, but more commonly the leaves are spread upon large tables covered with straw mats, and rolled by rubbing them with the hands, or between the palms.

This operation is continued until the leaves become cold, when they are again submitted to the *kuo*, and the process repeated. The best kinds are heated on the *kuo*, and rolled three or four times before they are deemed of maximum quality. For *green* teas, this completes the preparation of the finest varieties. Inferior qualities are subsequently flavored.

*Black* teas require an additional process, viz., to be heated in sieves over a hot charcoal fire. This has the effect of more perfectly driving off the acid principle, and rendering the leaves drier and more brittle.

As thus prepared, the finest early gatherings are, when last from the *kuo* and sieves, before getting cold, packed for exportation. But the quantity of this is very small.

*Scenting.*—By far the larger quantity of tea known in commerce has been aromatized or scented. A knowledge of this process, and the materials used in it, was, until very recently, kept secret from foreign nations. But it is now generally known that the Chinese employ for this purpose certain rare vegetable productions, which have the effect of imparting desirable flavors to tea, without in anyway affecting its natural properties. And some of the teas thus treated are known to be among the most eagerly sought after.

The only substances known to foreigners, with which the Chinese flavor tea, are the flowers of the following plants—a species of *chloranthus*, called by the Chinese *Chu-Lan*; the *Gardenia florida*, or *Pac Sheem*; the *olea fragrans*, or *Ruy fa*; and *Jasminum Sambac*, or *Mos-Sy-Hoa*. As already remarked, these plants are all scarce, even in China, where they are native; their use, therefore, is in every way calculated to enhance the value of the tea in which they are used, notwithstanding the Chinese themselves, as well as all other persons who have had the opportunities of judging, agree in the opinion that only common teas require scenting, and that, however exquisitely this process may be accomplished, the very ultimatum of success is only, after all, a faint imitation of the finest Souchong, the natural flavor of which being far more delicious than it is possible to communicate to an inferior variety.

When tea is about to be scented, it is taken hot from the roasters and put into a chest in a layer of two or three inches deep; upon this a handful of freshly gathered *Chu-Lan* flowers are strewn. Then another layer of tea, and so on until the chest is full. It is then tightly closed, and so kept for twenty-four hours, on the expiration of which time the chest is opened, and the tea and flowers thoroughly mixed and submitted to the drying process in sieves, over a charcoal fire, until the flowers become crisp, when the whole is removed and the flowers sifted out. If the tea is found to be sufficiently flavored the process is now closed; if not, the operation is again repeated.

The tea thus prepared is mixed with others, in the proportion of about one part of the scented to twenty of the plain, when the mixture is moderately treated in the *kuo*, and immediately afterwards, while warm, packed for use or exportation, and is known as *Cowslip Hyson*.

Black teas are also scented with *Chu-Lan* flowers, but in a different and more expensive manner, as it takes a larger quantity of the flowers. The flowers are first carefully roasted, so as not to burn them, and then reduced to a fine powder. This is sprinkled over the tea during the process of the last roastings, previous to packing. Some of this constitutes choice varieties of Souchong or Caper teas, and the Tet Siong. The *Pac Sheem* flowers are used for scenting a still more exquisitely fine Souchong, which is chiefly used for diplomatic presents, and rarely found in commerce. *Ruy-fa* and *Mos-Sy-Hoa* are also exclusively used for scenting black teas, of Souchong flavors.

*Character of the Chief Varieties.* BLACK TEAS.—*Pekoe.*—This is the finest, and has most aroma. The leaves are slender, of a dark silvery color, covered with a light silky dust; ends speckled with gray, black and white spots. Odor agreeably aromatic; infusion of golden-yellow color; taste somewhat similar to the flavor of fresh hazel-nuts.

*Congou*.—Leaves thin and short, of a grayish-black color; infusion clear, strong, and agreeable.

*Pouchong*.—Leaves large, long, and tightly rolled, mixed with a large quantity of leaf-stocks; odor sweet; infusion green.

*Souchong*.—Leaves larger than Congou, but not so large and long as Pouchong, thin, and rather broken; infusion clear, yellowish, and sweet. It is the strongest of black teas.

*Bohea*.—Leaves of all sizes, with fragments and leaf-stocks; of a grayish-green color, rolled longitudinally and crosswise; very dry and easily broken; infusion redish, of a somewhat smoky taste. If let stand, deposits a blackish sediment.

GREEN TEAS. *Hyson*.—Leaves long, straight, spirally twisted, and firmly rolled, but dry and easily broken; odor sweetly aromatic; infusion of clear, citron-yellow color. It is the most esteemed of all green teas.

*Gunpowder*.—This is distinguished from Hyson by being in smaller particles, still more tightly rolled, but less easily broken; of dark green color; infusion clear, golden green.

*Imperial*.—Much like Gunpowder, only in larger grains, and very hard; of silver-green color, and some of its grains resemble pearls.

*Hyson Shoulong*.—Resembles Hyson, but more fragrant.

*Hyson-junior, or Yu-tseen*.—Is composed of small delicate leaves, nicely rolled, and very crisp; of yellowish-green color; odor agreeable, resembling violets.

*Twankay*.—Large yellowish leaves, badly rolled, and strong odor; infusion limpid, bright yellow; sweet, rough taste.

*Hyson Skin*.—Leaves yellowish brown, irregularly rolled; odor nearly null, and of ferruginous taste; infusion bright yellow, and turbid. It is the Bohea of green teas.

*Uses and Constitutional Effects*.—Tea was first known in Europe by being taken there from India by the Dutch in 1610. It was introduced into England by lords Ossory and Arlington, from Holland, in 1666; and being much admired by the nobility, it was imported from thence, and generally sold for about 60 shillings per pound, and until the trade was taken up by the East India Company. Green tea was first used in England in 1715. Our colonial ancestors brought their tastes with them, and finding the conditions of the American climate such as to promote the use of a beverage which imparted hygienic benefits, tea appeared to them as one of the first necessities of comfortable digestion, which the lordly tea-lovers of England thought colonials had no right to enjoy; therefore they were taxed for venturing to indulge in the Celestial drink! Whereupon, the issue is well known. The great Atlantic, which was first set simmering on the shores of Boston and New York, was converted into a foaming and fuming tea-kettle, that at last boiled over, and so dreadfully scalded the *impost*-ers, as to require the use of the most potent revulsive known in the healing art of national discords. The burn has never perfectly healed, and it is doubtful whether it ever will; for, admitting the well-known properties of tea to promote nervous excitement, it is a homeopathic fact that from the year 1773, that most potent and powerful drug, *theine*, has been diffused through the oceans and seas of the world, and by the flowing and ebbing of tides and rivers, and by the infinitesimal division of the particles of watery vapor which have been distilled and redistilled in the mists and clouds of the universe, all

nature is now under the influence of tea; which, my dear reader, accounts for the go-aheadative propensities of Young America.

Tea chemically consists of mucilage, extractive, resin, gallic and tannic acids, and an alkaloid called theine. It has, from the time it was first made known to civilized nations, been considered by some a powerful poison, which, though irregular, slow, and uncertain, is nevertheless likely to break out—as above demonstrated. The poisonous property is attributed to the alkaloid theine, which, in the strongest tea reduced to the nicest chemical analysis, is found to exist in the proportion of forty-six-one-hundredths of a part in a hundred. It is said to possess exhilarant properties. Physiologically, tea, coffee, and tobacco possess the remarkable quality of retarding the waste of the system, and so diminish the demand for food, and make a limited amount go further. To the majority of people, the habitual use of tea is of incontestable advantage. It is decidedly favorable to digestion for healthy persons, and frequently remediable to dyspeptics. It develops a slight degree of excitation, and if taken in large quantity tells particularly on the nervous system; hence, it is apparent that persons of excitable temperament, at least, do not need tea, and may be injured by it. To the oppositely constituted, however, it makes the blood circulate more smoothly, promotes digestion and cutaneous exhalation, and stimulates the intellectual faculties, while, as already remarked, it renders the necessary quantity of food smaller, which Liebig and other distinguished chemists attribute to its possessing positively nutritive properties.

The common way of taking tea everybody is familiar with; but in Japan, among the wealthy, a more ancient mode is followed. The leaves being first ground to powder, it is infused in hot water for awhile, and afterwards whipped with a split bamboo till it creams, when they drink both the infusion and powder, as coffee is used in many parts of Asia; when it is said “to temper the spirits, harmonize the mind, dispel lassitude, and relieve fatigue; it awakens thought, and prevents drowsiness; lightens or refreshes the body, and clears the perceptive faculties.”

Chemists look for the properties of tea according to its elementary constitution; but the fact is, that, however active the ingredients might be under other circumstances, they are so nicely balanced in tea that, when taken in their combination, the effects of no one of its constituents are particularly pre-eminent. Tea can never be employed for its tannin, nor injurious on account of the amount it contains. The same may be said of theine in a still lighter degree. Theine is a feeble base, precipitated by tannin alone from its solutions, and does not, in reality, concentrate any of the active qualities of tea, it being only an isolation.

The prevalent discrepancies regarding the effects of tea on the constitution are wholly due to the different temperaments of individuals, whenever such temperaments are specially marked; and the same may be said, too, as regards the differences between black and green. When employed in moderation, the particular variety may safely depend upon the taste and experience of the consumer.

*Climatic Adaptation.*—The tea plant flourishes over a wide range of latitude and degree of elevation. It grows luxuriantly in the climate of Peking, in the latitude of 40°, and equally well in the vicinity of Canton, on the verge of the tropics. The best tea, however, is produced in a mild, temperate climate, the country about Nankin producing better tea

than either Pekin or Canton. But in any case, the tea plant is found to require a rich sandy loam, in order to bring it to perfection. Japan appears to be even more favorable to the growth of tea than China. In Japan it is planted around the borders of fields, without much regard to situation or soil, while in China chiefly middle grounds have to be selected, and much order observed in distance and cultivation—the plants standing about four feet apart.

By experiments which have been made of late years in South Carolina, tending to prove the perfect climatic adaptation of parts of that State to the growth of tea, and considering that the time cannot be long before the Chinese will form a much more considerable proportion of our immigrants than heretofore, there is just reason to believe that ere long tea will become an important agricultural product of the United States. In respect to latitude, elevation above the level of the sea, and other circumstances which modify the climate, our Southern States singularly correspond to those regions of China and Japan which are known to produce the best tea.

*Counterfeits and Adulterations.*—It is proper in this connection to state, that in order for tea to retain well its properties, it should be kept as free as possible from all moisture. Besides which, sea or ship air exercises a particular influence on the quality of tea, which ultimately destroys its aroma. The writer has frequently observed the result of this on the very best qualities of tea that could be obtained; no matter how tightly sealed, if kept at sea for a twelve month, it is scarcely better than so much of the dried debris of any other plant. It is well known that the shorter the voyage from China, other things being equal, the better the quality of tea.

The frauds in tea seem to have kept pace with the extent of its consumption. These chiefly consist in the employment of artificial coloring matter, and in the substitution of foreign leaves.

Green tea is more frequently adulterated than black, and of the latter, *Congou* and *Souchong* are the most pure; while those qualities having the strongest aroma, such as Pekoe, Caper, Chn Lau, and black Gunpowder, are more likely to be adulterated than those apparently weaker. The leaves of the *plum, ash, elder, hawthorn, willow, poplar, horse-chestnut, laurel, sweet brier, elm*, and divers other leaves colored with the *salts of copper* for green teas, and with logwood for black, have frequently been found by those who have taken the pains to examine the various qualities of tea always in market. Millions of pounds of these and similar leaves are dried annually by the Chinese, by whom they are mixed with, and sold as, tea. These mixtures, and the several varieties of tea, constitute many *sub-sorts*, which are colored, dusted, and packed in "original" boxes and papers, to suit the caliber of every purchaser.

*Catechu, kino, gum, starch, sulphate of iron or copperas, rose-pink, logwood, black-lead, soap-stone, indigo, and turmeric*, have all been isolated from black tea of "exquisite" appearance and "laudable" quality. In addition to these, green tea is treated with *Prussian blue, mineral green, verdigris, arsenite of copper, Dutch-pink, chromate of potash, bichromate of potash, chrome yellow, chalk, gypsum, carbonate of magnesia*, and many other substances which cannot be separated.

For the detection of these frauds it is absolutely necessary that the person examining be familiar with the appearances and structure of the tea-leaf, and to have the aid of the microscope.

The properties of *pure* tea are known to vary, yet there are certain properties in common with which one may become so familiar as to be able to mark a departure from them. *The infusion* of tea varies in color between light yellow and dark brown. Concentrated and warm, it is limpid, but on cooling, it is found to hold in suspense a fine, grayish powder, which renders the liquid somewhat milky. When this powder is separated by filtration it is found to consist of a combination of tanin and theine, perfectly soluble in hot water, and insoluble in cold; it is insipid, although formed of two very sapid matters—*tanin*, which has a rough, astringent taste; and *theine*, which is intensely bitter.

The infusion, filtered, gives, with a solution of subacetate of lead, an abundant yellowish-brown precipitate, which contains, in combination with the oxid of lead, all of the coloring matter, all the tanin, and a peculiar acid.

The infusion of green tea contains less coloring matter than black, but furnishing a more abundant precipitate, when treated with the subacetate of lead solution, than black tea does. Finally, the principles contained in the infusions of the two sorts are precisely the same, only they differ a little in their proportions, black tea being a little less marked than green.

With a little care most of the matters above named may be removed from tea by simply agitating the samples containing them briskly in a vial of distilled water for a few minutes, and then filtering. Insoluble powders may be thus collected, while the soluble substances may be detected by chemical tests already pointed out in previous papers, to which reference may also be made for the poisonous properties of the substances herein named.

## JOURNAL OF MERCANTILE LAW

### POWER OF BROKERS TO SELL OR PLEDGE.

United States Circuit Court, Northern District of California. Bragg, Rollinson & Co. vs. T. Lemen Meyer.

The action was one of replevin to recover possession of six hundred and fifty bags of coffee, alleged to have been wrongfully withheld from plaintiffs. The facts of the case are as follows:—

About the close of May last plaintiffs entrusted to one Edward Heilbuth the sale of the coffee mentioned, and delivered to him warehouse delivery orders for the said coffee, which was stored at the time in the warehouse of Daniel Gibb & Co., in this city, in the name of plaintiffs. Two orders were given to Heilbuth by Bragg, Rollinson & Co.—one in favor of Edward Heilbuth, or bearer, for 200 sacks; the other in favor of Edward Heilbuth, or order, for 450 sacks. The latter, upon obtaining possession of the orders, went to defendant and inquired if he would loan money on coffee. Meyer replied he would, if it was stored in Strauch's warehouse. The terms of storage with Strauch were arranged by Heilbuth, and the warehouse receipts handed to Strauch. On the 2d of June Heilbuth negotiated a loan from Meyer for \$1,200 on the 200 sacks, and on the following day that number of sacks was stored in Strauch's warehouse. On the same day Heilbuth negotiated a further loan of \$2,700 from the defendant on the remaining 450 sacks, which were also stored in Strauch's warehouse. The money was advanced to Heilbuth by defendant on the 4th of June, and it is supposed that Heilbuth absconded from the State on the steamer which left this

port on the 5th of June for Panama. After the departure of Heilbuth plaintiffs made inquiries as to what disposition had been made of the coffee, no sales having been reported to them. After some search the property was traced to the possession of the defendant. On the 12th of June a demand was made for the return of the coffee, which, on being refused, Bragg, Rollinson & Co. instituted this action. The case came on for trial before a jury on Thursday morning.

The good faith of defendant in making advances on the coffee was admitted by plaintiffs. The facts stated above were proved in evidence, and the question which arose on the trial was regarding the power of a broker to pledge the goods of his principal, plaintiffs contending that from Heilbuth's well-known occupation as a broker, the defendant was placed upon his inquiry as to possession and ownership of the coffee, it being contended that in such transactions the doctrine of *caveat emptor* should apply. It was also contended on behalf of plaintiffs, that a broker has no authority to pledge or pawn the goods of his principal. The defendant's counsel argued that Bragg, Rollinson & Co. having furnished Heilbuth with all the *indicia* and symbols of ownership of the coffee, had thereby afforded him the opportunity of holding himself out as owner of the goods, and in that way obtaining the loan from defendant. That the doctrine of the law is, "that where one of two innocent parties must suffer from the fraud of a third, that the one should suffer who had afforded, by his negligence, the opportunity for the commission of the fraud."

Judge McAllister, in charging the jury, said that in questions arising involving matters local in their character, and confined to this State, and which came before the Federal tribunals for adjudication, he should always pay the utmost respect to the decisions of this State as laid down by the highest judicial tribunal. But in commercial cases, involving principles more general and broad in their application, and concerning not alone the citizens of this State, but also the people of the country at large, he was instructed by the Supreme Court of the United States to regard the general current of legal authorities cited by the respective counsel. In California there had been three decisions affecting the question at issue, all of them in favor of the position assumed by the defendant. The current of English authorities appeared to sustain the position taken by plaintiffs. Judge McAllister substantially instructed the jury, that if they believed from the evidence that Heilbuth's general character in the community was that of a broker, and that, in his character of a broker, he received the goods from plaintiffs for sale, he had no power to pledge, and any pledge made by him would not divest Bragg, Rollinson & Co. of their right to the property. At the request of defendant's counsel, the jury were further charged that, if they believed from the testimony, that plaintiffs had intrusted Heilbuth with the evidence of titles to the coffee, so as to enable him to hold himself out as owner thereof, and if defendant, in good faith, and without notice that Heilbuth was acting as broker, and with due discretion on his part, advanced money to Heilbuth, the defendant was entitled to recover.

The jury, after an absence of about an hour, came into court, and rendered a verdict in favor of plaintiffs for return of the property, or the value thereof, it being assessed at \$4,875.

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#### ADMIRALTY DECISIONS.

The Supreme Court of the United States has recently decided the following admiralty points in the case of Taylor vs. Carryl:—

1. Whilst a vessel is in the actual and legal possession of the State Sheriff, by virtue of a writ of foreign attachment from a common law court of a State, the United States Marshal cannot lawfully execute an attachment against her, issued out of the District Court of the United States, in admiralty, in a proceeding *in rem*.

2. The United States Admiralty Court has no jurisdiction over a vessel whilst she is in the hands of the Sheriff by virtue of legal process, and an order for the

sale of such a vessel made by the admiralty is void; and a Marshal's sale, by virtue of such an order, though the same be made after the Sheriff's possession had ceased, is inoperative and gives no title to the purchaser.

It is stated in the *American Law Register* that this case was a writ of error from the Supreme Court of the United States to the Supreme Court of Pennsylvania. The latter court had affirmed the judgment of the Supreme Court at Nisi Prius, entered on a verdict in favor of Ward & Co., plaintiffs, in the Nisi Prius Court, in an action of replevin instituted by them against Robert Taylor.

The action of replevin was commenced in the Nisi Prius Court on the 24th of February, 1848, for a bark called the Royal Saxon. Ward & Co. had purchased the bark on the 9th of February, 1848, at a public sale of her by the Sheriff of the county of Philadelphia, made by order of the State courts. Robert Taylor afterwards, on the 15th of February, 1848, had purchased the vessel at a public sale of her made by the United States Marshal for the Eastern District of Pennsylvania, by virtue of a writ of sale issued by the District Court of the United States for that district, sitting in admiralty. The question for determination under this suit in replevin was, which title to the vessel should prevail—that given by the Sheriff to Ward & Co., or that given by the Marshal to Robert Taylor. The orders of sale, both in the State Court and in the Admiralty, were made on the ground that the vessel was chargeable and perishable.

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GENERAL AVERAGE.

The rules for a contribution of all the parties concerned towards a loss or damage at sea is called a general average, and the common rule is that all those articles which pay freight contribute, and none others; and they contribute according to their value.

The wages of sailors do not contribute. This is to reconcile them more easily to a jettison—their wages being the same in either event. In case of ransom, however, they do contribute.

If part of the cargo be sold to enable the ship to proceed, it is in the nature of a compulsive loan for the common benefit, and the goods saved must contribute the same as if they had been thrown overboard.\*

The rule of adjustment, in settling a general average, is to value the goods sacrificed as well as the goods saved, at the net price, after deducting the freight they would have brought at the port of discharge.

The value of the vessel is to be taken at the end of the voyage, and the owners contribute according to that value, and also according to the net amount of freight and earnings. The value of the vessel, when lost, is estimated according to her value at the port of departure, making a reasonable deduction for wear and tear up to the time of the disaster; and where spars, masts, cables, sails, etc., have been destroyed, it is usual to deduct one-third from the price of the new articles.

The contribution is in general not made till the ship arrive at the place of delivery; but accidents may happen, which may cause a contribution before she reach her destined port. Thus, when a vessel has been obliged to make a jettison; or by the damages suffered, soon after sailing, is obliged to return to her port of discharge, the necessary charges of her repairs, and replacing the goods thrown overboard, may then be settled by a general average.

The way of fixing a right sum, by which the average ought to be computed, can only be by examining what the whole ship, freight, and cargo, if no jettison had been made, would have produced net, if they all had belonged to one person, and been sold for ready money. And this is the sum whereon the contribution should be made, all the particular goods bearing the net proportion.†

It is the duty of the master, in case of general average, to cause an adjustment to be made upon his arrival at his port of destination, as he has a lien upon the cargo for contribution.

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\* 3 Rob. Ad., 264.

† 1 Magens, 69.

When this adjustment has been fairly made in a foreign port, according to the usage there, it is held binding, though contrary to the usage at the home port.

If the case, however, is not a proper subject of general average, the foreign adjustment founded in mistake is not binding.

For payment of average, each person may sue for his share when adjusted; but it is usual, where the ship has many consignees, for the master to take a bond from each of the different merchants, to pay his proportion of the average when adjusted.

A *bona fide* owner of the cargo is liable for such proportion, whether he has signed a bond or not; but a consignee is not; and if he do not give a bond, the master would have to resort to the owner, or to coerce payment by retaining the goods.

It is necessary here to add, that, as all sums which are paid on account of general average may be recovered by action from the underwriters, so any person, whose goods have been thrown overboard, or who has expended money for the general preservation of ship and cargo, may obtain repayment by application to a court of equity for a general contribution.

The following example of adjusted averages is here subjoined:—

AVERAGE ACCRUING TO THE SHIP *SEA-HORSE*, FROM *LIGA* TO NEW YORK, FOR ASSISTANCE IN GETTING OFF THE STRAND OF *ELSINEUR*.

To sundry charges paid at the sound for lighters and assistance in getting the ship off.....	\$120 00
Protests and postages.....	2 00
Total.....	\$122 00
Should the ship arrive at New York, she will make freight.....	700 00
Wages for all the people, one month and ten days.....	\$139 50
Victuals “ “ “ “ .....	110 50
	—————
	\$250 00
Freight to contribute.....	\$450 00
Ship Sea-horse valued at .....	4,000 00
Freight valued at.....	450 00
F. J. for value of hemp, as per invoice .....	6,000 00
D. N. for value of flax.....	1,000 00
T. R. for value of iron.....	350 00
	—————
Total.....	\$11,800 00

If \$11,800 loss give \$122, what will \$100 loss give?

Answer—\$1 03.39 or nearly .4 per cent.

The ship must bear \$4,000 at \$1 03.4 .....	\$41 36
Freight \$450, at \$1 03.6 per cent .....	4 65
F. J. pays the captain for \$6,000 at the same rate .....	62 03
D. N. pays the same for \$1,000.....	10 34
T. R. pays the same for \$350.....	3 62
	—————
Total.....	\$122 00

LIQUOR LAW IN MASSACHUSETTS.

The case of *James Brown vs. Stephen Perkins and wife*, was a case growing out of an occurrence in Rockport, on the 8th of July, 1856. Some two hundred women collected together on that day, and proceeded to several places where liquor was sold, and entered the shops by force, and destroyed the liquors there

found. Among other grounds of defence, it was claimed that the defendants, if they performed acts alleged, were justified in so doing, inasmuch as liquors kept for sale, and the shops in which they are kept, are declared common nuisances by the statute of 1855, and, as it was claimed by defendants, could be abated by the destruction of such liquors.

Chief Justice Shaw, of Massachusetts, recently has decided, that liquors kept for unlawful sale may be destroyed by individuals, without legal process, under the *nuisance* act of that State, from which our nuisance act of 1858 was copied. The Court says that "all intoxicating liquors illegally kept for sale, together with the vessels and implements of the trade, and the building in which they are found, are common nuisances, which individuals may abate, when used for illegal purposes, to-wit, gaming, prostitution, and liquor selling.

"All persons have a right to abate a public nuisance. As in cases cited by defendants, individuals may cut down a gate erected in a highway, or destroy a bridge thrown over navigable waters. I am of opinion that liquors kept illegally for sale, with the implements of trade, having been declared by law a public nuisance, every person may destroy them."

Judge Shaw makes a distinction between a house and shop. If kept in a shop, not a dwelling-house, it is justifiable to use so much force as is necessary to come at such liquor and vessels for the purpose of destroying them;—a dwelling-house is surrounded by law with a peculiar sacredness, and in that case the rule would be otherwise. The law abounds in maxims declaring that a man's house is his castle. It is the right of individuals to abate a public nuisance—the right must be cautiously exercised. If no liquor is found in the shop so entered, or if unnecessary violence is used, the justification fails.

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#### CROSSED CHECKS.

An English cotemporary remarks:—One of those astounding decisions by which common sense is overruled by law has just been pronounced in the English courts, in the important matter of crossed checks.

Our readers are aware that an Act of Parliament (19 and 20 Vic., cap 25) was passed to legalize the crossing of checks, by which that was made law which had previously only been custom, viz., that the drawer of a check, or any subsequent holder, might, by crossing the check with the name of a banker, or simply with the words "& Co.," secure its only being paid through a banker, the act declaring that this crossing should operate as a "direction to the banker." Under this protection, the commercial world hitherto rested secure. In the case in question, where the check had been stolen, and the crossing erased, it was held that the loss must fall on the customer, and not on the banker, the judges unanimously laying down the following propositions:—

1st. That as any holder could put a crossing on the check, any other holder, though, as in this instance, a thief! might take it off again.

2d. That the crossing formed no part of the check; and the erasure of it, consequently, by the thief was not a forgery, so that the banker was discharged from all liability.

Any comment on this complete abrogation of an Act of Parliament would be as absurd as the decision itself. The only thing that can be done is to put the crossing on in such a manner as to make erasure impossible, either by a caustic ink, or by a printed crossing from end to end. The better plan, no doubt, would be a short declaratory act, that the crossing shall be held to be, and form part of, the check.

Another case relative to checks was decided at the same time, and may be information to our readers. The defence was, that the check had not been presented in due time, having been issued in 1856, but not presented till 30th of March, 1857. The Court held that no time would be unreasonable within six years, unless loss was caused by the delay.

## COMMERCIAL CHRONICLE AND REVIEW.

STATE OF BUSINESS—BANK BALANCES—INCREASE OF MEANS IN NEW YORK—NO SPECULATIVE BANK  
LOANS—CLEARING-HOUSE—NEW YORK AND PHILADELPHIA—COMPARATIVE LOANS—CLEARINGS—  
STOCKS AND RENTS—SPECIE—ABUNDANCE OF MONEY—BANK OF FRANCE—RATE OF INTEREST—  
BANK OF GREAT BRITAIN—MOVEMENT OF CROPS AND SPECIE—LARGE ACCUMULATION—DIMINUTION  
OF CURRENCY—DISPOSITION OF SPECIE—MEANS FOR THE FUTURE—EXCHANGES—EXPORT OF  
SPECIE—ASSAY-OFFICE—TABLE OF EXPORTS—NATURE OF SPECIE EXPORTED—FEDERAL TREASURY—  
PROSPECTS OF NEW LOAN—STAGNATION OF BUSINESS—CURRENCY—SUFFOLK BANK—COURSE OF  
IMPORTS.

THERE has been a gradual recovery of business confidence in most departments, with a moderate increase in activity. If the sum of business falls below that of late years for the autumn seasons, it has probably been more safe and lucrative in its net results, and has not been marked by that money pressure which has in the last six or seven years almost invariably set in when the fall paper matures. The bank balances have usually accumulated in New York in the summer months from all quarters, and have been employed on stock loans and other temporary objects, until the usual crop movement required their presence once more out of New York. They have, consequently, to a greater or less extent, promoted speculations, and, when the balances are withdrawn, a number of borrowers compete in the market with those who require extra means to complete the fall payments for goods. The course pursued by the New York banks in allowing interest on deposits, attracted hither from country banks considerable balances, which uniformly run highest towards the end of the crop year in August. When the crops begin to move these balances are drawn down, and a pinch in the market always results. In order to illustrate the financial progress at New York, the following table of the New York banks in June of each year will be useful:—

	Capital.	Loans.	Specie.	Balances due banks.
June, 1848.....	\$24,149,910	\$41,568,078	\$4,740,847	\$4,337,134
" 1849.....	24,920,000	50,260,487	9,586,308	9,804,273
" 1850.....	27,300,330	60,028,155	10,739,957	11,231,160
" 1851.....	33,033,093	71,933,514	7,985,954	17,316,289
" 1852.....	35,528,250	81,821,460	12,152,048	18,150,081
" 1853.....	42,696,793	95,520,656	12,021,851	17,753,574
" 1854.....	45,515,288	91,916,710	10,280,969	20,108,000
" 1855.....	48,683,730	91,197,653	15,397,674	18,525,760
" 1856.....	53,985,000	108,474,921	16,166,180	20,208,100
" 1857.....	62,859,135	115,338,592	13,134,715	20,772,780
" 1858.....	67,819,100	118,299,388	31,704,814	28,275,873

The table shows how rapidly bank capital has increased here, and how constantly the quantity of money sent here from the interior for employment has swollen in amount. The great agricultural prosperity of the years 1847-48 placed large surplus funds at the disposition of the banks of the interior, and these funds have annually increased, always stimulating an inflation, which has as uniformly been followed by a pressure in the fall months.

This year there has been no speculation. The tendency has been to settlement and payment without putting money into new enterprises of any kind. The fall payments have passed amid a great abundance of money and little demand for it.

The bank loans, as will be seen in the usual weekly tables annexed, have gradually shrunk under the process of payment. They stood in New York, in the first week of October, \$3,000,000 lower than at the close of August. The returns of the banks, however, show considerable credits, notwithstanding the general dullness of business.

Mr. Lyman, of the Clearing-house, has furnished for publication the following summary of the circulation and net deposits, specie, and loans and discounts of the banks of this city, from the 1st of January, 1855, to the 1st of October, 1858. By this it appears that the weekly average was as follows:—

	Deposits & circulation.	Specie.	Loans & discounts.
1855.....	\$66,509,433	\$14,162,414	\$93,909,212
1856.....	73,557,625	13,325,280	105,332,060
1857.....	71,623,051	13,560,505	109,927,774
1858, nine months.....	87,285,274	31,943,635	113,301,703

The circulation and deposits due by the banks are very large, and the loans, due to the banks by the public, exceed the average of the last year, notwithstanding the extreme dullness of business. The large amount of deposits represents unemployed funds, and the loans are on government stocks, representing less commercial paper than usual.

The comparative clearings of the banks in Philadelphia and New York have been as follows, since the commencement of the former:—

	Philadelphia.		New York.	
	Clearings.	Balance.	Clearings.	Balance.
March 22 to 31.....	\$28,466,432	\$1,554,155	\$98,574,336	\$5,915,489
April.....	70,250,273	4,632,115	514,111,772	32,992,935
May.....	71,094,720	4,330,135	429,259,921	26,587,588
June.....	64,605,439	4,105,612	489,426,048	33,711,360
July.....	64,357,890	4,758,624	395,346,430	26,157,811
August.....	60,605,555	4,024,529	383,887,865	19,802,440
Total.....	\$359,380,309	\$23,405,170	\$2,310,606,372	\$145,167,623

The clearings in Philadelphia have been one-seventh the amount of the clearings in New York, and the cash balances paid have been in a larger proportion. The amount of clearings in New York bears a much larger proportion to the amount of bank loans than in Philadelphia. Thus, in the latter city, the loans are averaged at \$24,000,000, under the supposition that they average fifty days maturity; the amount paid in the time embraced in the table is \$72,000,000, while the clearings have been five times that amount. In New York the sum of notes matured would be \$172,000,000, while the clearings have been thirteen times that amount. The result shows the vast amount of business transactions done at the banks, besides the payment of loans. The immense number of checks drawn against deposits, and paid out for rents, bills, etc., joined to those originating in stock transactions, swell these amounts in New York to twelve times the note payments, and in Philadelphia to five times the note payments. The stock operations in New York swell the sum of the clearings to a great extent. These are one to ten millions per day, and perhaps the transfer and retransfer of \$1,000,000 stocks may sometimes carry with it three to ten millions of checks, all drawn upon banks, to be made good before three o'clock, and all coming into the Clearing-house next morning, without any legitimate business resulting from it. The amount of these transactions is now comparatively very small, and the clearings are proportionately limited.

The New York stock market is without any signs of speculation. The great distress which was engendered by the occurrences of the last year weigh heavily upon the markets, and Western railroads particularly are avoided. It is also the case that the classes who usually deal in stocks are less in funds than usual. The same is true of general business, which, in a dull season, does not create those numberless checks in payment of small bills and accounts that so swell the sum of the clearings. If we take a list of clearings in New York, we find that the weeks which embrace quarter-days—November 1st, February 1st, May 1st, and August 1st—uniformly show \$10,000,000 more clearings than those which precede or come after them. Thus, for April 5th to July 7th, there was no week when the clearings were over \$107,000,000, except the first week in May, when they were \$117,000,000. In the first week in August they were \$102,700,000, while the average for six weeks was only \$92,000,000. The fact indicates the importance of rent payments in the clearing accounts. The value of money is rather less than more on "call" stocks collateral. Brokers have obtained money at 3 and even 2 per cent, but 4 is the current quotation; good paper is done 4 a 6. The inside figure for good names, and the banks do not get a sufficiency. The accumulations of specie, both here and in Europe, continue very large.

The returns of the Bank of France by the last arrival show a continued immense increase in the accumulation of specie. That institution has reduced its rate of interest to 3 per cent. The returns of the banks in the leading cities are as follows:—

	SPECIE IN BANKS.					
	October.	March 11.	June 13.	July 12.	August 14.	September 9.
London.	\$35,850,110	\$88,532,091	\$86,530,138	\$84,217,895	\$83,937,637	\$87,311,010
Paris..	35,585,613	63,323,865	85,716,528	98,991,184	105,283,051	111,328,872
N. York	7,843,230	32,961,076	33,367,253	35,328,184	44,037,300	40,686,300
N. Orlns	3,230,370	10,978,759	10,312,237	10,877,768	10,912,871	11,285,308
Boston.	2,563,112	7,589,968	9,410,569	9,000,663	8,795,945	8,701,679
Philad..	2,071,434	5,448,514	7,055,188	6,399,754	6,875,520	6,635,856
Total	86,743,890	208,834,273	232,391,913	244,855,448	259,842,424	265,969,025

The aggregate accumulations is now more than three times as much as for the same time last year. The amount is equal to five years of California production. That in the Bank of France is larger than ever any bank held before, and, as the discounts continue to decline, following the inactivity of general business, the prospect is of a still greater increase in bullion; and the increase in the English bank is causing expectations of a further reduction in the rate of interest. The fine crops favor the accumulation of specie, as well as the demand for goods. The National Bank of Austria, which held 108,000,000 florins, or \$54,000,000, has, by decree, been required to redeem its notes in specie after November 1st, 1858. The notes then to be issued are of 1,000 florins, 100 florins, and 10 florins, and one-third must be represented by gold and silver, and the other two-thirds by legal discounted bills, or by stock. This regulation will go far to give confidence, and promote the circulation of coin in Europe. In the United States the accumulation of coin continues in the banks, and for the coming year is likely to continue to do so, since the imports of goods are small, general industry still depressed, and the exports of the leading staple, cotton, tobacco, etc., large.

The immense sums in coins and notes that have been withdrawn by the banks from circulation in the last ten months, show the great stagnation of business,

which before actively employed all that money; but as soon as the paralysis came upon the market, and payments began to be made in excess of the sums demanded for enterprises, the great reservoirs of money capital began to fill, and they have gone on doing so until the sums of specie amassed excite surprise. The banks of five cities hold now, in round numbers, two hundred millions, that have been collected from circulation during the year. That sum represents one-fourth the gold production of the past six years; another fourth has, in silver, been sent to Asia, and there remains but one-half of the whole production to supply the enlarged channels of circulation, the bills of all other banks and bankers in Europe, and the amounts hoarded, when business shall have revived. The large reserve of bullion will flow into its channels in connection with the new large supplies from the mines. From these sources there will in two years be four hundred millions of gold to spare to business, and this will be aided by about one hundred millions of paper issues, which have the same effect upon enterprise. This volume of currency, impending upon the six commercial centers enumerated, will be aided by very large yields of natural products in Europe and America with the newly opened Chinese Empire to operate upon. The Bank of France has reduced its rate of interest, we think for the first time in its history, to three per cent, and the rate is now the same as in London.

The movement of commerce has not been such in New York as to promote any very active demand for exchange, of which the quotations are as follows:—

	October 1.		October 15.	
London .....	9½ a	10½	9½ a	10½
Paris .....	5.11½ a	5.13½	5.11½ a	5.13½
Amsterdam .....	41½ a	41½	41½ a	41½
Frankfort .....	41½ a	41½	41½ a	41½
Bremen .....	79 a	79½	79½ a	79½
Hamburg .....	36½ a	36½	36½ a	36½
Antwerp .....	5.11½ a	5.12½	5.11½ a	5.12½
Berlin, Liepzig, Cologne .....	78½ a	78½	73½ a	73½

The export of specie has continued considerable as compared with same time last year, when the extreme panic upon the market caused all the gold which arrived to be coined for circulation, instead of being cast in bars for export. If we take the movement of the New York Assay-office for three months—August, September, and October—for three years, we have results as follows:—

	1856.		1857.		1858.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
August .....	\$1,158,000	\$16,100	\$885,000	\$235,000	\$1,725,000	\$311,000
September .....	1,575,000	26,500	1,300,000	275,000	1,520,000	550,000
October .....	2,300,000	39,500	2,733,000	650,000		
Total .....	\$5,033,000	\$82,100	\$4,918,000	\$1,170,000		

The deposits of silver increased largely during the panic last year, over those of the same time in the previous year, and the payments ordered were as follows:—

	1856.		1857.		1858.	
	Bars.	Coin.	Bars.	Coin.	Bars.	Coin.
August .....	\$1,154,600	\$10,000	\$890,000	\$240,000	\$1,610,000	\$426,000
September .....	1,585,600	16,000	250,000	1,325,000	1,512,000	558,000
October .....	2,309,500	30,000	24,000	3,359,000		
Total .....	\$5,049,700	\$56,000	\$1,364,000	\$4,920,000		

In 1856 nearly all the gold was ordered into bars for export. In 1857, the panic being on the market, the reverse was the case, and all the metal was ordered into coin for use. This year the proportion of coin continues large, and a considerable portion is of foreign silver arrived here, and which has become very abundant, so much so that banks refuse it, since it is not a legal tender over \$5. The quantity of coined money has been added to the circulation in the past year.

The supply of bars for export has been good, and the receipts and exports, with the amount remaining in the city, have 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.

	1857.		1858.		Specie in Total	
	Received.	Exported.	Received.	Exported.	sub-treasury.	in the city.
Jan. 16.....	\$1,269,107	\$250,000	\$1,607,440	\$1,045,490	\$2,934,000	\$33,145,266
23.....	.....	781,295	.....	1,244,368	3,075,900	33,903,151
30.....	1,460,900	.....	1,565,779	57,075	3,288,500	34,561,500
Feb. 6.....	225,955	1,177,812	.....	2,928,271	3,168,787	33,821,735
13.....	1,097,186	348,216	1,348,507	48,850	3,384,800	33,611,075
20.....	.....	279,667	.....	641,688	3,360,000	34,776,076
27.....	1,296,108	26,708	1,640,430	128,114	3,420,900	35,079,294
Mar. 7.....	636,000	967,405	.....	297,898	2,996,700	35,736,431
13.....	.....	422,914	1,279,134	225,274	2,964,000	35,925,076
20.....	1,004,000	306,351	11,000	116,114	6,853,852	37,681,656
27.....	.....	38,734	1,403,949	83,120	6,141,594	37,071,666
April 3.....	1,487,128	742,233	.....	115,790	5,548,069	37,078,069
10.....	375,800	468,698	.....	250,246	4,875,975	36,912,411
17.....	1,229,238	779,892	1,325,198	203,163	3,841,577	37,035,026
24.....	140,075	106,200	41,208	15,850	3,695,071	37,808,806
May 1.....	1,800,000	1,711,390	1,550,000	136,873	3,145,400	38,209,613
8.....	.....	671,101	.....	106,110	2,874,200	38,327,346
15.....	1,929,527	1,826,629	1,626,171	720,710	6,853,590	41,586,300
22.....	198,000	353,166	.....	532,862	5,566,300	39,613,700
29.....	1,658,072	2,714,002	1,575,991	400,300	6,393,500	37,894,600
June 5.....	.....	489,668	.....	51,425	5,263,300	38,053,660
12.....	1,920,168	3,394,892	1,446,175	16,616	4,803,609	38,170,900
17.....	208,000	2,045,389	.....	68,318	7,775,108	38,011,251
26.....	.....	2,019,406	1,799,502	276,487	7,461,600	39,410,688
July 3.....	1,892,000	58,228	.....	317,110	5,820,000	39,650,000
10.....	.....	1,184,115	1,500,000	564,030	5,342,200	40,047,800
17.....	1,591,107	523,368	.....	637,240	5,157,600	40,485,000
24.....	200,000	1,893,893	.....	1,028,270	5,336,000	40,851,090
31.....	1,488,040	896,407	1,163,818	303,318	5,144,700	40,856,300
Aug. 7.....	.....	1,615,932	.....	786,841	5,553,400	40,699,200
14.....	1,245,905	930,430	1,531,514	440,729	12,886,800	44,037,300
22.....	.....	2,180,008	.....	844,781	17,739,600	46,089,100
29.....	.....	149,399	1,434,674	187,941	13,418,000	41,235,000
Sept. 4.....	1,706,000	287,500	.....	562,087	13,077,000	41,125,600
11.....	100,000	187,187	1,796,139	227,980	12,626,900	40,686,300
18.....	lost, C. A.	102,968	.....	1,361,110	12,612,200	41,420,200
25.....	260,000	10,687	1,570,924	474,945	11,838,000	40,463,000
Oct. 2.....	.....	412,600	.....	1,126,404	11,100,600	39,633,700
9.....	1,268,735	69,000	1,322,005	675,817	10,476,649	39,646,853
Total.....	27,509,952	32,832,953	27,275,369	21,751,058	.....	.....

From Boston the exports have been small; for September \$126,750. The description and destination of the specie exports from the port of New York have been as follows:—

SHIPMENTS OF SPECIE FROM PORT OF NEW YORK.

	American coin.	Bars.	Silver.	Sov'reigns.	D'bloons.	French gold.	Spanish silver.	Total.
Liverpool ...	100,600	2,215,904	1,115	25,177	.....	.....	76,280	2,419,076
Havre.....	50,000	1,082,636	.....	.....	.....	.....	.....	1,082,636
Havana.....	.....	.....	.....	.....	5,100	.....	.....	5,100
Hamburg....	1,400	.....	.....	.....	.....	.....	.....	1,400
Bremen.....	2,250	.....	5,055	.....	.....	2,400	.....	9,705
Balize.....	1,120	.....	.....	.....	.....	.....	.....	1,120
Buenos Ayres.....	.....	.....	.....	.....	16,550	.....	.....	16,550
Neuvitas....	.....	.....	.....	.....	1,560	.....	.....	1,560
St. Thomas..	5,000	.....	.....	.....	17,000	.....	.....	22,000
Ponce.....	.....	.....	2,000	.....	31,129	.....	.....	33,129
Bolivar.....	25,000	.....	.....	.....	.....	.....	.....	25,000
Jacmel.....	500	.....	.....	.....	.....	.....	.....	500
Para.....	20,000	.....	.....	.....	.....	.....	.....	20,000
Aux Cays...	500	.....	.....	.....	.....	.....	.....	500
Total.....	206,370	3,248,540	8,170	25,177	71,339	2,400	76,280	3,638,276
May 8, Oct. 10	2,117,610	8,544,748	49,666	307,488	284,287	88,575	89,698	11,400,076

Although, as will be seen by the annual monthly tables of the trade at this port, the revenues of the federal government have been somewhat larger for September, yet its expenditures have been greater, and the whole amount of funds in the federal treasury has been reduced from \$12,895,424, at the close of August, to \$10,868,934, at the close of September; that is, by \$2,026,490, and an issue of the remaining half of the authorized loan of \$20,000,000 is looked for, and the new fives have been dull at 3¼ premium. State stocks generally are heavy.

The general stagnation of business causes far less currency than usual to be needed, and the circulation outstanding of the banks is not large. In New England the operation of the Bank of Mutual Redemption, the advent of which we alluded to in our last, has been accompanied by an active war with the Suffolk Bank, which has resulted in the renouncement by the latter of future responsibility for the currency.

The amount of imports at the port of New York for the month of September has been less than for the last year, but the quantities of goods put on the market show an excess over those sold for the same month last year. The money pressure last year caused a considerable amount of goods to be warehoused, and the operation this year is the reverse. The imports for the month are as follows:—

FOREIGN IMPORTS AT NEW YORK IN SEPTEMBER.

	1855.	1856.	1857.	1858.
Entered for consumption.....	\$11,859,017	\$10,934,435	\$8,841,367	\$11,180,523
Entered for warehousing.....	1,566,377	3,264,622	5,428,203	2,900,710
Free goods.....	489,126	1,026,208	1,772,505	1,253,829
Specie and bullion.....	107,205	84,097	805,285	138,233
Total entered at the port.....	\$14,021,725	\$15,309,362	\$16,847,360	\$15,473,295
Withdrawn from warehouse.....	2,311,341	3,457,622	2,882,046	2,905,062

Last year the stock of goods in bond was large, and very large additions were made during the month. This year the quantities in bond have supplied the market, when imports were small.

The total imports at New York since January 1st are about the same as in 1855. The total is over one hundred and fifteen millions, being \$78,175,639 less than for the first nine months of 1857:—

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

	1855.	1856.	1857.	1858.
Entered for consumption.....	\$84,665,055	128,900,191	114,522,999	\$76,582,434
Entered for warehousing.....	19,187,452	28,494,662	56,855,873	20,232,150
Free goods.....	10,252,994	14,701,645	15,504,705	16,552,095
Specie and bullion.....	678,999	1,150,770	6,679,914	2,021,173
Total entered at the port.....	114,784,500	173,247,268	193,563,491	115,887,852
Withdrawn from warehouse.....	19,471,459	19,094,642	32,122,274	31,097,577

In face of this large increase, it will be seen that over thirty-one millions have been withdrawn from warehouse, reducing the stock \$11,000,000, where last year it was increased \$24,000,000 :—

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

	1855.	1856.	1857.	1858.
First quarter.....	\$35,200,366	\$51,871,305	\$65,666,728	\$29,044,644
Second quarter.....	32,747,063	56,430,604	55,262,699	32,740,170
Third quarter.....	46,837,071	64,945,359	72,634,064	53,603,218
Total, nine months.....	114,784,500	173,247,268	193,563,491	115,887,852

The imports of dry goods for consumption in September of the present year are somewhat larger than for the same month last year, when the panic began to weigh upon the market. The increase is \$1,341,223, mostly silks and woollens. Last year large quantities were warehoused in consequence of the money stringency, hence the total imports is now less by \$640,267 than for September, 1857, but the amount thrown upon the market is \$572,567 larger than the imports, showing a reduction in stocks :—

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

ENTERED FOR CONSUMPTION.				
	1855.	1856.	1857.	1858.
Manufactures of wool.....	\$2,607,170	\$2,154,266	\$1,362,495	\$1,910,232
Manufactures of cotton.....	1,042,843	1,050,922	820,449	881,692
Manufactures of silk.....	2,380,508	1,880,926	1,848,572	2,077,703
Manufactures of flax.....	753,019	815,542	375,293	404,768
Miscellaneous dry goods.....	648,472	600,514	328,275	301,912
Total.....	\$7,432,012	\$6,502,170	\$4,235,084	\$5,576,307
WITHDRAWN FROM WAREHOUSE.				
Manufactures of wool.....	\$267,575	\$524,532	\$330,389	\$484,900
Manufactures of cotton.....	82,928	166,728	87,362	128,765
Manufactures of silk.....	190,682	163,573	107,333	178,456
Manufactures of flax.....	91,782	80,139	73,091	121,410
Miscellaneous dry goods.....	96,438	21,175	70,240	107,745
Total.....	\$729,405	\$956,147	\$668,415	\$1,021,276
Add entered for consumption....	7,432,012	6,502,170	4,235,084	5,576,307
Total thrown on market....	\$8,161,417	\$7,458,317	\$4,903,499	\$6,597,583
ENTERED FOR WAREHOUSING.				
Manufactures of wool.....	\$91,479	\$332,632	\$920,325	\$178,150
Manufactures of cotton.....	109,258	154,866	455,549	100,492
Manufactures of silk.....	76,010	181,766	440,269	44,416
Manufactures of flax.....	46,671	143,687	420,909	79,043
Miscellaneous dry goods.....	37,884	53,859	193,146	46,607
Total.....	\$361,302	\$866,810	\$2,430,198	\$448,708
Add entered for consumption....	7,432,012	6,502,170	4,235,084	5,576,307
Total entered at port.....	\$7,793,314	\$7,368,980	\$6,665,282	\$6,025,015

This leaves the total imports of foreign dry goods at this port, since January 1st, \$640,267 less than for the corresponding date of last year, while the amount put on the market is \$1,694,084 more than for September, 1857 :—

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

	ENTERED FOR CONSUMPTION.			
	1855.	1856.	1857.	1858.
Manufactures of wool.....	\$13,024,243	\$21,315,298	\$19,010,964	\$13,890,836
Manufactures of cotton.....	6,514,180	12,763,076	13,748,031	7,557,996
Manufactures of silk.....	17,212,322	25,254,582	21,911,711	14,459,562
Manufactures of flax.....	4,175,570	6,649,359	5,044,318	3,359,963
Miscellaneous dry goods.....	4,077,029	5,873,957	5,380,366	2,698,170
<b>Total.....</b>	<b>\$45,003,344</b>	<b>\$71,856,272</b>	<b>\$65,695,390</b>	<b>\$41,966,527</b>

	WITHDRAWN FROM WAREHOUSE.			
	1855.	1856.	1857.	1858.
Manufactures of wool.....	\$2,212,832	\$2,317,929	\$4,815,683	\$4,003,246
Manufactures of cotton.....	1,984,560	1,819,911	2,718,415	3,280,663
Manufactures of silk.....	2,348,560	1,764,310	3,862,866	3,065,465
Manufactures of flax.....	1,063,168	864,858	1,389,126	1,868,026
Miscellaneous dry goods.....	708,199	335,975	707,877	1,136,379
<b>Total withdrawn.....</b>	<b>\$8,317,319</b>	<b>\$7,102,983</b>	<b>\$13,493,967</b>	<b>\$13,353,779</b>

Add entered for consumption....	45,003,344	71,856,272	65,095,390	41,966,527
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**Total thrown upon market..** \$53,320,663 \$78,959,255 \$78,589,357 \$55,320,306

	ENTERED FOR WAREHOUSING.			
	1855.	1856.	1857.	1858.
Manufactures of wool.....	\$1,449,109	\$2,771,289	\$6,650,196	\$1,909,642
Manufactures of cotton.....	1,251,810	1,588,051	3,078,640	1,648,030
Manufactures of silk.....	1,746,238	1,870,394	4,647,896	1,032,557
Manufactures of flax.....	771,897	780,466	1,957,634	728,273
Miscellaneous dry goods.....	597,557	492,547	1,417,544	483,884
<b>Total.....</b>	<b>\$5,816,611</b>	<b>\$7,502,747</b>	<b>\$17,751,910</b>	<b>\$5,802,386</b>

Add entered for consumption....	45,003,344	71,856,272	65,095,390	41,966,527
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**Total entered at the port....** \$50,819,955 \$79,359,019 \$82,847,300 \$47,768,913

The total exports, exclusive of specie, shipped from New York to foreign ports in the month of September, errors excepted, is \$1,306,385 less than for the same period of last year, and about half those for September, 1856. We annex a comparison for four years :—

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

	1855.	1856.	1857.	1858.
Domestic produce.....	\$5,228,637	\$7,045,202	\$4,218,954	\$3,521,992
Foreign merchandise (free).....	17,369	67,325	417,570	169,863
Foreign merchandise (dutiable)..	358,896	509,752	566,106	204,390
Specie and bullion.....	1,831,684	3,738,547	990,476	3,239,591

**Total exports.....** \$7,436,586 \$11,360,826 \$6,193,106 \$7,135,836

**Total, exclusive of specie..** 5,604,902 7,622,279 5,202,630 3,896,245

The shipments of specie for September last year were very small, for reasons sufficiently obvious. The exports, exclusive of specie, from New York to foreign ports this year are nearly as large as for the same time in 1856. The exports of specie show a large decrease, notwithstanding the increase in September :—

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

	1855.	1856.	1857.	1858.
Domestic produce.....	\$39,808,299	\$57,336,195	\$47,233,769	\$41,534,618
Foreign merchandise (free).....	3,457,965	748,075	3,127,326	1,125,561
Foreign merchandise (dutiable)...	3,781,244	2,554,353	4,104,150	2,986,672
Specie and bullion .....	24,439,196	27,487,086	33,288,632	20,602,848
Total exports.....	\$71,486,704	\$88,125,709	\$87,753,877	\$66,249,699
Total, exclusive of specie...	47,047,508	60,638,623	54,465,245	45,646,851

We have prepared a quarterly statement of the shipments of domestic produce from New York, which will indicate the course of these exports during the last nine months, as compared with former years:—

## QUARTERLY STATEMENT OF EXPORTS OF DOMESTIC PRODUCE.

	1855.	1856.	1857.	1858.
First quarter .....	\$12,958,884	\$18,710,798	\$17,347,525	\$12,421,547
Second quarter .....	13,378,540	19,066,095	16,604,115	16,158,845
Third quarter.....	13,470,875	19,559,302	12,782,129	12,954,226
Total, nine months .....	\$39,808,299	\$57,336,195	\$47,233,769	\$41,534,618

The cash duties received at New York show a falling off as compared with last year, owing obviously to the small importation, notwithstanding the quantities taken out of bond, being the reverse of last year, when duties for the month were lessened by putting goods in bond:—

## CASH DUTIES RECEIVED AT NEW YORK.

	1856.	1857.	1858.
In September.....	\$3,702,134 70	\$2,249,982 89	\$2,672,935 63
Previous eight months .....	33,269,089 13	30,227,371 32	18,021,536 91
Total since January 1st....	\$36,971,223 83	\$32,477,354 21	\$20,694,472 54

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**JOURNAL OF BANKING, CURRENCY, AND FINANCE.**


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## SPECIE IN THE UNITED STATES.

Various estimates are made from time to time of the quantity of specie in the country, and the mode of its distribution. Some are very wild in their results. The best means of approximation is to adhere to the official figures in relation to the precious metals. For this purpose, we go back to the first records of their movement, which were commenced in 1821. It is to be borne in mind that this country—which up to 1824 produced none of the precious metals, and from that time only in small quantities up to 1849—was obliged to depend entirely upon the sale of its produce to other countries for a supply of those metals for ornament and use. To procure that supply, it was necessary that, whatever might be the apparent fluctuations of commerce, it should in the long run be what is called “favorable.” Up to 1821, there had been about \$16,000,000 coined, but foreign coins were continued a legal tender up to within a few years. In 1821, the banks held about \$19,000,000, and Crawford, Gallatin, and others estimated that at that time there was about \$37,000,000 in the country. From that time up to 1849, when California was discovered, the movement was as follows:—

Specie in the country, 1821.....		\$37,000,000
Production of United States mines.....		13,811,206
Import.....	\$242,239,061	
Export.....	180,596,664	
		60,642,397
In the country, 1849.....		\$111,453,603
In the Federal Treasury.....	\$5,700,915	
In banks.....	43,619,000	
In plate, ornaments, &c., estimated.....	30,000,000	
In money circulation.....	82,138,688	
		111,453,603

In 1849, we began to receive California gold, most of which has passed through the Mint, as well as imported metals, particularly silver. The following table shows the amount of both metals coined in each year; the amount of both metals bearing the United States stamp exported in each year; also the quantity of metals imported and re-exported in the same shape. The returns of the Mint were formerly made up to December of each year, but by the law of February 21, 1857, they were ordered to be closed June 30, the regular fiscal year; hence, the amount of coinage for 1857 is for six months only—January 1 to July 1:—

COINAGE OF UNITED STATES, EXPORTS OF UNITED STATES COIN, AND IMPORT AND EXPORT OF FOREIGN COINS.

Years.	Coinage.	Export U. S. Coin.	Import coin.	Export foreign coin.
1849....	\$11,122,712	\$956,874	\$6,651,240	\$4,548,774
1850.....	33,847,838	2,045,679	4,628,792	5,477,315
1851.....	63,388,889	18,069,580	5,453,592	11,403,172
1852.....	57,845,598	37,487,837	5,505,044	5,236,308
1853.....	64,291,478	23,548,535	4,201,382	3,938,340
1854.....	60,713,865	38,234,566	6,758,587	3,962,734
1855.....	44,060,304	53,957,418	3,659,812	2,289,925
1856.....	64,283,963	44,148,279	4,207,632	1,597,206
1857.....	26,794,782	60,078,352	12,981,101	9,840,781
Total.....	\$426,349,428	\$278,477,120	\$53,527,880	\$46,411,334
Excess import.....				7,116,546

We have thus the fact that the import of foreign coins has exceeded the export by \$7,116,546, and this has taken place since the passage of the silver coinage bill in 1852, since when the government has been a buyer of silver for coinage into the new coins of appreciated value. The silver has come mostly from Mexico to New Orleans and to New York, and, added to the California gold, has swelled the amount of coinage, of which the excess over the export of United States coin is the large sum of \$147,872,308. In the year 1857, the importation of gold was large in the shape of doubloons from France, through New York to Cuba, on account of the high price of sugar. The general fact drawn from these figures is that the amount of coins in the country has increased \$147,872,308 since 1848, when the amount was \$111,453,603. The amount of hard currency has considerably more than doubled, and is now—

On hand, 1848.....		\$111,453,603
Increase to 1857.....		147,872,308
In the country, 1857.....		\$259,325,911
In Treasury.....	\$22,101,202	
In banks.....	58,955,859	
In plate, &c.....	40,000,000	
In circulation.....	138,268,850	
		259,325,911

The amount in plate and ornaments is an estimate, and is probably much under the mark, as it gives but \$8 for the plate and ornaments of each white family in the Union. The import of watches and jewelry in 1857 was about \$4,000,000. This, of course, is not included in the specie, but indicates the amount of ornaments used.

Again, the Commissioners at Castle Garden, where three-fourths of the immigrants into the Union arrive, ascertain that the money (coin) brought by them averages \$100 per head that they admit to have in their possession. The number of immigrants that have arrived in the Union since 1843 is 3,635,460, which, at \$100 each, would give the enormous sum of \$363,546,000, or a sum equal to the product of California. Be the sum, however, more or less, we have not taken it into account; but it indicates that it is enough to cover all unreported out-goes from the country. We can now estimate the actual circulation of the country:—

	1848.	1857.
Bank loans.....	\$344,476,000	\$728,029,914
Bank circulation.....	128,506,000	155,208,344
Less notes on hand.....	16,427,000	22,447,486
Net circulation.....	\$112,079,000	\$132,760,908
Specie in circulation.....	82,133,688	138,268,850
Mixed circulation.....	\$144,212,688	\$271,029,750

We observe that the circulation has nearly doubled, but that it is mostly in specie. The paper has increased \$20,000,000, but the specie has risen \$106,000,000. It is not, therefore, a matter of surprise or regret that the continued product of \$50,000,000 per annum in California should find a market abroad, without still further adding to this large volume of currency.

The above figures come down only to the close of the fiscal year 1857. Since then the activity of the Mint was greatly increased by the panic. The coinage of the Pennsylvania Mint was but \$525,833 in August, 1857, which rose to \$3,367,490 in October. At New Orleans the coinage has also been active—mostly of silver. The official figures of the whole specie movement for 1858 are, however, not yet at hand. As far as received they indicate that about \$20,000,000 has been added to the currency last year.

#### CONDITION OF THE BANKS OF MASSACHUSETTS FROM 1854 TO 1858.

LIABILITIES.						
Years.	Number of banks.	Capital.	Circulation.	Deposits.	Profits on hand.	Total.
1854 ..	151	\$53,572,652	\$18,641,402	\$18,651,929	\$5,110,371	\$95,476,354
1855 ..	168	57,314,603	16,319,568	18,608,631	5,367,991	95,603,793
1856 ..	169	58,187,000	18,057,762	20,780,217	5,995,970	102,970,949
1857 ..	173	58,571,930	17,404,232	23,613,096	6,267,601	105,856,259
1858 ..	173	60,386,960	2,795,630	22,725,660	7,153,680	100,061,930

RESOURCES.						
Year.	Number of banks.	Notes, bills of exchange, &c.	Specie.	Real estate.	Total.	Ratio of circulation to specie.
1854.....	151	\$90,833,439	\$3,456,406	\$1,186,509	\$95,476,354	\$5.40
1855.....	168	90,689,771	3,727,512	1,186,610	95,603,793	4.37
1856.....	169	97,222,876	4,497,731	1,250,342	102,970,949	4.01
1857.....	173	99,725,161	4,880,756	1,250,342	105,856,259	3.57
1858.....	173	92,130,832	6,322,485	1,608,613	100,061,930	1.54

CITY WEEKLY BANK RETURNS.

NEW YORK WEEKLY BANK RETURNS.

	Loans.	Specie.	Circulation.	Deposits.	Average clearings.	Actual deposits.
Jan. 2	\$98,549,983	\$28,561,946	\$6,490,403	\$78,635,225	\$13,601,357	\$65,033,867
9	98,792,757	29,176,838	6,625,464	79,841,362	13,899,078	63,942,284
16	99,473,762	30,211,266	6,349,325	81,790,321	14,066,412	67,723,909
23	101,172,642	30,829,151	6,336,042	82,598,348	13,074,762	69,523,836
30	102,180,089	31,273,023	6,369,678	83,997,081	13,519,330	70,477,751
Feb. 6	103,602,932	30,652,948	6,873,931	86,000,468	15,439,033	70,561,405
13	103,783,306	30,226,275	6,607,271	84,229,492	13,803,583	70,425,909
20	103,706,734	31,416,076	6,542,618	86,773,222	14,769,565	72,003,657
27	103,769,127	31,658,694	6,530,759	87,886,311	15,657,056	71,729,805
March 6	105,021,863	32,739,731	6,854,624	90,382,446	18,002,665	72,370,781
13	105,293,631	32,961,076	6,755,958	90,063,432	16,511,506	72,552,926
20	107,440,350	31,902,656	6,853,852	91,238,505	17,064,588	74,173,917
27	109,095,412	30,929,472	6,892,231	90,644,098	16,429,066	74,201,709
April 3	110,588,354	31,230,000	7,232,332	93,589,149	17,567,160	76,021,989
10	110,847,617	32,036,436	7,245,809	93,566,100	16,775,237	76,790,863
17	111,341,489	33,196,449	7,190,170	96,448,450	17,329,431	78,121,025
24	111,003,476	34,113,891	7,140,851	95,340,344	16,141,451	79,198,893
May 1	111,868,456	35,064,213	7,431,814	98,438,506	17,375,203	80,563,303
8	112,741,955	35,453,146	7,735,056	101,165,806	19,438,661	81,727,146
16	114,199,288	34,730,728	7,502,975	101,884,163	18,284,868	83,599,295
22	115,658,082	34,047,446	7,307,445	101,917,869	17,620,131	84,297,738
29	116,650,943	31,496,144	7,252,616	99,351,901	16,199,657	83,152,244
June 5	116,424,597	32,790,333	7,547,830	101,489,635	17,982,648	83,506,887
12	116,022,152	33,367,253	7,367,725	100,787,073	16,503,899	84,283,194
19	117,797,547	32,396,456	7,297,631	102,149,470	16,818,521	85,280,987
26	118,823,401	31,948,089	7,215,689	101,961,682	15,825,983	86,135,699
July 3	119,812,407	33,830,232	7,458,190	106,803,210	17,267,927	89,535,233
10	118,863,937	34,705,593	7,571,373	106,420,723	18,168,757	88,260,956
17	119,164,222	35,328,184	7,346,946	107,101,061	17,046,961	90,054,100
24	118,946,482	35,315,243	7,351,065	105,490,896	15,365,206	90,105,690
31	119,850,456	35,712,107	7,408,365	106,456,030	15,310,157	91,145,873
Aug. 7	120,892,857	35,154,844	7,784,415	107,454,715	17,115,237	90,339,678
14	123,374,459	31,150,472	7,388,739	105,034,769	15,208,690	89,826,082
21	126,368,231	28,349,507	7,480,684	104,609,658	15,449,895	89,159,763
28	126,004,424	27,817,006	7,466,846	103,923,178	16,208,039	87,720,139
Sept. 4	125,885,840	28,048,661	7,748,249	103,347,811	15,414,213	87,933,594
11	125,013,211	28,059,495	7,830,669	102,899,554	15,989,375	86,908,179
18	124,649,018	28,808,068	7,313,695	104,733,688	17,603,982	87,129,706
25	124,118,904	28,625,331	7,864,373	102,429,344	16,347,447	86,081,897
Oct. 3	123,659,697	28,533,785	7,875,750	104,901,563	19,015,193	85,886,370
9	123,599,250	29,170,204	7,980,519	105,565,930	19,175,717	86,390,203

BOSTON BANKS.

	Loans.	Specie.	Circulation.	Deposits.	Due to banks.	Due from banks.
Jan. 5	\$50,726,800	\$5,028,000	\$5,416,000	\$17,073,800	\$3,911,000	\$5,732,600
12	51,221,000	5,449,000	5,933,400	17,226,700	4,368,000	5,969,500
18	51,740,926	5,661,216	5,669,028	17,722,553	4,754,006	5,891,800
25	51,772,412	6,073,680	5,494,721	18,129,649	5,331,721	1,949,031
Feb. 1	51,854,178	6,402,460	5,251,006	18,395,692	5,111,278	5,725,337
8	52,011,821	6,872,977	5,498,600	18,602,984	5,317,764	5,756,068
15	52,137,972	7,079,606	5,898,660	18,429,345	5,668,464	5,523,012
22	52,089,500	7,257,800	5,299,000	18,450,500	5,329,600	5,377,900
Mar. 1	51,970,800	7,316,800	5,170,000	18,525,000	5,778,000	5,625,000
8	52,251,300	7,497,700	5,182,400	18,931,682	5,764,000	6,137,000
15	52,068,743	7,559,698	5,291,549	19,099,682	5,837,534	6,011,377
22	51,999,451	7,235,531	5,163,492	19,029,251	5,934,007	6,057,699
29	51,632,451	7,905,491	5,159,569	18,956,249	5,804,569	5,925,462
April 5	51,918,600	8,259,500	5,477,500	20,136,400	6,576,900	6,386,000
12	52,042,428	8,505,312	5,852,991	20,675,028	5,987,725	6,590,350
19	51,752,500	9,007,000	6,224,500	20,657,500	6,110,000	7,259,400
26	51,388,977	8,851,719	6,007,628	20,671,569	5,884,533	7,363,702

	Loans.	Specie.	Circulation.	Deposits.	Due to banks.	Due from banks.
May 4....	51,499,700	9,243,000	5,903,600	21,257,900	5,925,900	7,444,000
10....	51,679,315	9,351,861	6,165,768	21,143,973	5,949,986	7,562,885
18....	52,622,000	9,210,000	6,117,000	21,527,700	7,187,800	6,263,000
25....	53,396,741	9,015,146	6,096,417	21,418,578	7,175,486	6,756,792
31....	53,469,179	9,120,846	5,903,020	20,846,860	6,530,828	6,929,062
June 7....	53,407,693	9,315,086	5,870,808	20,668,037	7,265,607	6,399,061
14....	53,951,082	9,410,569	5,732,900	20,815,560	7,532,900	5,755,268
21....	54,162,119	9,457,831	5,703,699	20,764,739	7,804,896	5,809,542
28....	54,780,644	9,119,604	5,633,176	20,833,942	7,827,075	5,674,795
July 5....	55,808,453	9,104,461	6,313,049	21,570,803	8,089,162	6,357,413
12....	56,200,929	9,000,663	6,538,325	21,075,247	8,526,510	6,299,019
19....	56,626,264	8,930,757	6,236,698	21,462,437	8,565,647	6,023,415
26....	56,602,469	8,943,004	6,268,745	21,456,471	8,658,185	6,268,745
Aug. 2....	56,250,500	8,883,400	5,869,800	21,161,000	8,467,000	5,767,000
9....	56,096,805	8,985,526	6,238,221	21,051,519	8,445,734	6,112,023
16....	55,971,072	8,795,945	6,026,818	20,804,875	8,132,356	5,675,367
23....	55,845,271	8,958,280	5,988,995	20,698,794	7,693,989	5,599,457
30....	55,650,350	8,724,186	5,889,477	20,698,228	7,537,728	5,952,844
Sept. 6....	55,926,042	8,701,679	6,137,981	20,971,138	7,632,562	6,287,397
13....	56,238,615	8,589,825	6,265,577	20,634,771	7,837,548	6,299,769
20....	56,414,497	8,432,250	6,265,314	20,799,474	7,932,082	6,493,886
27....	56,410,258	8,378,564	6,155,136	21,003,583	7,728,766	6,565,208
Oct. 4....	56,226,344	8,593,378	6,415,799	21,561,424	7,572,434	7,064,285

## WEEKLY AVERAGE OF THE PHILADELPHIA BANKS.

Date.	Loans.	Specie.	Circulation.	Deposits.	Due banks.
Jan. 11, '58.	\$21,302,374	\$3,770,701	\$1,011,033	\$11,465,263	4,453,304
Jan. 18....	21,068,652	4,018,295	1,046,545	11,512,765	4,349,676
Jan. 25....	20,730,958	4,243,966	1,062,192	11,547,697	4,414,160
Feb. 1....	20,423,704	4,465,693	1,096,462	12,195,126	4,173,710
Feb. 8....	20,359,226	4,668,085	1,293,046	11,904,519	3,531,721
Feb. 15....	20,071,474	4,888,983	1,559,218	11,889,342	2,967,933
Feb. 22....	20,161,260	4,924,906	1,686,689	12,014,605	2,776,665
Mar. 1....	20,251,066	4,903,936	1,808,734	11,830,532	2,645,662
Mar. 9....	20,471,161	5,147,615	1,916,352	12,253,282	2,726,124
Mar. 16....	20,522,936	5,448,514	2,077,967	12,691,547	2,782,085
Mar. 23....	20,796,957	5,453,358	2,140,463	12,413,191	2,849,730
Mar. 30....	21,020,198	5,661,782	2,296,444	13,201,599	2,945,185
Apr. 6....	21,657,152	5,937,595	2,647,399	13,422,318	3,056,181
Apr. 12....	21,656,028	6,133,000	2,675,193	13,784,656	3,178,855
Apr. 19....	21,776,667	6,382,485	2,484,150	14,682,175	3,071,603
Apr. 26....	22,141,800	6,752,640	2,408,421	15,068,178	2,804,095
May 3....	22,243,824	7,027,712	2,329,617	15,589,713	2,610,000
May 10....	22,190,934	7,143,628	2,406,482	15,260,858	2,754,973
May 17....	22,592,841	7,019,204	2,351,709	15,548,237	3,055,076
May 24....	22,969,576	6,963,371	2,410,181	15,354,423	3,221,858
May 31....	23,103,418	7,031,756	2,436,527	15,726,640	3,211,889
June 7....	23,542,751	6,985,208	2,406,568	15,776,251	3,380,477
June 14....	23,796,085	7,055,188	2,387,886	15,883,306	3,565,213
June 21....	23,803,903	6,873,971	2,365,435	15,857,904	3,504,300
June 28....	24,060,708	6,664,681	2,389,252	16,356,129	3,101,201
July 5....	24,311,928	6,895,877	2,431,181	16,566,846	2,986,297
July 12....	23,783,792	6,399,754	2,422,411	15,898,464	3,369,430
July 19....	24,555,873	6,868,596	2,548,945	16,937,535	3,351,204
July 26....	24,570,778	6,956,440	2,514,345	17,196,794	3,291,107
Aug. 2....	24,524,569	7,070,145	2,505,278	17,533,780	3,284,866
Aug. 9....	24,542,291	6,882,660	2,534,652	17,054,076	3,176,333
Aug. 16....	24,829,767	6,375,520	2,522,540	16,929,656	3,378,351
Aug. 23....	24,913,526	6,605,882	2,505,899	16,848,980	3,421,217
Aug. 30....	24,843,131	6,476,406	2,460,645	16,961,496	3,446,195
Sept. 4....	24,983,251	6,635,856	2,520,501	17,426,777	3,370,165
Sept. 13....	24,903,328	6,704,753	2,572,275	17,138,243	3,405,537
Sept. 20....	24,972,044	6,853,374	2,597,781	17,264,823	3,187,622
Sept. 27....	25,133,137	6,909,985	2,591,549	17,509,605	3,020,702
Oct. 4....	25,248,410	7,139,461	2,677,116	17,506,426	3,244,940

## NEW ORLEANS BANKS.

	Short loans.	Specie.	Circulation.	Deposits.	Exchange.	Distant balances.
Oct. 17...	\$19,200,533	\$3,230,320	\$6,196,459	\$7,442,142	\$2,297,348	\$897,551
Dec. 12...	18,069,088	8,841,370	4,148,859	9,993,370	2,838,878	816,132
19...	17,818,222	9,942,880	4,224,042	10,996,494	3,526,929	1,266,660
26...	17,741,355	10,320,714	4,336,624	11,579,048	3,951,212	1,363,473
Jan. 2...	18,149,456	10,505,183	4,535,951	11,948,905	4,114,622	1,590,072
9...	14,873,404	10,626,260	4,778,539	11,754,593	4,675,028	1,349,781
16...	14,804,320	10,592,617	4,797,746	12,323,808	5,095,771	1,552,855
23...	14,559,131	10,693,330	4,767,816	12,573,173	5,201,368	1,459,861
30...	14,674,217	10,844,246	4,803,071	12,678,696	5,249,136	1,379,908
Feb. 6...	14,490,001	11,187,298	5,037,906	14,539,408	5,934,781	1,256,815
13...	14,937,307	11,110,763	5,100,916	14,368,835	6,624,657	1,283,609
20...	14,890,351	11,065,597	5,254,181	14,640,976	7,124,477	1,274,034
27...	15,062,058	11,061,832	5,524,209	14,894,714	7,623,252	1,327,750
March 6...	15,832,181	10,967,225	6,005,769	15,201,909	7,919,605	1,378,846
13...	15,888,347	10,978,759	6,299,957	15,421,499	8,220,000	1,347,623
20...	15,937,924	10,897,866	6,654,434	15,765,084	8,776,621	1,172,552
27...	16,157,998	10,947,636	7,068,240	15,792,554	8,880,798	1,271,084
April 3...	16,641,554	10,848,605	7,572,094	15,453,850	9,147,709	1,664,614
10...	16,481,249	10,932,570	7,692,634	15,658,182	9,321,352	1,410,349
17...	16,480,547	10,854,012	7,685,539	15,640,948	9,035,522	1,381,527
24...	16,094,721	10,798,455	7,828,399	15,589,151	9,221,277	1,473,994
May 1...	15,933,046	10,892,453	7,945,334	16,681,593	8,754,140	1,263,882
8...	15,459,435	10,615,530	8,023,429	16,386,529	9,159,848	1,112,188
15...	14,958,401	10,478,675	7,972,599	15,035,182	9,418,151	1,429,660
22...	14,772,173	10,394,638	7,954,829	15,096,528	9,184,271	1,266,140
29...	14,250,529	10,299,135	7,916,858	14,648,164	8,899,170	1,368,531
June 5...	13,521,534	10,257,171	7,965,484	16,007,939	8,269,260	1,102,648
12...	12,828,721	10,312,237	7,943,819	15,464,347	8,533,964	1,009,370
19...	12,374,123	10,208,900	7,645,844	15,714,302	8,720,257	1,119,137
26...	12,390,984	10,423,080	7,323,084	15,676,134	8,110,788	1,034,117
July 3...	12,291,555	10,676,674	7,962,959	16,013,100	7,890,863	1,061,242
10...	12,116,486	10,755,126	7,671,824	14,114,217	6,970,157	1,192,675
17...	11,931,955	10,877,768	7,452,104	14,078,294	7,427,930	1,244,213
24...	11,985,231	10,936,870	7,334,414	13,864,925	6,348,192	1,336,398
31...	12,011,616	10,992,148	7,231,739	15,262,173	6,053,229	1,402,012
Aug. 7...	12,452,664	10,835,005	7,135,389	15,200,271	5,844,132	1,547,331
14...	12,833,216	10,912,975	7,024,587	13,564,756	5,263,035	1,327,951
21...	13,516,161	10,806,910	6,860,289	13,164,598	4,652,889	1,253,843
28...	14,196,661	11,173,021	6,731,599	13,343,938	4,081,875	1,185,562
Sept. 4...	14,892,969	11,285,308	6,828,889	14,636,311	3,853,326	1,139,616
11...	15,323,750	11,621,848	6,853,324	13,684,268	3,855,010	1,220,262
18...	16,121,809	11,304,474	6,704,604	13,682,634	3,654,192	993,280
25...	16,864,950	11,299,625	6,638,594	13,931,777	3,890,649	1,120,727
Oct. 4...	17,470,301	11,163,318	6,722,197	16,161,514	4,899,449	1,226,565

## PROVIDENCE BANKS.

	Loans.	Specie.	Circulation.	Deposits.	Due oth. b'ks
Jan. 11.....	\$17,701,725	\$565,553	\$1,552,822	\$2,025,956	\$1,338,435
Mar. 15.....	16,925,349	520,828	1,310,787	1,903,032	1,043,930
Apr. 5.....	17,037,949	591,861	1,409,695	1,946,998	1,080,817
19.....	17,169,822	564,033	1,483,226	1,965,316	996,961
May 3.....	17,203,225	566,869	1,393,553	2,068,335	1,089,333
17.....	17,054,877	567,024	1,451,356	2,062,597	1,131,176
June 7.....	17,060,695	577,863	1,555,717	2,088,873	1,203,543
June 21.....	17,345,487	573,317	1,604,850	1,988,496	1,170,711
July 5.....	17,653,908	523,691	1,810,047	2,402,956	1,010,101
July 19.....	17,857,068	466,266	2,039,911	2,079,183	1,145,364
Aug. 2.....	17,780,220	444,165	1,921,812	2,022,092	1,095,396
Sept. 6.....	17,121,639	175,635	1,420,455	935,593	958,242

## PITTSBURG BANKS.

	Loans.	Specie.	Circulation.	Deposits.	Due banks
April 12.....	\$5,513,821	\$1,194,232	\$1,287,095	\$1,305,294	\$70,236
19.....	5,570,585	1,220,633	1,291,091	1,345,062	87,713
26.....	5,611,689	1,221,195	1,319,416	1,404,750	84,171
May 3.....	5,784,492	1,192,216	1,360,551	1,504,549	40,312
10.....	5,763,651	1,171,627	1,365,551	1,585,182	74,491
17.....	5,737,072	1,191,663	1,373,401	1,491,620	111,260
24.....	5,769,868	1,175,334	1,371,586	1,464,767	124,044
31.....	5,843,108	1,212,178	1,394,146	1,467,849	88,896
June 7.....	5,895,461	1,207,637	1,426,586	1,540,926	90,334
14.....	5,865,951	1,218,342	1,385,926	1,556,862	108,994
21.....	5,836,952	1,223,759	1,366,481	1,571,589	134,480
28.....	5,874,782	1,266,195	1,377,096	1,630,570	125,743
July 5.....	6,014,676	1,246,588	1,436,651	1,699,196	85,698
12.....	6,016,509	1,229,383	1,458,776	1,691,758	157,608
19.....	6,016,404	1,249,398	1,475,351	1,720,691	165,257
26.....	6,077,608	1,256,026	1,439,916	1,708,210	188,551
Aug. 2.....	6,009,453	1,198,767	1,423,669	1,730,650	188,242
7.....	5,975,821	1,236,485	1,378,231	1,788,792	136,835
14.....	5,940,451	1,257,921	1,428,856	1,818,617	57,411
21.....	5,953,828	1,266,621	1,452,751	1,887,579	182,413
28.....	6,008,461	1,257,173	1,435,516	1,884,917	181,392
Sept. 5.....	5,985,766	1,261,195	1,470,741	1,858,072	142,215
13.....	6,056,234	1,273,341	1,456,763	1,916,852	162,709
20.....	6,089,536	1,272,874	1,495,741	1,842,590	159,734
27.....	6,054,505	1,302,584	1,506,073	1,835,375	178,532
Oct. 4.....	6,096,979	1,445,575	1,540,098	1,908,049	138,940

## ST. LOUIS BANKS.

	Exchange.	Circulation.	Specie.
April 10.....	\$1,255,694	\$1,788,970	\$1,673,628
17.....	1,161,065	1,793,945	1,720,728
24.....	1,260,295	1,832,915	1,770,882
May 8.....	1,369,316	1,240,431	1,959,823
15.....	1,494,025	1,864,960	2,161,503
22.....	1,547,938	1,825,810	2,225,285
29.....	1,543,531	1,921,475	2,396,027
June 5.....	1,557,119	2,087,890	2,452,141
12.....	1,471,190	2,101,405	2,536,707
19.....	1,459,735	2,161,985	2,465,372
26.....	1,417,340	2,005,505	2,434,398
July 3.....	1,523,179	2,246,835	2,320,758
10.....	1,445,704	2,260,560	2,315,635
17.....	1,490,876	2,190,955	2,322,245
24.....	1,494,116	2,161,370	2,238,498
31.....	1,487,256	2,159,540	2,169,387
Aug. 7.....	1,531,723	2,079,225	2,108,988
14.....	1,609,067	1,932,160	2,081,197
21.....	1,695,299	1,882,625	2,026,841
28.....	1,766,798	1,943,735	2,043,733
Sept. 4.....	1,734,169	1,975,760	1,995,312
11.....	1,848,603	1,928,710	1,885,317
18.....	1,970,955	1,650,430	1,708,042
25.....	2,033,244	1,525,180	1,668,182
Oct. 4.....	2,016,967	1,452,893	1,736,080

## BOSTON BANK DIVIDENDS—1857 AND 1858.

COMPILED FOR THE MERCHANTS' MAGAZINE BY JOSEPH G. MARTIN, COMMISSION STOCK BROKER, 10 STATE-STREET, BOSTON.

The following table presents the capital of each bank, together with the last four semi-annual dividends, and the amount paid October 4th, 1858; also the

market value of each stock, (dividend off,) April and October, 1857, and April and October, 1858. This table shows the current prices previous to the panic of 1857, the low rates touched in October of that year, and the subsequent reaction, in some cases higher even than before. The changes in the dividends from April last, are, the Atlantic an increase of  $\frac{1}{2}$  per cent, Merchants' and Union a decrease of  $\frac{1}{2}$  per cent, and Shawmut 1 per cent less.

The Hide and Leather Bank commenced operations April 13, 1858, capital \$1,000,000, of which \$937,600 has already been paid in, and the balance will be by October 5. The bank pays interest on instalments, averaging 3 per cent for six months on about \$675,000. The Bank of Mutual Redemption commenced August 23, on \$500,000 paid in.

Banks.	Capital stock.	Dividends.—				Amount.	Value of stock, dividend off.			
		1857.		1858.			1857.		1858.	
		Apr.	Oct.	Apr.	Oct.	April.	Oct.	April.	Oct.	
Atlantic.....	\$500,000	3	3	3	3 $\frac{1}{2}$	\$17,500	98	95	101	104 $\frac{1}{2}$
Atlas.....	500,000	4	3 $\frac{1}{2}$	4	4	20,000	107	100	106	106
Blackstone.....	750,000	4	4	3 $\frac{1}{2}$	3 $\frac{1}{2}$	26,250	104	95	101 $\frac{1}{2}$	103 $\frac{1}{2}$
Boston, (par 50)..	900,000	4	4	4	4	36,000	58	55	57 $\frac{1}{2}$	59
Boylston.....	400,000	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	18,000	111 $\frac{1}{2}$	106	108 $\frac{1}{2}$	111 $\frac{1}{2}$
Broadway.....	150,000	4	3 $\frac{1}{2}$	3	3	4,500	101	95	95	98
City.....	1,000,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	35,000	104 $\frac{1}{2}$	95	104 $\frac{1}{2}$	105
Columbian.....	750,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	26,250	104 $\frac{1}{2}$	95	104	106 $\frac{1}{2}$
Commerce.....	2,000,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	70,000	100 $\frac{1}{2}$	83	98 $\frac{1}{2}$	101
Eagle.....	700,000	4	4	4	4	28,000	108	104	109	111
Eliot.....	600,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	21,000	100	85	100	103 $\frac{1}{2}$
Exchange.....	1,000,000	5	5	5	5	50,000	117	104	116	120
Faneuil Hall....	500,000	4	4	4	4	20,000	109	102	108	109 $\frac{1}{2}$
Freeman's.....	400,000	5	5	4	4	16,000	117	108	114	112
Globe.....	1,000,000	4	4	4	4	40,000	118	104	113 $\frac{1}{2}$	114
Granite.....	900,000	3 $\frac{1}{2}$	3	3	3	27,000	100	90	97 $\frac{1}{2}$	98
Hamilton.....	500,000	4	4	4	4	20,000	118	108	116	120
Hide & Leather.	675,000	new		3	3	20,250	new		102	
Howard.....	500,000	3 $\frac{1}{2}$	3	3	3	15,000	95	85	96	98 $\frac{1}{2}$
Market, (par 70).	560,000	5	5	4	4	22,400	83	76	80	82
Mass'tts, (p. 250)	800,000	\$8	\$8	\$8	*\$8	25,600	255	240	252	262
Maverick.....	400,000	3	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	14,000	90	80	91 $\frac{1}{2}$	94 $\frac{1}{2}$
Mechanics'.....	250,000	4	4	4	4	10,000	108	102	106	108
Merchants'.....	4,000,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3	120,000	103 $\frac{1}{2}$	75	99 $\frac{1}{2}$	102
National.....	750,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	26,250	100	90	97 $\frac{1}{2}$	100
New England...	1,000,000	4	4	4	4	40,000	111	101	111	112 $\frac{1}{2}$
North.....	750,000	3 $\frac{1}{2}$	3	3	3	22,500	97 $\frac{1}{2}$	90	96	97
North America .	750,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3	3	22,500	104 $\frac{1}{2}$	95	99 $\frac{1}{2}$	102
Shawmut.....	750,000	4	4	4	3	22,500	102	95	101	104
Shoe & Leather.	1,000,000	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	45,000	114 $\frac{1}{2}$	105	114 $\frac{1}{2}$	118 $\frac{1}{2}$
State, (par 60)...	1,800,000	4	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	63,000	66	63	67	68
Suffolk.....	1,000,000	5	5	5	5	50,000	128	120	129	127
Traders'.....	600,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3	3	18,000	101 $\frac{1}{2}$	85	97	98 $\frac{1}{2}$
Tremont.....	1,250,000	4	4	4	4	50,000	111	103	110	111 $\frac{1}{2}$
Union.....	1,000,000	4	4	4	3 $\frac{1}{2}$	35,000	110	102	110	111 $\frac{1}{2}$
Washington.....	750,000	4	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	26,250	104	97	104 $\frac{1}{2}$	107
Webster.....	1,500,000	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	52,400	102	90	102 $\frac{1}{2}$	104
October, 1858.	32,635,000					\$1,176,250				
April, 1858.	31,960,000					1,186,000				
October, 1857.	31,960,000					1,204,350				
April, 1857.	31,960,000					1,229,100				

The following dividends and interest are also payable at the dates given. In addition to these, early in October is the usual period for dividends by the Boyl-

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

ston, City, Eliot, Manufacturers', Merchants', National, Neptune, Quincy, Warren, and Washington Insurance Companies, as also the Boston Exchange Company, a quarterly dividend of probably  $1\frac{1}{2}$  per cent, adding, in round numbers, over \$200,000, and making the total to be paid out in October nearly \$2,000,000.

Payable.	Companies.	Capital.	Div.	Amount.
1st	Boston Steam Flour Mills bonds .....	\$100,000	3	\$3,000
1st	Boston city bonds .....	Interest.	.	80,000
1st	Cambridge (horse) Railroad .....	100,000	$4\frac{1}{2}$	7,200
1st	Massachusetts State bonds.....	Interest.	.	20,750
1st	Manchester and Lawrence Railroad bonds.....	200,000	3	6,000
1st	Michigan Central Railroad bonds.....	Interest.	.	171,878
1st	Michigan Central Railroad bonds.....	Princip'l.	.	39,250
4th	New England Glass Company .....	500,000	3	15,000
1st	Northampton Bridge Company .....	33,000	$1\frac{3}{4}$	578
1st	Ogdensburg 1st 7's, (April coupon).....	1,500,000	$3\frac{1}{2}$	52,500
1st	Philadelphia, Wilmington, and Baltimore Railroad...	5,600,000	3	168,000
4th	Shoe and Leather Fire and Marine Insurance Comp'y.	100,000	4	4,000
Total.....				\$568,156

PUBLIC DEBT OF MASSACHUSETTS AT THE PERIODS NAMED.

	January 1st.			
	1855.	1856.	1857.	1858.
Funded State debt.....	\$695,000	\$769,000	\$1,139,000	\$1,314,000
Temporary loan.....	354,937	662,337	397,000	306,500
Money not called for .....	8,125	15,825	17,125	18,955
Total debt for which the State is originally liable.....	\$1,058,062	\$1,447,162	\$1,553,125	\$1,639,455
Scrip loaned to sundry railroad corporations, for which they are originally liable..	\$5,049,555	\$5,049,555	\$5,049,555	*\$4,949,555
Scrip issued for Western R. R. shares covered by a sinking fund of greater amount....	995,000	995,000	995,000	†.....
Nominal public debt, all sorts	\$7,102,167	\$7,494,717	\$7,597,680	\$6,589,010

FINANCES OF TENNESSEE.

The comparative value of taxable property in Tennessee has been as follows :—

	1850.	1856.	Increase.
Land.....	\$84,110,174	\$139,378,342	\$55,268,268
Slaves .....	55,441,455	82,319,723	26,878,268
Town lots.....	12,811,177	27,039,565	14,228,388
Other taxables .....	7,195,377	11,531,981	4,336,604
Total.....	\$159,558,183	\$260,319,611	\$100,761,428

\* \$100,000 having been paid by the Boston and Maine Railroad Corporation.

† The sinking fund of more than a million dollars, provided many years previously, having been used to cover this scrip, that being the purpose for which the fund was designed.

These two items, for which of course no taxation was required, make the whole reduction of debt.

The total increase of debt, on the other hand, as appears above, was \$581,393 in three years, equal to nearly 60 per cent upon the amount of debt for which the Commonwealth is originally liable.

## OPERATIONS OF THE BRANCH MINT FOR THE LAST FISCAL YEAR.

A detailed statement of the operations of the United States Branch Mint in San Francisco during the government fiscal year ending 30th June, 1858, was published in the *Alta California* of the 5th inst. The following is a condensation of the statement, giving at a glance all the facts interesting or valuable for present or future reference :—

## GOLD MOVEMENT.

Number of deposits.....	10,740
Weight of deposits after melting.....ozs.	1,034,285
Value .....	\$19,104,370
Silver contained in same.....	115,329
Mint charge for coining.....	92,035
Mint charge for refining .....	117,251
Mint charge for making bars .....	2,047
Premium paid depositors on silver contained in gold...	4,394
Paid depositors .....	19,012,760
Total coinage.....	18,459,800

The coinage was as follows :—

Double-eagles.....	\$17,718,800
Eagles.....	278,000
Half-eagles.....	293,000
Three-dollar pieces .....	27,000
Quarter-eagles.....	123,000
Dollar pieces .....	20,000
Total.....	\$18,459,800

The deposits of each month in the year were as follows, from which it will be seen that during March, April, May, and June, the mines were the most productive :—

## DEPOSITS.

	No. deposits.	Weight after melting, ozs.	Value.
July.....	27	50,062	\$949,431
August.....	979	86,689	1,580,359
September .....	1,241	99,029	1,806,519
October.....	1,296	100,657	1,828,272
November.....	298	28,461	515,057
December.....	470	35,997	656,886
January.....	453	40,001	732,766
February.....	694	77,770	1,421,593
March.....	1,331	120,760	2,228,583
April.....	1,376	120,744	2,223,905
May.....	1,360	154,159	2,896,127
June.....	1,210	119,951	2,264,860
Total.....	10,740	1,034,284	\$19,104,369

The average fineness of the deposits during the year was 893.2, or 16.8 thousandths below the standard of United States coin.

During January, unparted bars worth \$261,737 41 were made; during February, \$228,522 07; during March, \$326,034 17. Total during quarter, \$816,295 93.

The silver coinage executed, and bars made, during the year amounted to \$158,714, distributed among the several denominations, as follows :—

Half-dollars.....	\$109,000
Quarter-dollars.....	15,750
Dimes.....	3,000
Bars.....	30,964
<b>Total.....</b>	<b>\$158,714</b>

The Mint was closed for settlement from the 1st to the 23d of November, 1857.

The total value of the deposits of gold and silver, during the year, was \$19,320,893 85.

The total value of the coins and bars made was \$19,434,809 28.

On the profit and loss account of the purchase of silver, there was a credit of \$309 60 for the third quarter of 1857; of \$323 75 for the fourth quarter; and \$2,507 54 for the first quarter of 1858; and a debit balance of \$1,383 83 for the second quarter of 1858; the balance of credit for the year being \$1,757 06.

#### BANKS OF NEW YORK CITY.

The following are the quarterly reports of the New York city banks since the panic :—

	LIABILITIES.		
	1857. December 26.	1858. March 13.	1858. June 19.
Capital .....	\$65,024,112	\$67,033,695	\$67,041,182
Circulation .....	6,279,802	6,584,706	7,080,396
Profits.....	8,170,760	7,051,828	8,091,406
Due other banks.....	17,152,207	23,760,646	28,275,873
Due individuals .....	535,118	296,698	343,184
Treasurer State of New York.....	431,723	86,819	443,685
Deposits .....	59,377,069	68,171,425	74,029,833
Miscellaneous.....	409,679	830,476	430,722
<b>Total liabilities.....</b>	<b>\$157,370,537</b>	<b>\$173,376,352</b>	<b>\$185,726,331</b>
	RESOURCES.		
Loans.....	\$97,783,303	\$105,487,501	\$118,299,388
Overdrafts.....	95,112	121,350	51,734
Due from banks.....	4,033,850	3,723,204	5,338,023
Real estate.....	5,424,647	5,675,847	5,815,368
Specie.....	26,660,583	33,104,257	31,704,814
Cash items.....	12,914,769	14,930,929	13,689,788
Stocks, etc.....	8,191,419	8,683,406	8,922,278
Bonds and mortgages.....	366,558	379,409	440,335
Bills of solvent banks.....	996,930	886,531	904,077
Bills of suspended banks .....	759	678	727
Expense account .....	905,044	424,949	559,766
Add for cents.....	.....	.....	33
<b>Total resources.....</b>	<b>\$157,310,537</b>	<b>\$173,376,352</b>	<b>\$185,726,331</b>

#### THE ENGLISH INCOME TAX.

A Parliamentary return shows the number of persons who pay income tax under schedule D, with the amount of assessment. The public will be interested in seeing the figures. The payment was for the year ending 5th of April, 1857 :—

Under £100 a year .....	20,348	£800 and under £900 .....	1,745
£100 and under £150 .....	120,650	900 " 1,000 .....	816
150 " 200 .....	40,086	1,000 " 2,000 .....	5,423
200 " 300 .....	32,665	2,000 " 3,000 .....	1,568
300 " 400 .....	15,006	3,000 " 4,000 .....	773
400 " 500 .....	7,407	4,000 " 5,000 .....	450
500 " 600 .....	5,471	5,000 " 10,000 .....	811
600 " 700 .....	3,105	10,000 " 50,000 .....	444
700 " 800 .....	2,066	50,000 and upwards .....	46

The total number assessed was only 258,880, but this return does not include Ireland. Under schedule E we have the number put down at 87,498, with the tax charged upon £100 a year up to £5,000.

VALUATION OF TAXABLE PROPERTY IN KINGS COUNTY, NEW YORK.

The following is the valuation of taxable property in the several wards of Brooklyn and towns of Kings County, as prepared by the Assessors, and returned to the Board of Supervisors, for the year 1858 :—

Wards.	BROOKLYN.		Total.	Increase.	Decrease.
	Real.	Personal.			
1.....	\$5,389,425	\$839,247	\$6,228,672	.....	\$16,450
2.....	3,013,955	1,748,621	4,762,576	16,032	.....
3.....	7,832,850	2,908,421	10,741,271	94,471	.....
4.....	4,793,875	868,149	5,662,024	.....	132,872
5.....	2,589,725	16,904	2,786,626	119,600	.....
6.....	10,059,700	1,224,544	11,304,224	.....	110,491
7.....	8,560,785	43,400	8,604,185	.....	23,942
8.....	3,385,100	211,268	3,596,368	.....	121,830
9.....	6,357,702	204,566	6,562,268	.....	56,343
10.....	8,805,718	303,326	9,109,044	.....	249,346
11.....	9,202,990	365,858	9,568,848	343,019	.....
12.....	3,927,275	24,755	3,952,050	.....	27,200
13.....	5,796,610	1,083,593	6,880,203	.....	334,636
14.....	3,166,915	200,350	3,367,265	52,173	.....
15.....	1,573,503	.....	1,573,603	.....	13,745
16.....	1,668,080	20,000	3,688,080	.....	98,680
17.....	2,203,102	30,719	2,233,821	.....	76,121
18.....	1,563,551	64,000	1,627,551	.....	16,744
19.....	3,065,920	34,753	3,109,673	31,845	.....
Total.....	\$88,136,781	\$10,212,524	\$98,349,275	\$657,170	\$1,283,920
	TOWNS.				
New Utrecht.....	\$1,573,067	\$301,405	\$2,874,472	\$11,524	.....
Flatbush.....	1,124,142	510,000	1,634,642	7,490	.....
New Lots.....	746,915	182,800	929,111	47,370	.....
Gravesend.....	544,241	124,850	669,076	.....	3,040
Flatlands.....	563,351	150,525	713,987	9,237	.....
Total.....	\$4,551,716	\$1,269,575	\$5,821,291	\$75,621	\$3,040
Grand total..	92,688,497	11,482,099	104,170,566	732,791	1,286,960

The value of real estate and personal property in 1857, in totals, was as follows :—

	Real.	Personal.	Total.
Brooklyn.....	\$87,807,150	\$11,168,872	\$98,976,022
Towns.....	4,434,007	1,314,706	5,748,713
Total.....	\$92,241,157	\$12,483,578	\$104,724,735

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**STATISTICS OF TRADE AND COMMERCE.**


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**COTTON CROP OF THE UNITED STATES.**

The following is the annual statement of the cotton crop from the New York Shipping List:—

STATEMENT AND TOTAL AMOUNT FOR THE YEAR ENDING 31ST AUGUST, 1858.		1858.	1857.	1856.
<b>NEW ORLEANS.</b>				
Export to foreign ports.... bales	1,495,070			
Coastwise.....	164,637			
Stock, 1st Sept., 1858.....	30,230			
	<hr/>			
		1,689,937		
Deduct received from Mobile....	67,451			
Received from Montgomery, &c. ....	.....			
Received from Florida.....	9,160			
Received from Texas.....	29,596			
Stock, 1st Sept., 1857.....	7,321			
	<hr/>			
		113,528		
		<hr/>	1,576,409	1,435,000
			1,661,433	
<b>MOBILE.</b>				
Export to foreign ports.....	387,032			
Coastwise.....	128,013			
Manufactured in Mobile, &c.....	1,807			
Stock, 1st Sept., 1858.....	10,495			
	<hr/>			
		527,347		
Deduct received from N. Orleans	479			
Stock, 1st Sept., 1857.....	4,504			
	<hr/>			
		4,983		
		<hr/>	522,364	503,177
			659,738	
<b>TEXAS.</b>				
Export to foreign ports.....	50,338			
Coastwise (and burnt, 70 bales).	94,011			
Stock, 1st Sept., 1858.....	1,899			
	<hr/>			
		146,248		
Deduct stock, 1st Sept., 1857.....	962			
	<hr/>			
		145,286	89,882	116,078
<b>FLORIDA.</b>				
Export to foreign ports, Uplands	25,737			
Sea Islands.....	34			
Coastwise, Uplands.....	70,305			
Sea Islands.....	25,651			
Burnt at Apalachicola.....	600			
Stock, 1st Sept., 1858.....	80			
	<hr/>			
		122,407		
Deduct stock, 1st Sept., 1857.....	56			
	<hr/>			
		122,351	136,344	144,404
<b>GEORGIA.</b>				
Export to foreign ports, Uplands	159,141			
Sea Islands.....	8,561			
Coastwise, Uplands.....	117,680			
Sea Islands.....	7,417			
Stock in Savannah, 1st Sept., '58	684			
Stock in Augusta, &c.....	1,901			
	<hr/>			
		295,414		
Deduct received from Florida...	7,768			
Stock in Savannah, 1st Sept., '57	1,926			
Stock in Augusta, &c.....	2,747			
	<hr/>			
		12,441		
		<hr/>	282,973	322,111
			389,445	

SOUTH CAROLINA.

Export from Charleston—				
To foreign ports, Uplands.....	276,547			
Sea Islands.....	22,857			
Coastwise, Uplands.....	115,158			
Sea Islands.....	2,800			
Burnt and manuf. at Charleston.	771			
Stock in Charleston, 1st Sept., '58	11,715			
	<hr/>			
	429,854			
Export from Georgetown—				
To coastwise ports, Uplands ...	1,918			
	<hr/>	431,772		
Deduct rec'd from Florida, S. Isl.	7,519			
Received from Savannah, S. Isl.	1,575			
Uplands.....	10,788			
Stock in Charleston, 1st Sept., '57	5,644			
	<hr/>	25,521		
		<hr/>	406,251	397,331
				495,976

NORTH CAROLINA.

Export to coastwise ports.....	23,999	27,147	26,098
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VIRGINIA.

Export to foreign ports.....	495			
Coastwise.....	8,942			
Manuf. (taken from the ports)..	15,088			
Stock, 1st Sept., 1853.....	600			
	<hr/>	25,125		
Deduct stock, 1st Sept., 1857.....	420			
		<hr/>	24,705	23,773
				20,458
Received at New York, overland, from Tennessee, &c.		3,363	2,022	2,086
“ Philadelphia, “ “ “		3,275	1,236	7,938
“ Baltimore, “ “ “		2,986	1,496	4,191

Total crop of the United States .....	3,113,962	2,939,519	3,527,845
Increase over crop of 1857 .....			174,443
Decrease from crop of 1856.....			413,883
Increase over crop of 1855 .....			266,623

EXPORT TO FOREIGN PORTS, FROM SEPTEMBER 1, 1857, TO AUGUST 31, 1858.

	To Great Britain.	To France.	To North of Europe.	To other for. ports.	Total.
New Orleans.....bales	1,016,716	236,596	116,304	125,454	1,495,070
Mobile.....	265,461	89,887	21,462	10,219	387,032
Texas.....	33,933	1,689	14,716	.....	50,338
Florida.....	25,771	.....	.....	.....	25,771
Savannah.....	149,346	7,376	7,680	3,300	167,702
Charleston.....	192,251	35,503	33,126	38,524	299,404
Virginia.....	495	.....	.....	.....	495
Baltimore.....	164	.....	.....	.....	164
Philadelphia.....	995	.....	.....	.....	995
New York.....	110,721	12,951	20,308	3,841	147,821
Boston.....	14,110	.....	1,549	4	15,663
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total.....	1,809,966	384,002	215,145	181,342	2,590,455
Total last year.....	1,428,870	413,357	245,798	164,632	2,252,657
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Increase.....	381,096	.....	.....	16,710	337,798
Decrease.....	.....	29,355	30,653	.....	.....

The comparative crops and consumption have been as follows—(For the previous years, see *Merchants' Magazine*, vol. xxxv., page 612.)

	Crop.	U. S. consumption from the ports.	Total U. S. consumption.
1856 .....	3,527,845	652,739	706,412
1857 .....	2,939,516	702,138	770,739
1858 .....	3,113,962	452,185	819,936

The total United States consumption includes estimates of quantities taken from plantations by the Southern factories, and is an estimate merely. If the estimate is admitted, the amount should be added to the crop.

#### VALUE OF PRODUCE OF THE INTERIOR AT NEW ORLEANS.

The New Orleans *Price Current* has the following :—

The following comparison of the value of the principal products of the interior received at this port from 1st September to 31st August, is compiled from a series of tables which we have yearly prepared for our "annual statement." It will be found to exhibit some interesting facts in regard to our commerce with the South and West :—

	1857-58.	1856-57.	1855-56.
Cotton.....	\$88,127,340	\$86,255,079	\$70,371,720
Sugar.....	17,900,608	8,137,360	16,199,890
Tobacco .....	13,628,327	11,973,645	8,072,775
Flour.....	7,078,215	9,034,179	8,407,305
Pork.....	5,769,130	5,859,287	5,584,505
Lard.....	4,606,630	4,262,958	3,381,278
Lead.....	696,964	91,455	409,940
Molasses.....	4,601,015	2,685,309	4,582,242
Bacon .....	5,665,488	6,772,241	4,570,363
Corn .....	1,904,211	2,533,237	3,020,031
Whisky.....	1,001,656	2,329,132	1,785,036
Wheat.....	802,550	2,327,886	2,782,476
Bagging .....	463,983	512,448	610,290
Beef.....	497,490	484,585	824,289
Hemp.....	344,675	390,090	504,540
Bate rope .....	1,066,208	1,123,460	1,013,310
Butter.....	380,275	360,550	395,065
Hay.....	273,933	296,805	612,350
Hides.....	309,522	579,411	454,293
Coal.....	1,250,500	1,150,500	444,150
Potatoes.....	473,582	185,332	456,390
Staves.....	747,500	455,000	232,350
Tallow .....	27,150	28,950	32,265
Feathers.....	44,300	41,150	32,676
Oats.....	682,378	629,073	587,180
Corn meal.....	3,500	4,280	960
Other articles.....	8,808,416	9,557,967	8,888,412
Total.....	\$167,155,546	\$158,061,369	\$144,256,081

1854-55 ... \$117,106,823	1849-50 ... \$96,897,873	1844-45 ... \$57,196,122
1853-54 ... 115,336,798	1848-49 ... 81,989,692	1843-44 ... 60,094,716
1852-53 ... 134,233,735	1847-48 ... 79,779,151	1842-43 ... 53,782,054
1851-52 ... 108,051,708	1846-47 ... 90,033,256	1841-42 ... 45,716,045
1850-51 ... 106,924,083	1845-46 ... 77,193,464	

From the above table it results that the total value of all the products received at this port from the interior, from September 1st, 1841, to September 1st, 1858, a period of seventeen years, amounts to \$1,693,803,516.

#### FISHERIES OF MASSACHUSETTS.

Vessels employed.....	1,145	Cod oil .....	\$60,895
Tonnage.....	78,070	Capital.....	3,696,436
Mackerel, bbls. 153,464.. val.	\$1,355,332	Hands employed.....	10,551
Cod, quintals 439,380.....	1,413,413	Bushels salt used .....	424,549

COMMERCE OF CINCINNATI.

The Cincinnati *Price Current* gives its annual tables of the trade of that port, embracing the quantities, average prices, and aggregate values. It will be perceived there is a decrease in the value of the leading articles of imports and exports, but this is not owing to a decrease in the quantity, in the aggregate, but to the great fall in prices of most articles, imported and exported, the past, as compared with the previous, year. The value of the imports and exports for several years compare as follows:—

	Imports.	Exports.		Imports.	Exports.
1851-2....	\$41,256,199	\$33,234,896	1855-6....	\$75,295,901	\$50,744,786
1852-3....	51,230,644	36,266,108	1856-7....	77,090,146	55,642,171
1853-4....	65,730,029	45,432,780	1857-8....	74,348,758	47,407,095
1854-5....	67,501,341	38,777,394			

There can be no doubt that, had the prices for the various articles been the same, the total value of the imports and exports the past year would have exceeded last year. We would state that the figures do not approximate to the value of the entire commerce of Cincinnati at all; all they show is the comparative increase or decrease, and are not of much use beyond this. The total value of the imports cannot be less than eighty-five million dollars, and of the exports than ninety millions.

VALUE OF PRINCIPAL IMPORTS INTO THE PORT OF CINCINNATI FOR THE YEARS ENDING AUGUST 31ST, 1857 AND 1858.

Articles.	Quantity.	Average price.	Total value.	Total last year.
Apples, green . . . . . bbls.	40,023	\$1 00	\$40,023	\$37,410
Beef . . . . .	376	12 50	4,700	9,534
Beef . . . . . tcs.	25	18 50	462	21
Bagging . . . . . pieces	98	3 00	294	....
Barley . . . . . bush.	400,967	65	260,628	609,696
Beans . . . . .	23,839	1 50	35,759	88,730
Butter . . . . . bbls.	14,525	30 00	435,750	374,616
Butter . . . . . firkins and kegs	17,945	10 25	183,936	175,088
Blooms . . . . . tons	3,398	58 00	197,094	366,240
Bran, &c. . . . . sacks	164,814	75	123,610	118,793
Candles . . . . . boxes	1,421	6 40	9,694	15,758
Corn . . . . . bush.	1,090,236	35	381,582	920,349
Corn meal . . . . .	4,840	50	2,420	5,148
Cider . . . . . bbls.	1,262	5 00	6,310	5,466
Cheese . . . . . casks	78	21 00	1,638	6,188
Cheese . . . . . boxes	199,578	3 20	638,649	635,842
Cotton . . . . . bales	18,754	58 00	1,087,732	1,052,464
Coffee . . . . . sacks	129,129	18 00	2,325,323	1,843,290
Codfish . . . . . drums	2,238	20 00	64,903	48,994
Cooperage . . . . . pieces	203,291	1 15	223,784	161,406
Eggs . . . . . boxes and bbls.	28,674	6 00	172,044	126,553
Flour . . . . . bbls.	633,818	3 90	2,469,940	2,846,761
Feathers . . . . . sacks	3,871	39 00	150,969	146,944
Fish, sundries . . . . . bbls.	14,692	12 50	183,550	176,670
Fish, sundries . . . . . kegs and kits	9,119	3 75	34,196	36,904
Fruits, dried . . . . . bush.	46,547	2 10	97,648	97,594
Grease . . . . . bbls.	5,815	19 50	113,392	191,400
Glass . . . . . boxes	34,375	2 15	417,655	78,902
Glassware . . . . . packages	32,558	4 40	143,255	183,167
Hemp . . . . . bundles and bales	6,611	15 00	99,165	178,600
Hides, loose . . . . . No.	105,261	3 25	342,098	295,120
Hides, green . . . . . lbs.	32,639	5	1,631	2,430
Hay . . . . . bales	39,812	2 50	99,530	187,596
Herrings . . . . . boxes	11,285	45	5,078	5,065

Articles.	Quantity.	Average price.	Total value.	Total last year.
Hogs.....head	429,870	\$10 50	\$4,513,530	\$6,067,477
Hops.....bales	5,088	20 00	101,760	106,750
Iron and steel.....pieces	279,907	1 60	447,851	1,349,598
Iron and steel.....bundles	110,980	4 00	443,920	482,320
Iron and steel.....tons	5,318	80 00	425,440	494,480
Lead.....pigs	59,866	6 00	359,596	398,682
Lard.....bbls.	46,651	24 00	1,619,624	795,555
Lard.....kegs	8,629	4 75	30,987	57,937
Leather.....bundles	17,087	14 00	239,218	304,560
Lemons.....boxes	9,689	3 75	36,334	28,500
Lime.....bbls.	62,847	1 00	62,847	68,755
Liquors.....hhds. and pipes	1,391	210 00	292,110	547,650
Merchandise and sundries.....packages	969,505	35 00	33,932,675	30,783,458
Merchandise.....tons	3,411	620 00	2,114,320	1,287,680
Molasses.....bbls.	72,369	10 00	723,690	961,004
Malt.....bush.	60,692	1 00	60,692	194,923
Nails.....kegs	84,148	3 75	315,555	533,021
Oils.....bbls.	16,150	40 40	652,460	514,345
Oranges.....boxes and bbls.	11,669	4 50	52,510	66,585
Oakum.....bales	3,435	14 50	49,807	82,530
Oats.....bush.	598,950	35	206,482	256,469
Oil cake.....lbs.	1,644,000	1 $\frac{1}{4}$	20,550	3,219
Pork and bacon.....hhds.	5,954	65 00	387,010	261,120
Pork and bacon.....tierces	1,487	20 00	29,740	43,342
Pork and bacon.....bbls.	22,291	14 00	310,074	354,834
Pork and bacon, in bulk.....lbs.	19,613,113	5 $\frac{1}{2}$	1,078,721	897,478
Potatoes.....bbls.	44,686	1 00	44,686	104,708
Pig-iron.....tons	23,153	26 00	601,978	884,520
Pimento and pepper.....bags	5,764	12 00	69,168	53,712
Rye.....bush.	64,385	60	38,631	102,436
Rosin, tar, &c.....bbls.	13,905	3 00	41,715	21,226
Raisins.....boxes	25,739	4 00	102,956	66,827
Rope, twine, &c.....packages	8,216	7 00	57,512	57,627
Rice.....tierces	3,794	33 00	125,202	162,830
Sugar.....hhds.	44,976	75 00	3,373,200	1,917,600
Sugar.....bbls.	46,247	20 00	924,940	541,175
Sugar.....boxes	1,070	55 60	58,850	91,326
Seed, flax.....bbls.	42,413	3 00	127,239	94,954
Seed, grass.....	17,388	20 00	347,760	275,376
Seed, hemp.....	828	3 00	2,484	2,086
Salt.....sacks	59,601	1 40	83,441	222,454
Salt.....bbls.	73,120	1 50	109,680	282,427
Shot.....kegs	1,652	20 00	32,040	38,249
Tea.....packages	14,793	39 00	576,927	526,510
Tobacco.....hhds.	4,476	105 00	469,980	532,070
Tobacco.....bbls.	4,603	9 00	41,427	29,293
Tobacco.....boxes and kegs	33,745	25 00	843,625	1,106,838
Tallow.....bbls.	3,478	24 00	83,472	127,868
Wines.....bbls. and quarter-casks	2,806	65 00	182,390	254,310
Wines.....baskets and boxes	8,408	10 00	84,080	121,320
Wheat.....bush.	1,211,543	85	1,029,811	939,039
Wool.....bales	3,115	25 00	77,875	192,928
Whisky.....bbls.	411,229	10 00	4,112,290	6,914,349
Yarns, cotton.....packages	11,820	1 50	17,730	25,716
Yarns.....lbs.	3,170	20	634	1,806
Lumber.....feet	80,000,000	1 $\frac{1}{4}$	1,000,000	1,350,000
Coal.....bush.	15,260,000	8	1,220,800	1,450,000
Shingles.....M.	33,750	4 00	135,000	149,600
Staves, wood, and stone, estimated.	.....	..	400,000	460,000
Total.....	.....	.....	\$74,348,758	\$77,950,146

VALUE OF PRINCIPAL EXPORTS FROM THE PORT OF CINCINNATI FOR THE YEARS ENDING  
AUGUST 31st, 1857 AND 1858.

Articles.	Quantity.	Average price.	Total value.	Total last year.
Apples, green . . . . .	bbls. 9,396	\$1 25	\$11,745	\$15,002
Alcohol . . . . .	59,071	21 00	1,240,491	1,178,205
Beef . . . . .	15,850	12 50	198,125	262,766
Beef . . . . .	tierces 4,568	18 50	84,508	106,197
Beans . . . . .	bbls. 4,783	4 50	20,328	28,416
Brooms . . . . .	doz. 18,618	1 50	27,927	50,218
Butter . . . . .	bbls. 2,949	30 00	88,470	92,484
Butter . . . . .	firkins and kegs 29,007	10 25	304,573	262,956
Bran, &c . . . . .	sacks 27,705	75	20,754	14,091
Bagging . . . . .	pieces 2,829	3 00	8,478	3,868
Corn . . . . .	sacks 19,152	90	17,236	101,837
Corn meal . . . . .	bbls. 682	2 25	1,534	2,853
Cheese . . . . .	casks 38	21 00	798	2,522
Cheese . . . . .	boxes 124,854	3 20	399,532	418,960
Candles . . . . .	155,257	6 40	993,644	1,334,972
Cattle . . . . .	head 17,115	60 00	1,026,900	1,513,596
Cotton . . . . .	bales 19,381	58 00	1,124,098	743,568
Coffee . . . . .	sacks 68,744	18 00	1,237,392	894,492
Cooperage . . . . .	pieces 136,079	1 00	136,079	115,899
Eggs . . . . .	bbls. 15,384	11 20	172,290	104,330
Flour . . . . .	609,215	3 90	2,375,938	2,396,536
Feathers . . . . .	sacks 2,558	36 00	128,088	165,550
Fruit, dried . . . . .	bush. 9,311	2 25	43,450	43,602
Grease . . . . .	bbls. 3,703	18 50	68,595	136,680
Grass-seed . . . . .	7,465	20 00	149,300	168,096
Horses . . . . .	head 2,417	130 00	314,210	334,040
Hay . . . . .	bales 2,585	2 25	5,810	15,460
Hemp . . . . .	1,529	20 00	30,580	42,450
Hides . . . . .	lbs. 362,391	12	43,486	559,635
Hides . . . . .	No. 91,945	3 50	321,807	244,043
Iron . . . . .	pieces 486,689	1 40	681,504	1,416,807
Iron . . . . .	bundles 83,603	3 45	288,430	2,366,603
Iron . . . . .	tons 8,760	72 00	624,240	1,285,120
Lard . . . . .	bbls. 53,384	24 00	1,281,216	998,703
Lard . . . . .	kegs 53,578	4 75	254,495	283,750
Lard-oil . . . . .	bbls. 40,525	36 00	1,458,900	1,817,480
Linseed-oil . . . . .	1,000	28 00	28,000	32,292
Molasses . . . . .	43,233	11 00	475,563	518,672
Oil cake . . . . .	tons 2,492	26 00	64,792	27,230
Oats . . . . .	sacks 5,200	90	4,680	43,822
Potatoes, &c . . . . .	bbls. 83,881	1 50	125,821	58,469
Pork and bacon . . . . .	hhds. 43,247	75 00	3,243,525	2,725,760
Pork and bacon . . . . .	tierces 34,648	24 00	831,552	852,150
Pork and bacon . . . . .	boxes 113,594	15 00	1,703,910	1,814,688
Pork and bacon . . . . .	bbls. 21,318	32 00	682,176	1,016,464
Pork and bacon, in bulk . . . . .	lbs. 618,353	6½	40,192	67,559
Rope, twine, &c . . . . .	packages 12,802	6 25	80,012	57,078
Soap . . . . .	boxes 51,708	4 00	206,832	208,940
Sheep . . . . .	head 4,363	1 75	7,635	12,974
Sugar . . . . .	hhds. 29,142	80 00	2,341,260	1,592,400
Salt . . . . .	bbls. 44,291	2 00	88,582	97,980
Salt . . . . .	sacks 21,524	1 50	32,286	15,626
Seed, flax . . . . .	bbls. 2,362	3 00	7,086	3,433
Sundry merchandise . . . . .	packages 1,381,990	7 50	10,364,925	11,700,462
Sundry merchandise . . . . .	tons 6,848	625 00	4,280,900	3,671,040
Sundry liquors . . . . .	bbls. 28,706	40 00	1,148,240	3,064,350
Sundry manufactures . . . . .	pieces 113,640	4 00	454,560	1,748,424
Sundry produce . . . . .	packages 185,065	3 50	647,727	611,886
Starch . . . . .	boxes 27,710	3 00	83,130	143,428
Tallow . . . . .	bbls. 2,304	25 00	57,600	195,636
Tobacco . . . . .	kegs and boxes 32,279	22 00	710,138	926,046

Articles.	Quantity.	Average price.	Total value.	Total last year.
Tobacco.....hhds.	4,588	\$105 00	\$481,741	\$445,940
Tobacco.....bales	5,798	10 25	59,429	64,086
Vinegar.....bbls.	11,566	4 00	46,264	41,628
Whisky.....	268,226	10 25	2,749,316	4,704,557
Wool.....bales	4,586	24 00	110,064	229,760
Wool.....lbs.	.....	35	.....	634
White lead.....kegs	60,582	2 25	136,309	138,260
Castings.....pieces	48,617	4 50	198,776	471,130
Castings.....	2,796	80 00	223,780	343,620
Wheat.....sacks	315,830	1 60	505,328	473,904
Total.....			\$47,407,095	\$55,642,171

#### COMMERCE OF MEMPHIS, TENNESSEE.

The following is a report of the trade of the port of Memphis for the year ending June 30, 1858:—

	No.	Revenue.
Steamboat arrivals and departures during the year....	2,279	\$18,906 60
Flatboats arrived during the year.....	379	4,780 62
Total revenue collected.....		\$23,687 22

#### TONNAGE.

	No.	Tonnage.
Regular packets in the trade the past year.....	40	15,714
Landings of transient boats.....	1,610	885,500
Total tonnage.....		901,214

#### EXPORTS, FOREIGN IMPORTS, AND VALUE.

	Amount.	Est. value.
Cotton.....bales	233,081	\$11,654,050
Wheat shipped.....bush.	81,361	73,225
Flour.....bbls.	26,371	131,850
Tobacco.....hhds.	131	9,825
Estimated value of furs, peltries, and hides.....	.....	100,000
Value of exports.....		\$11,938,959
Value of foreign imports bonded at Memphis the past year..		302,734

NUMBER OF BALES OF COTTON SHIPPED FROM JULY 1, 1857, TO JUNE 30, 1858.

New Orleans....	204,281	Ohio River .....	28,014	St. Louis.....	786
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#### EXPORT OF COTTON FROM MOBILE.

The *Mobile Journal of Commerce Letter Sheet* gives the following:—

EXPORTS OF COTTON TO FOREIGN PORTS, WITH THE WEIGHT AND VALUE ATTACHED, FOR THE YEAR ENDING AUGUST 31ST, 1858.

	Bales.	Pounds.	Value.
Great Britain, in American vessels	187,177	96,952,505	\$10,943,034
“ in foreign vessels...	78,287	40,499,798	4,309,551
Total to Great Britain.....	265 464	137,452,303	\$15,252,585
France.....	89,887	46,689,533	5,045,660
Trieste and Sardinia .....	7,419	3,826,928	415,221
Sweden.....	3,150	1,634,490	174,598
Hamburg.....	6,047	3,193,540	389,785
Russia.....	10,907	5,752,860	704,014
Holland.....	1,358	725,244	91,735
Spain.....	2,800	1,375,873	165,427
Total, 1857.....	387,032	200,650,771	\$22,239,025
Total, 1856.....	485,085	248,730,100	21,114,661

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**COMMERCIAL REGULATIONS.**

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**GENERAL REGULATIONS TO COLLECTORS.**

The following regulations are prescribed by the Treasury Department, August 24, 1858, for the government of collectors and other officers of the customs :—

Misunderstandings as to the relative obligations and duties of the several officers of the customs not unfrequently occur, and the Department thinks it proper on several points to add to, or make more specific, the existing regulations on the subject.

**COLLECTOR AND APPRAISERS**—While the appraisers are to exercise their own judgment, on the most reliable information accessible to them, in determining, under the law and regulations of the Department, the value of imports for the assessment of duties, they are under the general control and direction of the collector in regard to the arrangement and transaction of the business in their department of the customs. All new regulations made by the collector for the government of the appraisers' department, should be first submitted by him to the appraisers for such comments as they may deem proper, and will be submitted, with the remarks of the appraisers, to this Department for approval. All nominations, or removals from office, by the appraisers should be submitted, through the collector, to this Department, in order to the proper exercise, on its part, of its supervisory power over the collection of the revenue. It is the duty of the collector, where the subordinates of the appraisers appear neglectful of their duties, or otherwise unfaithful or incompetent, to call the attention of the appraisers to the fact, and if the evil is not cured, to report the same to the Department.

**COLLECTOR AND SURVEYOR**.—The surveyor of the port will report to the collector in writing any default of subordinates serving under him, but who are appointed by the collector ; and should any such subordinate, who has been suspended by the surveyor, be restored by the collector, he (the collector) will report the case (together with the surveyor's report to him) to the Department for its consideration and action.

**APPOINTMENT OF SUBORDINATE OFFICERS OF THE CUSTOMS.**

It is deemed proper to state, for the information of the collectors, naval officers, surveyors, and appraisers generally, that, in accordance with existing regulations, no subordinate officers of the customs can be removed or appointed without the previous sanction of the Secretary of the Treasury. When the removal of an officer is thought necessary, the case will be reported to the Secretary, with the reasons, and a nomination of the person desired to be employed in his stead will be submitted, and, on receiving the Secretary's approbation, the necessary oath will be administered, and the officer will then (and not before) be legally qualified to enter upon the duties of the office. Compensation cannot be allowed until these requirements are complied with, and cannot in any case commence before the date of the oath. When additional officers are thought necessary, the grounds of such necessity will be reported fully, and the rate of compensation proper to be allowed ; and if the Secretary approves of the proposed increase, the persons selected will be nominated, and the same course as above prescribed will be pursued. Where the urgency of the case requires that the employment of an officer be discontinued before the special sanction of the Secretary can be obtained, the officer will be suspended, and the case reported to the Secretary for approval. The duties of a deputy terminate with those of the collector, naval officer, or surveyor by whom he was appointed, and if continued in office, he must be re-nominated by the newly-appointed principal, and the nomination approved by the Secretary. Other subordinate officers are appointed without limitation, and do not require a renomination to hold over. When the office of deputy collector is connected with that of inspector, or other office, and he is paid in the latter

capacity, the office of deputy only becomes vacant. In submitting nominations, attention is called to General Regulations, articles 576 and 577, page 321, applied to naval officers, surveyors, and appraisers, in Circular Instructions No. 4, page 14. And to employment of aids to the revenue, article 609, page 339; and to appointment of relations, article 615, page 342.

#### LEAVE OF ABSENCE.

Upon making application for leave of absence, the collector, naval officer, or surveyor will state the necessity of the case, the time he desires his leave to commence, and when to terminate, and, upon receiving the Department's sanction, he will report the name of the person he may appoint as his "special deputy," under the provisions of the 22d section of the act of 2d March, 1799, and at the same time, he will transmit to the Commissioner of Customs a certified copy of his appointment, with his official oath. Appraisers will forward to the Department their applications for leave of absence through the collector of the district, who will also state his views on the subject.

#### CERTIFICATE REQUIRED IN CASES WHERE THERE ARE NO CUSTOM-HOUSES AT THE FOREIGN PORT OF EXPORTATION—ADDITIONAL TO ARTICLE 246, TREASURY REGULATIONS OF FEBRUARY 1, 1857.

In cases where the certificate of the custom-house officer at the foreign port of shipment, required for the free entry of manufactures or productions of the United States exported and brought back, cannot be obtained for the reason of there being no such officer at the foreign port of exportation, a certificate of the foreign recipient of the goods, or his representative, having a knowledge of the facts, duly authenticated by the consul of the United States, may be admitted in lieu thereof—all the other requirements of the law and treasury regulations being carefully observed and enforced.

#### PACKAGES DO NOT ENTER INTO THE VALUE OF THE SUGAR.

The value of sugar imported from Cuba is to be ascertained and appraised without reference to the packages in which it is contained, whether boxes or hogsheads, and to this value is to be added the cost of the packages.

#### CLAIMS FOR REFUNDING.

Collectors are requested to refer parties applying for return of duties paid to the subjoined regulation, transmitted for the information and guidance of those to whom it may apply:—Hereafter, in all cases where parties allege to have claims for return of duties paid in error, illegal exactions, or otherwise, the application must be made direct to this Department, by the owner or importer; upon receipt of which, a report of the case, when requisite, will be called for from the collector, and, upon its examination, the decision of the Department will be rendered. The instructions issued under date of 19th November, 1857, and all others relating to the preparation and transmission of certified statements by collectors, are superseded by the above.

#### CASKS OF AMERICAN MANUFACTURE.

It has been decided by the Department that casks of American manufacture exported empty from the United States, and afterwards imported filled with molasses, are not entitled to entry free of duty; and, generally, all bags, boxes, casks, or other envelopes, manufactured in the United States, of domestic or foreign materials, exported empty and returned filled, or exported filled and returned empty, are, on importation into the United States, liable to duty, not being in the same condition as when exported, as required by the provisions of schedule I of the existing tariff in order to be entitled to exemption from duty.

## LABELS.

TREASURY DEPARTMENT, July 29, 1858.

SIR:—I acknowledge the receipt of your report, of the 18th ultimo, on the appeal of Messrs. Robert H. Berdell & Co. from your decision as to the rate of duty chargeable, under the tariff of 1857, on two cases of "labels" imported per steamer "Africa" from Liverpool. It appears that you exacted a duty of 24 per cent on the articles in question, as manufactures of paper under the classification in schedule C of "manufactures of paper, or of which paper is a component material, not otherwise provided for," while the appellants claim to enter them at a duty of 15 per cent, as unenumerated in any schedule of the tariff of 1857. The samples transmitted with your report of the 10th instant are composed of paper, wholly or in part, colored and ornamented, and some of them, in the form of cards, enameled; and in the opinion of the Department they were properly classified by you under schedule C, as a manufacture of paper, or of which paper is a component material, not otherwise provided for, and the duty correctly assessed at 24 per cent. Your decision is hereby affirmed. I am, very respectfully,

AUGUSTUS SCHELL, Esq., Collector, New York.

HOWELL COBB, Secretary of the Treasury.

## "CUDBEAR."

TREASURY DEPARTMENT, July 31, 1858.

SIR:—I have carefully examined your report, of the 22d instant, on the appeal of Messrs. Clark & McConnin from your assessment of duty of 8 per cent on "cudbear," under schedule G of the tariff of 1857. It is conceded that the article in question is not in a crude state, and is used in the process of dyeing. "Cudbear" was designated by name in schedule G of the tariff of 1846, subject to a duty of 10 per cent. In schedule E, of that tariff, and subject to a duty of 20 per cent, were embraced "articles not in a crude state, used in dyeing or tanning, not otherwise provided for." The 2d section of the tariff act of 1857 transfers to schedule H, subject to duty at the reduced rate of 4 per cent, "articles not in a crude state, used in dyeing or tanning, not otherwise provided for;" and the appellants contend that "cudbear" being so used, and not being in a crude state, is thus transferred, and should be made chargeable with a duty of 4 per cent in that schedule. It is obvious that this transfer can embrace only such articles in a crude state used in dyeing or tanning as were not provided for elsewhere in the act. "Cudbear" being provided for by name in schedule G was not transferred, but remains in that schedule in the tariff of 1857, subject to the duty of 8 per cent exacted by the collector, whose decision is hereby affirmed. I am, very respectfully,

AUGUSTUS SCHELL, Esq., Collector, New York.

HOWELL COBB, Secretary of the Treasury.

## ROOT OF QUICK GRASS.

TREASURY DEPARTMENT, August 21, 1858.

SIR:—I acknowledge the receipt of your report, under date of the 11th ultimo, in reference to the rate of duty assessed by you on an article described as the "root of quick grass," imported by Charles Boeckl, Esq., who has appealed from your decision to the Department. The article in question is a root used in the manufacture of brushes, and imported in a condition to be so used. The Department cannot concur with the appellant that it is entitled to entry free of duty, under the classification in schedule I of the tariff of 1857 of "trees, shrubs, bulbs, plants, and roots, not otherwise provided for," that provision having reference to articles imported for planting and propagation of plants. This article, in the opinion of the Department, was correctly referred by you to the classification in schedule D of the tariff of 1857, of "jute, sisal grass, coir, and other vegetable substances, unmanufactured, not otherwise provided for," and subjected to duty at the rate of 19 per cent; and your decision to that effect is hereby affirmed. I am, very respectfully,

AUGUSTUS SCHELL, Esq., Collector, New York.

HOWELL COBB, Secretary of the Treasury.

**GROUND PEAS OR PEA NUTS.**

TREASURY DEPARTMENT, August 4, 1858.

SIR:—I acknowledge the receipt of your report, under date of the 28th ultimo, on the appeal of Mr. E. D. Kimball from your decision assessing a duty of 15 per cent on an importation of ground peas or pea nuts, as articles unenumerated in the tariff of 1857, the appellant contending that they are entitled to entry at the rate of 8 per cent, as "fruit," under the classification in schedule G of that tariff of "fruits, green, ripe, or dried." The Department concurs with you in the opinion, that, in consideration of the manner of production and growth, as well as the character of the article itself, it can hardly be classed either as a "fruit" or "nut" in the restricted and peculiar sense in which those terms are used in commercial or common parlance, and that it more nearly resembles the natural productions of the soil known as "vegetables," such as beans, peas, and other leguminous products, with which it is classed by botanists. Ground peas or pea nuts may therefore be regarded as liable to the duty of 15 per cent under the classification in schedule E of the tariff of 1857, of "berries, vegetables, and flowers, not otherwise provided for," or be treated as an unenumerated article, and chargeable, as such, with the same rate of duty under the 1st section of that act. According to either classification, the proper rate of duty was charged by you in this case, and your decision is hereby affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

A. W. AUSTIN, Esq., Collector, Boston.

**EMPTY CHRONOMETER BOXES.**

TREASURY DEPARTMENT, August 3, 1858.

SIR:—The Department has had under consideration the appeal of Messrs. C. B. Richard, Boas & Co. from your decision levying duties on an importation, by the steamer "Saxonia," of certain articles described as "chronometer cases or boxes." The articles in question were reported by the appraisers as rosewood and mahogany cases for chronometers; were empty, when imported, though intended, as the importers allege, to inclose chronometer movements expected to arrive by another vessel. Regarding the articles as in no just sense parts of chronometers, nor exclusively appropriated to the purpose alleged by the importers, you appear to have charged them with a duty of 30 per cent, as manufactures of rosewood and mahogany, under the classification in schedule B of the tariff of 1857, of "manufactures of cedar-wood, granadilla, ebony, mahogany, rosewood, and satin-wood." The appellants contend that the cases or boxes in question are liable only to a duty of 8 per cent, under the classification in schedule G of "chronometers, box and ships', and parts thereof," and that the box or case is essential to the proper preservation and working of the instrument, and is therefore a "part thereof" within the meaning of the law. In the opinion of the Department the duty was properly levied in this case. However boxes or cases actually containing chronometers on importation might be treated in reference to their dutiable character, when imported empty, and by a separate vessel, as in this case, they constitute, in the opinion of this Department, no part of the chronometer within the meaning of the law. Your decision is hereby affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

AUGUSTUS SCHELL, Esq., Collector, New York.

**BOOKS IMPORTED BY AMERICAN TRACT SOCIETY.**

In the case of the application of the treasurer of the American Tract Society for return of duty on two cases of French books imported from Canada, the Department decided "that the American Tract Society, although an incorporated society, does not come within the provision allowing the free entry of books for the use of any society incorporated or established for literary or philosophical purposes, or for the encouragement of the fine arts."

## GLASS, CUT.

TREASURY DEPARTMENT, August 5, 1858.

SIR :—I acknowledge the receipt of your report, under date of the 22d ultimo, on the appeal taken by Mr. Alvan Clark from your decision subjecting to duty, at the rate of 30 per cent, under the classification in schedule B of the tariff of 1857, of "glass, cut," certain articles described by the appellant as "unwrought glass" imported by him in the steamer "Arabia," but which appear from your report to consist of four "optical discs," being circular plates of cast or pressed glass, the edges of which are ground or cut and polished, and designed for object glasses in telescopes. It does not appear distinctly, from the importer's statement, to what rate of duty he considers the article subject. In analogous cases, under the tariff of 1846, this Department decided that the operations of cutting or grinding, to which the articles in question appear to have been subjected, brought the article so finished or ornamented into the classification of "glass, cut," as, for example, glass tumblers, whether blown or pressed, smoothed by cutting or grinding, or with engraved sides, were by that process made liable to duty as "glass, cut." To that view, in accordance with which the rate of duty appears to have been determined by you in this case, the Department still adheres. Your decision is hereby affirmed. I am, very respectfully,

HOWELL COBB, Secretary of the Treasury.

A. W. AUSTIN, Esq., Collector, Boston, Massachusetts.

## NAUTICAL INTELLIGENCE.

## NEW LIGHTHOUSE AT BARNEGAT, NEW JERSEY,

AND CHANGE OF LIGHT FROM FIXED TO REVOLVING—INTERVAL 10 SECONDS.

The new lighthouse tower on the south side of the entrance of Barnegat Inlet, New Jersey, will be completed at an early day, and the light will be exhibited therefrom for the first time at sunset on Saturday, the 1st day of January, 1859, and will be kept burning during that night and every night thereafter from sunset to sunrise. The tower is built of brick, is 148 feet high, and is surmounted by an iron lantern 15 feet high. The lantern is painted black; the upper half of the tower is of the natural color of the brick, and the lower half is white. The illuminating apparatus is a revolving catadioptric lens of the 1st order of the system of Fresnel, showing a bright flash every ten seconds of the natural color. The focal plane is 165 feet above the level of the sea, and the light should be seen in ordinary states of the atmosphere 22 nautical miles. The approximate position of the lighthouse, deduced from the Coast Survey determination, is—latitude, 39° 45' 49" N., longitude, 74° 06' 05" W. Mariners are requested to take particular notice that the temporary 4th order lens light at Barnegat will be fixed until January 1, 1859, when it will be changed to a 1st order revolving light with an interval of 10 seconds between the flashes. By order of the Lighthouse Board,

W. F. RAYNOLDS, Captain Corps Top. Engineers.

PHILADELPHIA, PENNSYLVANIA, September 1, 1858.

## RANGE LIGHTS ON THE NORTH FRONT OF AMELIA ISLAND, FLORIDA.

Two beacon lights have been erected on the north front of Amelia Island, to guide vessels into the entrance of Fernandina Harbor, Florida. The seaward beacon light is on a wooden frame-work; structure painted red. The focal plane is 60 feet above the level of the sea. The illuminating apparatus is a Fresnel lens of the 6th order, showing a fixed light of the natural color. The inner beacon is on a dwelling-house, painted white, with a red roof. The focal plane is 35 feet above the level of the sea. The illuminating apparatus is a lens of the

6th order, showing a fixed light of the natural color. The beacons should be visible in ordinary weather a distance of 6 nautical miles. To enter Fernandina Harbor by these beacons, bring the main (Amelia Island) light to bear S. W. or W. S. W., in seven fathoms water, and run for it until the beacons are in range. Then run in on the range which bears W.  $\frac{3}{4}$  N., until up with the inner buoy. The beacons will be lighted for the first time at sundown on Monday, the 1st of November next, and will be kept burning during that and every night thereafter from sunset till sunrise. By order of the Lighthouse Board,

W. H. C. WHITING, Lieutenant Corps of Engineers.

FERNANDINA, FLORIDA, September 1, 1858.

#### BEACONS ON POINTS HAYLEY AND BUNBURY, AUSTRALIA.

Official information has been received at this office, that the Harbormaster at Melbourne has given notice, that the following beacons have been erected on the coast to mark the position of Henty Reef, off Apollo Bay, between Cape Otway and Port Philip, South Australia:—Two pillar beacons, each surmounted by a ball, on Point Haley, about 9 miles to the northeastward of Cape Otway. The outer or seaward one is painted black, the inner white, and they stand W.  $\frac{1}{4}$  S. and E.  $\frac{3}{4}$  N., 200 yards from each other. Two beacons of the same forms on Cape or Point Bunbury, the southeast point of Apollo Bay, about 11 miles northeast of Cape Otway. The seaward beacon is red, the inshore one white, and they are 200 yards apart in a N. W.  $\frac{1}{2}$  N. and S. E.  $\frac{1}{2}$  S. direction. The reef, on which the sea only breaks occasionally in bad weather, has not more than 18 feet over it at low water, with 10 fathoms all round within a cable's length. It lies N. E.  $\frac{3}{4}$  E. easterly 11 miles from Cape Otway Lighthouse, and S. E.  $\frac{1}{2}$  S. 2 miles from Point Bunbury, with the beacons on Point Hayley and Point Bunbury respectively in line.

DIRECTIONS.—Vessels are cautioned to give this danger a good berth. Those bound to the northeast must keep the black beacon on Point Hayley well open to the northward of the white one, until the white beacon on Cape Bunbury opens well to the northeastward of the red beacon. Vessels proceeding to the southwest must keep the outer or red beacon on Cape Bunbury well open to the southward of the white one, until the white beacon on Point Hayley is seen well open to the southwestward of the black beacon.

ROCK OFF HOWICK ISLANDS.—Information has been received at the British Admiralty, that H. M. S. Megara, on the passage from Sydney to Calcutta, passed about a cable's length to the northward of a pinnacle rock when running, with the wind blowing hard, for a night anchorage under the Howick Group of islands, inside the barrier reef, east coast of Australia. The rock was not examined, but appeared to have about 6 feet of water over it, and its approximate position is  $4\frac{1}{2}$  miles east of the southernmost (No. 3.) Howick Island, or in latitude about  $14^{\circ} 32\frac{1}{2}'$  S., longitude  $145^{\circ} 6\frac{1}{2}'$  east of Greenwich. The bearings are magnetic. Variation  $9^{\circ}$  east of Apollo Bay, and  $7^{\circ} 20'$  east at the Howick Group, in 1858. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 23, 1858.

#### LIGHT AT RIO DE LA HACHA, NEW GRANADA.

Information has been received at this office, that a harbor light has been established at the city of La Hacha, on the river of that name, in the province of Santa Martha, coast of New Granada, West Indies. The light is a fixed light, placed at an elevation of 69 English feet above the level of the sea at high water, and should be visible in clear weather from a distance of about 6 miles. It is shown from the tower of the church of La Hacha, in latitude  $11^{\circ} 33' 47''$  N.; longitude  $72^{\circ} 59' 16''$  west of Greenwich.

CAUTION.—The small fixed light at the pier of La Guayra, the port of Caracas, on the coast of Venezuela, is no longer exhibited. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 4, 1858.

## LIGHTS ON HIGH WHITBY—ENGLAND, EAST COAST.

Official information has been received at this office that the Corporation of the Trinity House of London has given notice, that on and after the 1st of October, 1858, lights will be exhibited from the two lighthouses recently erected near Ling Hill, on High Whitby, to the southward of the town of Whitby, east coast of England. The lights will be fixed white lights, each placed at an elevation of 240 feet above the level of the sea at high water. They will illuminate seaward, between N. N. W.  $\frac{1}{2}$  W. and S. by E.  $\frac{1}{4}$  E., showing over the North Cheek of Robin Hood Bay, and in clear weather they should be seen from a distance of about 23 miles. The illuminating apparatus will be dioptric, or by lenses of the first order. The light-towers stand N. by W.  $\frac{3}{4}$  W., and S. by E.  $\frac{3}{4}$  E., 258 yards from each other, and the southern is in latitude  $54^{\circ} 28' 40''$  N.; longitude  $0^{\circ} 34' 10''$  west of Greenwich.

CAUTION.—The mariner is strictly cautioned that the lights in line bearing S. by E.  $\frac{3}{4}$  E. lead on Whitby scar or rock, which lies about 2 miles from the north lighthouse. The southern light must therefore be kept open of the northern, in order to clear that danger. The bearings are magnetic. Variation  $23^{\circ}$  west in 1858. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 28, 1858.

## LIGHT ON KIRKABISTER NESS—SHETLAND ISLES, BRESSAY SOUND.

Official information has been received at this office that the Commissioners of Northern Lighthouses have given notice, that on and after the 30th of August, 1858, a light will be exhibited from the lighthouse recently erected on Kirkabister Ness, the southeastern point of Bressay, on the eastern side of the entrance of the Sound of Bressay, leading to Lerwick, Shetland. The light will be a revolving light showing red and white alternately, at intervals of one minute; it will be placed at an elevation of about 105 feet above the level of the sea at high water, and should be visible in clear weather from the deck of a vessel a distance of about 15 miles. The illuminating apparatus will be dioptric, or by lenses, of the second order. The light-tower is 40 feet in height, and will, with the keeper's houses, be painted white. It stands in latitude  $60^{\circ} 6' 10''$  N.; longitude  $1^{\circ} 7' 30''$  west of Greenwich. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 28, 1858.

## FIXED LIGHT ON KOKSKAR—BALTIC, GULF OF FINLAND.

Official information has been received at this office, that the Imperial Ministry of Marine of Russia has given notice, that on and after the 27th of May, 1858, a light would be exhibited from the lighthouse reconstructed on Kokskar, a little to the eastward of the meridian of Revel, on the south shore of the Gulf of Finland. The light is a fixed white light, placed at an elevation of 100 English feet above the level of the sea, and should be visible from the deck of a vessel in clear weather from a distance of 15 miles. The illuminating apparatus is a Fresnel lens of the second order. The light-tower is 97 feet in height; its base is broad, built of stone, and whitewashed; the upper part is of iron, painted red, and the lantern is painted green. It stands in about latitude  $59^{\circ} 41\frac{1}{2}'$  N., longitude  $25^{\circ} 1\frac{1}{2}'$  east of Greenwich. On the exhibition of the new light, the temporary light shown during the rebuilding of the lighthouse would be discontinued. Notice has also been given, that henceforth the Russian lights in the Baltic and Gulf of Finland will be lighted all night in summer, which has not hitherto been done. Also, that a light-vessel showing a red light would be placed on the south side of the Kalbaden-grund, about 14 miles to the southwest of Glosholm. And a light-vessel showing three white lights, to the north of Revel-stein or stone, near Revel. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 28, 1858.

## LIGHT ON THE SKAGEN OR SKAW—KATTEGAT, COAST OF JUTLAND.

Official information has been received at this office, that the Danish Royal Navy Department has given notice that, before the close of the present year, (1858,) a light will be exhibited from the new lighthouse on the Skagen or Skaw, the north point of Jutland, at the entrance of the Kattegat. The light will be a fixed white light, placed at an elevation of 144 English feet above the level of the sea, illuminating with its greatest brilliancy from W. by S. round northerly to S. W. by S., and showing a fainter light through the remaining points of the compass. The bright light should be visible 17 miles, and the faint light 12 miles in clear weather. The illuminating apparatus will be dioptric, or by lenses, of the first order. The light-tower is circular, built of red brick, and 126 feet in height. It stands E. by N. 1,720 yards from the old lighthouse, in latitude  $57^{\circ} 44' 9''$  N., longitude  $10^{\circ} 37' 56''$  east of Greenwich. On the exhibition of the new light the light at present shown will be discontinued.

LIGHT ON SAMSO ISLAND.—Also, that in the autumn of 1858, a light will be exhibited from the lighthouse recently erected on Vestborg Point, the southwest point of Samsø Island, at the entrance to the Belts, Kattegat. The light will be a fixed white light, varied every three minutes by a very bright flash of 14 seconds' duration, preceded and followed by an eclipse lasting 11 seconds. It will be placed at an elevation of 118 English feet above the level of the sea, and should be visible in clear weather at the distance of 14 miles; the flash at 16 miles. Within a distance of 6 miles the eclipses will be almost imperceptible. The illuminating apparatus will be dioptric, of the third order. The light-tower is circular, of brick, and 45 feet high. It stands in latitude  $55^{\circ} 46' 14''$  N., longitude  $10^{\circ} 33' 22''$  east of Greenwich. The bearings are magnetic. Variation  $17^{\circ}$  west in 1858. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 28, 1858.

## FIXED LIGHT AT REGGIO—MEDITERRANEAN, COASTS OF ITALY AND GREECE.

Information has been received at this office, that a light has been established at Reggio, in Calabria, on the south coast of Italy. The light is a fixed white light, placed at an elevation of 75 English feet above the level of the sea, and should be seen in clear weather at a distance of about five miles. It is shown from the small steeple of the church of Santa Maria de Portosalvo; and its position is in latitude  $38^{\circ} 6' 44''$  N., and longitude  $15^{\circ} 38' 43''$  east of Greenwich.

ALTERATION OF LIGHT AT MOLFETTA.—Also, that the fixed light at the western extremity of the detached mole at Molfetta, in Bari, on the western shore of the Adriatic, has been altered to a fixed light varied by a flash every three minutes.

CAUTION.—The lights said to have been exhibited at Cape Rizzulo, and at Port Cotrone, in Calabria, also at Andrea Island, off Gallipoli, in Otranto, on the southeast coast of Italy, do not exist.

EGRIPO OR NEGROPONT CHANNEL.—The Greek Government has given notice, that the Negropont Channel between Eubœa or Egripo and the mainland, which had been opened in January last at a depth of fifteen feet, has been closed for the summer, in order that it may be further deepened to eighteen feet English. It is expected that the navigation will be again open in October next. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 4, 1858.

## LIGHTS AT PORT JACKSON—AUSTRALIA, EAST COAST.

Official information has been received at this office that the Colonial Government of New South Wales has given notice, that on and after the 1st of June, 1858, a light would be exhibited all night from the lighthouse recently erected on the Inner South Head, at the entrance of Port Jackson, Sydney. The light is a fixed white light, placed at an elevation of about 90 feet above the level of the sea, and in clear weather should be visible from the deck of a vessel at a dis-

tance of about 15 miles. The illuminating apparatus is catoptric, or by reflectors, of the first order. The light-tower is 30 feet in height, and painted in vertical stripes of red and white. It stands on the edge of the cliff, in latitude 33° 50' 45" S., longitude 151° 18' 42" east of Greenwich.

LIGHT ON FORT DENISON.—Also, that on and after the same date a fixed red harbor light would be exhibited from the tower of Fort Denison, formerly known as Pinchut Island, in Port Jackson. By order of the Lighthouse Board,

THORNTON A. JENKINS, Secretary.

WASHINGTON, August 28, 1858.

## JOURNAL OF INSURANCE.

### PENNSYLVANIA INSURANCE LAW.

AN ACT FOR THE BETTER SECURING TO THE COMMONWEALTH THE PAYMENT OF TAXES DUE BY INCORPORATED COMPANIES. APPROVED APRIL 21, 1858.\*

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same,* That hereafter, it shall be the duty of the president or treasurer of all institutions and companies, incorporated by or under any law of this Commonwealth, who are taxable under the laws of this State, to make report, in writing, to the Auditor-General, annually, in the month of November, stating specifically the amount of capital paid in, the date, amount, and rate per centum of each and every dividend declared by their respective corporations during the year ending with the first Monday of said month, and for each and every year in which the dividend or dividends of any such company or corporation do not amount to six per cent per annum, or more, on the capital stock paid in; the president or treasurer thereof, shall also furnish the Auditor-General, at the time of making said report, with an appraisement of the capital stock, in conformity with the thirty-third section of the act, entitled "An Act to reduce the State debt," etc., approved April 29, 1844.

SEC. 2. That if the said officers of any such company or corporation shall neglect or refuse to furnish the Auditor-General, on or before the thirty-first day of December, in each and every year, with a report aforesaid, or the report and appraisement, as the case may be, as required by the first section of this act, it shall be the duty of the accountant officers of the Commonwealth to add ten per cent to the tax of said corporation, for each and every year for which such report or reports and appraisement were not so furnished; which percentage shall be settled and collected with the said tax, in the usual manner of settling accounts and collecting such taxes:—*Provided,* That if said officers of any such company or corporation shall fail to comply with the provisions of the first section of this act, during the months of November and December, for three successive years, it shall be the duty of the Auditor-General to report the fact to the Governor, who shall, thereupon, by proclamation, published in one newspaper at Harrisburg, one at Philadelphia, and one at Pittsburg, daily, for two weeks, declare the charter of said company or corporation forfeited, and their chartered privileges at an end:—*Provided further,* That the charters of all companies shall be forfeited in manner aforesaid, who have neglected or refused to make report to the Auditor-General, as required by the seventy-first section of the act, entitled "An Act to provide for the ordinary expenses of government," etc., approved May 7, 1855, except such as make said report within one year after the passage of this act.

SEC. 3. That hereafter no institution or company, incorporated by or under any law of this Commonwealth, shall go into operation, without first having the

\* This Act regulates the taxes of insurance, as well as all other corporations in the State.

name of the institution or company, the date of incorporation, the place of business, the amount of capital paid in, and the names of the president and cashier, or treasurer, of the same, registered in the office of the Auditor-General; and any such institution or company who shall neglect or refuse to comply with the provisions of this section, shall be subject to a penalty of five hundred dollars, which penalty shall be collected on an account settled by the accountant officers, as taxes on bank dividends are now settled and collected.

SEC. 4. That it shall be the duty of the Auditor-General to cause this act to be published weekly, for three consecutive weeks, in one newspaper published in Philadelphia, one in Harrisburg, and one in Pittsburg, for which a reasonable compensation shall be allowed, to be determined by the accountant officers, and settled in the usual way, which publication shall be taken and held as notice to all persons concerned.

G. NELSON SMITH, Speaker pro tem of the House of Representatives.  
WILLIAM H. WALSH, speaker of the Senate.

APPROVED—The twenty-first day of April, Anno Domini, one thousand eight hundred and fifty-eight.

WILLIAM F. PACKER.

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### NEW JERSEY INSURANCE LAW.

A SUPPLEMENT TO AN ACT, ENTITLED "AN ACT TO PROVIDE FOR THE INCORPORATION OF INSURANCE COMPANIES." APPROVED MARCH 10, 1852.

Whereas, By the laws of some of the United States, it is provided that insurance companies, chartered under the laws of this State, shall not transact business in said States, except on a deposit of securities in said laws named; Therefore,

SECTION 1. *Be it enacted by the Senate and General Assembly of the State of New Jersey.* That it shall be lawful for the treasurer of this State to receive from any insurance company, chartered under the laws of this State, a deposit of such securities as may be necessary to enable such company to transact business in any of the United States, under the laws of said States.

SEC. 2. *And be it enacted,* That said securities shall be held by the treasurer, so long as the said companies shall desire to transact business in the States requiring said deposit; but the parties making the deposit shall be at liberty to draw the dividends, or receive the interest on such securities; and whenever said companies shall desire to discontinue their business in said States, and it shall no longer be required by the laws of said States, the treasurer shall return the said securities to the companies depositing the same.

SEC. 3. *And be it enacted,* That the treasurer, for performing the duties required by this act, shall receive such compensation as is provided for performing like duties, by the act to which this is a supplement.

SEC. 4. *And be it enacted,* That this act shall take effect immediately.

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### FIRE INSURANCE.

The Philadelphia *Press* remarks :—

The importance of insurance against losses by fire and water may be seen at a glance by the following figures :—There were 322 fires in the United States in 1857, and the amount of property destroyed was \$14,502,000. In 1856, the amount of property destroyed was upwards of \$3,000,000 greater. The entire loss by marine disasters in the month of December last was \$2,306,735. The above amount included thirteen steamers, forty-two ships, thirty-two barks, twenty-two brigs, and fifty-seven schooners. If this property was insured, as the most of it undoubtedly was, many thousands, perhaps millions, of persons bore the loss, each one suffering a little, whereas if no insurance had been effected, many persons would have suffered a business ruin, while others would have been seriously crippled in their affairs for life.

PROFITS OF INSURANCE COMPANIES.

The aggregates of the statements of the seventy-nine fire insurance companies doing business in New York in 1857, and mere agents of foreign companies, many of which transact a large business, for the year ending December 31, 1857, are as follows :—

Receipts of premiums.....		\$5,578,859
Losses.....	\$2,436,965	
Expenses, including taxes.....	1,568,401	
		4,005,366
Surplus receipts .....		\$1,573,493

The losses are thus shown to be 44 per cent of the gross premiums, the expenses 28 per cent, and their disbursements together 72 per cent, leaving the surplus receipts 28 per cent.

POSTAL DEPARTMENT.

POSTAGES.

The following table shows the comparative activity of correspondence in seven countries in one year :—

	Population.	Postal revenue.	Postal expenses.	No. of letters.	Letters per 1,000 persons.
Switzerland ...	2,392,740	\$447,572	\$341,028	19,773,671	8,299
Holland .....	3,056,591	288,162	156,784	13,349,553	4,367
Belgium.....	4,426,202	755,648	327,118	11,521,955	2,603
Spain .....	13,396,218	1,281,761	1,095,398	30,775,686	2,209
France .....	35,783,170	9,321,900	6,023,925	150,000,000	4,192
United States..	23,191,876	5,940,724	7,982,757	102,139,148	4,404
Great Britain..	27,833,501	12,872,039	7,003,399	410,817,489	14,760

The correspondence in the United States is not so large as in Switzerland, and is about the same as in Holland and France, and not 30 per cent of the activity of letters in England. One reason may possibly be found in the agricultural occupation of the United States, as well as to the use of the telegraph, and the greater use of the public prints. The United States is the only country that does not derive a net revenue from the Post-office.

TELEGRAPHIC COMMUNICATION IN GREAT BRITAIN.

We extract from a blue book on miscellaneous statistics of the United Kingdom, the following information respecting electric telegraphs for the use of the public, in each of the years 1855, 1856, and 1857 :—

ELECTRIC AND INTERNATIONAL.

	1855.	1856.	1857.
Miles of telegraph.....	5,228	5,398	5,637
Miles of wire .....	27,711	28,627	29,498
Stations for public.....	404	423	460
Instruments .....	2,458	2,774	2,938
Public messages.....	717,104	768,248	844,668

On the 1st of January, 1858, this company had sixty-eight agreements with

railway companies and public offices for their business messages. The number of such messages is not recorded, but is estimated as amounting to three times the number of the messages sent by the general public. This company also furnished intelligence, on the 1st January, 1858, to 142 provincial journals, and to fifty-five different reading-rooms, but no record is kept of the number of those messages.

## BRITISH AND IRISH MAGNETIC.

	1855.	1856.	1857.
Miles of telegraph.....	3,283	3,324	3,441
Miles of wire.....	14,926	15,008	15,688
Stations for public.....	201	209	230
Instruments.....	492	510	574
Public messages.....	264,727	316,420	356,186

The number of messages to and from the continent, transmitted jointly by this company and the Submarine Telegraph Company, and the number of messages for the railway companies, newspapers, and newsrooms, are not included with the messages for the public, but are estimated at about 250,000 messages per annum.

## SOUTHEASTERN RAILWAY.

	1855.	1856.	1857.
Miles of telegraph.....	285	301	301
Miles of wire.....	1,083	1,220	1,296
Stations for public.....	73	81	80
Instruments.....	180	145	141
Public messages.....	35,698	36,855	40,309

The Southeastern has no working arrangements with either of the electric telegraph companies.

The total of recorded messages by these companies for three years may therefore be calculated as under :—

	1855.	1856.	1857.
Miles of telegraph.....	8,766	9,023	9,379
Miles of wire.....	43,720	44,855	46,482
Stations for public.....	678	713	770
Instruments.....	3,080	3,429	3,653
Public messages.....	1,017,529	1,121,523	1,241,163

## NUMBER OF LETTERS.

The number of letters mailed annually in Great Britain and the United States has, according to official reports, been as follows :—

## NUMBER OF LETTERS MAILED.

	United States.	Great Britain.
1847.....	47,587,757	322,146,243
1848.....	52,364,819	328,830,184
1849.....	60,159,862	337,399,199
1850.....	69,426,452	347,069,071
1851.....	83,252,735	360,647,187
1852.....	95,790,524	379,501,499
1853.....	102,139,148	410,817,489
1854.....	119,604,418	443,649,301
1855.....	126,723,425	456,216,716
1856.....	121,450,401	478,393,803
Total.....	888,527,549	3,864,670,152
Population, 1851.....	23,674,706	27,435,325

The number of letters in Great Britain has been more than four times as many as in the United States, and the average, per head, throughout the United States has been 4.9 letters per head, and in Great Britain 17 letters per head. These results, somewhat surprising when we consider that the people of the United States are more given to writing and reading than those of most countries, are to be accounted for only by reason of the better postal facilities of England. Not only is the rate uniform and cheap, but the delivery prompt, easy, and safe. This is particularly the case in the great cities. If a person conversant with the London Post-office arrangements should visit that of New York, he would have no difficulty in accounting for the smaller correspondence here. There is a great difference in the number of letters written in different sections. The people in Louisiana write over five-and-a-half letters to a person, in Missouri about three-and-a-half, in Indiana only three, in the Territories a little over three, and in Massachusetts ten. One or two such States as Massachusetts, New York, or Pennsylvania, have as many letters, and contribute as much revenue, as nearly a dozen States and Territories that have little commerce and a scattering population.

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## RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

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### RAILROAD CONVENTION.

The difficulties that were encountered by the great East and West trunk railroads led to a convention to agree upon terms for the regulation of future traffic. This is the first great movement of the kind which has resulted from our railroad system, and we append the terms of the agreement. The following is the official agreement entered into by the railway convention, which finally adjourned on Saturday last :—

At a meeting of the representatives of the Baltimore and Ohio, Pennsylvania, New York and Erie, and New York Central Railroads, held at the St. Nicholas Hotel, in the city of New York, on the 25th day of September, 1858, on motion, Charles Moran, President of the New York and Erie, was appointed chairman, and Samuel L. M. Barlow, secretary. After full discussion, the following agreement was adopted :—

1st. Neither party shall hereafter, directly or indirectly, employ runners or agents of any description for the purpose of soliciting passengers, or allow any compensation, by way of commission, drawback, or otherwise, for procuring passengers for their respective roads; but each party shall be at liberty to employ one person as a traveling agent, to inquire into the sale of tickets by connecting roads, and whether the company such agent represents is fairly treated by other roads as to its passenger business at competing points.

2d. Neither company shall in any way, directly or indirectly, procure any other company, its officers or agents, to exercise any influence to favor the traffic over its road in preference to those of the other parties hereto—it being intended that business shall be left to take its own course and its most convenient channel.

3d. The parties hereto will not employ freight agents at the West, except at lake and river ports, nor at any other points not on their respective roads proper, except at Boston, New York, Philadelphia, and Baltimore. No agents for soliciting freights shall be employed by either company, directly or indirectly, at any points not on their respective roads proper other than those above mentioned, and no contract shall be made for the transportation of freight, except from day to day, at the current rates for the time being.

4th. All barrel freight, except flour, shall be carried only by actual weight.

5th. A tariff on all freights from New York, and to and from all competing points, East and West, shall be fixed and agreed upon by the parties hereto, without power or discretion of agents of any grade to reduce the same, and no drawback, drayage, or commission shall hereafter be allowed, directly or indirectly, to any shipper of goods. In fixing the tariff rates the same rates shall be charged, East and West, on first, second, and third classes.

6th. The Pennsylvania Railroad Company and the Baltimore and Ohio Railroad Company shall establish the rates of transportation from Boston to competing points, which rates shall also be those charged by the New York Central and the New York and Erie Companies by rail and water. During the continuance of summer rates the New York companies shall charge additionally on all articles transported from Boston by all rail, on first-class, ten cents per hundred, and on second, third, and fourth classes, six cents per hundred, and during the period for winter rates they shall charge, over and above the rates of the Pennsylvania Railroad Company and the Baltimore and Ohio Railroad Company, ten cents per hundred on the first and second classes, eight cents per hundred on third class, and five cents per hundred on fourth class, or the said Pennsylvania and Baltimore and Ohio Railroad Companies shall be at liberty to charge all rail rates and insure the marine risks on the Atlantic Ocean and the Ohio River. Provided that all the rates from Boston to points of competition at the West shall not be fixed to exceed those of the rail by the Grand Trunk and the Ogdensburg lines; and provided further that the minimum of all rail rates from Boston shall not be less than from New York to the same points.

7th. Each of the four lines shall be at liberty to insure at their option respectively all goods shipped to and from New York to their respective termini, viz., Piermont, Albany, Philadelphia, and Baltimore; and that the differences between water and rail and all rail to Cincinnati shall be reduced to eight cents per hundred pounds on first and second classes, and to five cents per hundred pounds on third and fourth classes, and that without the joint assent of the Pennsylvania and Baltimore and Ohio roads the New York Central and New York and Erie Companies shall not hereafter make the rates on merchandise and live stock between New York and Columbus, or points west, south, or southwest of Columbus, less per ton per mile than the rates charged for the same between Cleveland and New York by all rail.

8th. The differences herein agreed to between all rail and water and rail rates to cover the water communication by lake and river, as well as by Atlantic Ocean; but whenever the local rates of any of the four roads and their connecting lines joined to water rates shall reduce the through rates to any point, the competing roads shall have the right to reduce their through rates to such point so as to leave only the above mentioned differences between the water and rail and the all rail rates.

9th. No bills as to trains, fares, or freights, except such as are posted in suitable frames, either at offices or hotels, or other public places, shall hereafter be used or circulated by either company. Such bills shall be posted only between the seaboard and the western termini of the roads of the respective parties. No advertisement or bill of either company shall in any way depreciate the line, route, or accommodations of the others; but all such bills and advertisements shall be confined to a statement of the times of departure and arrival of the connections with other routes of travel, and the rates and conditions of fares and freights.

10th. The classification of freights eastward and westward shall be uniform in all respects on the four lines, and shall be according to the schedules of classification hereto annexed.

11th. Each party shall protect the others from any variations from the said classifications, or of rates of freight by any express or transportation company, (by contract in any form either by car-load or otherwise,) which may use said roads respectively, on all freights destined to any competing point; and further, to insure such protection, no freight shall be carried on time by either of the

four companies, or by any express company, in any form over the roads of either of the four companies, at a less charge than ten per cent advance on regular all rail tariff rates; and any connecting line which shall influence traffic by a drawback to the shippers or to any express company, shall no longer have their coupon tickets sold by any of the four lines, nor shall through freight arrangements be continued with them thereafter, so long as they shall continue to allow said drawback.

12th. In case of any doubt of any agent of either of the companies as to the classification of any article of freight, he shall, if there be agents of the other companies or either of them at such place, consult such agent or agents in regard thereto, and, if they do not agree, the question shall be referred by them without delay to the proper officers of their respective roads.

13th. The rates and charges and freights to and from all common points shall be the same by each of the four lines, and any agreement which has heretofore been made with other persons and corporations for the reduction of the rates, or for the payment of commissions or otherwise, by which they shall be enabled to transport property at the rates which may be fixed upon from time to time, under this agreement, shall be at once terminated by the respective companies.

14th. The rates of transportation upon all live stock to and from all competing points shall be uniform per hundred pounds. No car-load to be charged for as less than 18,000 pounds, and all excess of weight to be charged extra in same proportion.

15th. All changes or modifications of the rates of freights or its classification must be made by the consent of the parties hereto, signified by their respective presidents, in writing.

16th. No free passes shall hereafter be issued by either of the parties hereto, except to the employees of each company employed at or between the termini of the roads of the respective companies, and to drovers in charge of live stock on stock trains eastward; but they shall be limited to one person for either one or two car-loads of live stock; to two persons for not less than four car-loads; to three persons for not less than six car-loads, and to four persons for not less than ten car-loads or more, who shall, in all cases, be required to pay regular fares on their return.

17th. The rates of passenger fares and extra baggage on the four lines shall be uniform between all common points, predicated on the fares of the New York and Erie and New York Central Railroads, being nine dollars from the first day of November until the first day of April in each year, and until the New York and Erie Road shall have given ten days' notice of an intention to reduce to eight dollars, and after such notice to the first day of November, eight dollars. Fares to and from all Western points to be divided in accordance with the resolutions of the Indianapolis convention, adopted April 14th, 1858.

18th. Neither company shall carry United States passengers or other passengers at less than first-class fares, except emigrants going westward; and no emigrants shall be carried at first-class speed—it being understood that the Baltimore and Ohio Road may, when their emigrant traffic is not sufficient to fill one car, send such emigrant passengers in a second-class car attached to their regular passenger trains; but this exception shall expire on the first day of April next, provided notice of a desire to terminate it at that time shall be given by either of the three lines to the Baltimore and Ohio Road.

Eighty pounds of baggage per passenger shall be allowed, and no charge shall be made for excess, unless the whole weight is over one hundred pounds, in which case the whole excess over eighty pounds shall be charged for, at not less than double first-class freight rates.

19th. In the event of any question arising as to the true meaning of any part of this agreement, the same shall be construed liberally, so as to meet the real intention of the parties as hereinbefore expressed, and to place all on a fair and equal footing in their competition for the passenger and freight traffic over their respective lines; and should any point of difference not herein provided for arise, the same shall be settled with reference to the general principles hereby established, and on the basis of equal and exact justice to all parties.

20th. It is further agreed between the parties hereto, that Samuel L. M. Barlow, of the city of New York, shall be appointed as the mutual agent and umpire of all the roads assenting to this agreement, to whom all complaints of violation of its provisions shall in the first instance be made in writing, with the proofs of such alleged violation. He shall thereupon give immediate notice in writing, with a copy of the proof so furnished, to the president of the road complained of, and shall fix a time within five days, or as soon thereafter as the nature of the complaint will admit, for hearing the parties and considering the proofs on both sides; and he shall thereupon forthwith determine as to the justice of the complaint so made, and give notice to all the parties hereto of his decision, and he shall be at liberty to fine the offending road not less than \$500, and not more than \$2,000—one-half of such penalty to accrue to the informer, and the other half to the road making the complaint. In case the violation complained of shall be determined by him to have been proven, then the company thus found to be in fault shall, within five days after notice of his decision, pay, through such umpire, whatever sum he shall determine, not exceeding \$2,000, and if such violation shall be decided by him to have been willful, and to have been committed by any officer, agent, or agency of such company, then such officer, agent, or agency shall, within the same time, be dismissed from all connection with such road. The compensation of such umpire shall be fair and equitable for the service performed, and shall be paid by all the parties hereto in equal proportions.

21st. In the event of any question arising as to the true meaning of any part of this contract in regard to rates or classifications, the party complaining shall, in the first instance, refer the question to the umpire hereby provided for, and until after his decision no other measure of redress shall be resorted to by the complaining party. All the parties hereto agree that any such complaint shall be thoroughly and speedily investigated by the superior officers of the company complained of, and that every facility shall be given to the umpire for the purpose of fully investigating and determining such complaint, and that, whether by decision of the umpire, a fine shall be imposed, or an officer, agent, or agency be held subject to dismissal, such decision shall be immediately and fully complied with by the road complained of.

22d. Should any difficulty arise in carrying this agreement into effect, the parties hereto, in view of the importance of the objects sought to be obtained, agree in good faith to endeavor, by mutual arrangements and concessions, to secure the practical working of the principles hereby recognized, but for the purpose of eventual protection to their respective rights, either party may, on fifteen days' notice, in writing to the others, elect to terminate this agreement, and the same shall thereupon be terminated accordingly, and thenceforth cease to have any further effect or operation, but no party hereto can withdraw from one or more sections of this agreement without abrogating the whole agreement.

23d. This contract to take full effect on the signature thereof by the representatives of the four lines, and the rates of freight, and the passenger fares hereby established, shall go into operation on the first day of October next.

ERASTUS CORNING, President New York Central Railroad Company.  
CHARLES MORAN, President New York and Erie Railroad Company.  
JOHN W. GARRETT, on behalf of Baltimore and Ohio Railroad Company.  
J. EDGAR THOMSON, President Pennsylvania Railroad Company.

The following resolution was unanimously passed by the convention, and ordered to be published in the New York papers:—

*Resolved*, That the thanks of this convention be tendered to Samuel L. M. Barlow, Esq., President of the Ohio and Mississippi Railroad Company, for his laborious, energetic, and valuable services in bringing about this meeting, and so successfully promoting the restoration of harmonious relations between the managements of the great Eastern and Western lines, on whose judicious action the value as remunerative investments of such vast properties depend.

#### CONVENTION OF RAILROAD PRESIDENTS—ADVANCE OF RATES.

The result of the Convention of Railroad Presidents is a general advance of passenger rates from all the Western points to New York of three dollars, and

to Philadelphia of a very slight amount, so as to make the rates to both points the same as they were previous to the reduction. These rates, as well as the following freight charges to New York, will go into effect after the ratification of the four lines interested:—

RATES PER TON FROM NEW YORK TO THE WEST.

	1st class.	2d class.	3d class.	4th class.
Cincinnati.....	\$1 20	\$0 88	\$0 70	\$0 55
Dayton .....				
Xenia.....				
Piqua.....				
Louisville.....	1 35	1 02	0 83	0 63
Cairo.....	1 75	1 40	1 15	0 85
Evansville.....	1 70	1 35	1 10	0 80
St. Louis.....	1 70	1 35	1 20	0 80
Alton.....	1 65	1 30	1 05	0 75
Vincennes.....	1 55	1 20	1 00	0 70
Columbus.....	1 15	0 83	0 65	0 53
Newark.....				
Zanesville.....				
Springfield, Ohio.....	1 18	0 88	0 70	0 54
Urbana.....				
Cleveland.....	0 90	0 68	0 55	0 40
Sandusky.....	1 00	0 76	0 63	0 46
Toledo.....	1 04	0 79	0 64	0 48
Mansfield.....	1 07	0 82	0 65	0 51
Crestline.....				
Wooster.....	1 35	1 02	0 83	0 63
Madison, Indiana.....				
Terre Haute.....	1 50	1 13	0 90	0 73
Indianapolis.....	1 25	0 93	0 75	0 53
Jeffersonville.....	1 35	....	....	....
New Albany.....	1 45	1 12	0 93	0 73
Bellefontaine.....	1 05	0 83	0 68	0 52
Fort Wayne, Indiana.....	1 27	0 99	0 80	0 60
Forest, not less than Bellefontaine.....	....	....	....	....
Peru, Indiana.....	1 34	1 05	0 84	0 65
Logansport.....	1 36	1 07	0 85	0 66
Lafayette.....	1 39	1 09	0 89	0 68
Attica.....	1 44	1 14	0 90	0 70
Williamsport.....				
Danville.....	1 50	1 15	0 95	0 73
Tolono.....	1 59	1 23	1 00	0 76
Decatur.....	1 65	1 28	1 05	0 79
Springfield, Illinois.....	1 68	1 30	1 05	0 84
Jacksonville.....	1 74	1 36	1 14	0 86
Naples.....				
Chicago.....				
	1 55	1 16	1 00	0 76

EFFECT OF RAILROADS.

From a late address to the people of Tennessee we extract the following as the effect of railroads upon property:—

I will take this occasion to notice an assertion (I will not call it an argument) which I am informed has sometimes been made in your State, in reference to the financial condition of Tennessee. It has been said that Tennessee was greatly embarrassed by the aid she had given to railroads—that she was heavily involved in debt, and that if she ever paid her debt, she would be compelled to resort to taxation for that purpose. These assertions are made by those who show themselves to be entirely ignorant of her true condition. At the session of the Le-

gislature, which met in October, 1851, the first law was enacted giving State aid to railroads. By the express provisions of the statutes in Tennessee, in reference to railroads, it is made the duty of the various railroad companies to pay the interest upon the bonds issued for their benefit as it becomes due, and also to pay into the State Treasury, after they have been in operation five years, two per cent per annum, which is to be invested in State bonds to be used as a sinking fund to redeem the bonds which the State has furnished to each railroad company as the bonds mature. Thus far, every railroad company in the State has complied with the law, although many of them are yet in an unfinished condition. The State retains a lien upon the roads to secure herself against loss. Under the Tennessee system, which I have not time here fully to explain, the State is rendered perfectly secure, although, where roads are unwisely undertaken, or injudiciously built, the individual stockholders may sustain a loss. The amount of bonds issued or indorsed by the State for railroads was, as appears by the last governor's message, \$15,589,000. Now, let us see what has been the increase in the value of the taxable property of Tennessee. The taxable property does not include slaves under twelve years of age, nor the greatest portion of her live stock, these not being subject to taxation. The following tables, made out from the Controller's reports in 1851 and 1857, will show what has been the increase in the value of property in Tennessee since 1850:—

Value of land, 1856.....	\$139,378,342
“ “ 1850.....	84,110,174
Increase .....	\$55,268,268
Value of slaves in 1856.....	\$82,319,723
“ “ 1850.....	55,441,455
Increase .....	\$26,878,268
Value of town lots in 1856.....	\$27,039,565
“ “ 1850.....	12,811,177
Increase .....	\$14,228,388
Value of other taxables in 1856.....	\$11,531,981
“ “ 1850.....	7,195,377
Increase .....	\$4,386,604
Total increase .....	100,761,428

The Controller's report to the Legislature in 1857 shows only the amount and value of taxable property in 1856, and there has doubtless been a large increase since that time. The value of land in Polk County in 1850 was only \$387,479, and in 1856 it had increased to \$1,674,424. Wherever railroads have been built, there has been the great increase in the value of property.

#### THE FIRST STEAMBOAT ON THE HUDSON.

The following communication, which we copy from the New York *Commercial Advertiser*, will, we doubt not, prove interesting to our readers. At all events, it is worthy of record in the more permanent pages of the *Merchants' Magazine*, as matter of history:—

CATSKILL, September, 1857.

I am, as far as I know, the only person now living, who was on board the first steamboat on her first trip from New York to Albany. I do not refer to the trial trip which was made in 1807, in what may be termed a scow, but to the first trip made by the old "North River," the first passenger boat propelled by steam.

The craft employed by Mr. Fulton, on the "trial trip," (called the Clermont),

was taken to what was then called lower Red Hook, and in the winter of 1807 and 1808, was hauled out on ways to be enlarged and converted into a commodious steamboat. She was launched about the 1st of May, and called the "North River." She was taken down to New York, by Captain Samuel Jenkins, who had her in temporary charge, until Captain, afterwards styled "Commodore," Wiswall should be able to assume the command. On arriving at New York she was taken to the dock at the foot of Dey-street, where the machinery was put on board, and the cabin and ship carpenter's work were completed. This was done with a rapidity which in those days was considered extraordinary—Mr. Fulton himself overseeing and attending to every part. He was usually on board as early as five o'clock in the morning, and would be there almost the entire day. I never knew a more industrious, indefatigable, laborious man.

"Fulton's new steamboat" was the wonder of the day. She was visited daily by hundreds of the curious. During the time preparations were going forward, trials were made of the working of the machinery, by hauling out into the stream, putting on steam, and starting the engine. This was no small affair, for when the engineer gave the notice "all ready," all hands were called, (carpenter's, joiners, painters, caulkers, laborers, and crew,) to give momentum to the ponderous balance or fly wheel, to prevent what is termed "catching on the center." During one of those trials, when going up the river at the rate of six or eight miles an hour, Mr. Fulton stood looking over the bow of the boat for fifteen or twenty minutes, apparently wholly absorbed. Suddenly he wheeled and addressed a friend who stood near him, with great enthusiasm, "my good friend she is a fine boat, and our success is certain."

Commodore Wiswall was now in command. At the hour appointed (2 o'clock, A. M.,) for her departure for Albany, Chancellor Livingston, with a number of invited friends came on board, and after a good deal of bustle and no little "noise and confusion," the boat was got out into the stream, and headed up the river. Steam was put on and sails were set, for she was provided with large square sails attached to masts, that were so constructed that they could be raised and lowered as the direction and strength of the wind might require. There was at this time a light breeze from the south, and with steam and sails a very satisfactory rate of speed was obtained. Fast-sailing sloops were passed with ease, the machinery worked finely, and everything seemed to promise well. After a time, however, it was discovered that steam was escaping from the boiler. This boiler was constructed of wood, a cylinder perhaps twenty feet long and ten in diameter, bound with heavy iron bands, with iron tubes extending from the lower part into the furnace. The heat imparted to the iron bands by the steam, produced a shrinking of the wood directly under them; whilst the space between them would swell from moisture imparted by the steam, so that the edges of the planks would be uneven, leaving open spaces through which the steam escaped. How could the difficulty be obviated? Resort was had to covering the boiler with blankets and carpets, which prevented the evil to some extent, and as the favorable wind continued, we kept on the even tenor of our way, and just before sunrise next morning we were at Clermont, the residence of the Chancellor, who with his friends landed, and the boat proceeded to Albany, where she arrived at 2 or 3 o'clock, P. M.

"Fulton's new steamboat," was here, too, the wonder of the day, and was visited by great numbers. There seemed but one opinion, viz:—that the enterprise would prove an entire failure. A member of one of the largest freighting establishments in the city of Albany, which relied upon the carrying of passengers to and from New York for a material part of its income, in conversation with the writer, remarked, sneeringly, "Fulton will never succeed, but it is all well enough, for him to make the experiment. He is only sporting with the Chancellor's money, who has enough to experiment upon without injuring him." Within two years this same gentleman was a large stockholder in the opposition boats started by an association in Albany. These boats, however, were in a short time laid up under an injunction issued by the Chancellor, and were never afterward run on the river; so that my friend lost almost the whole of the money he ventured in experimenting on the rights of others.

After two or three days' stay in Albany, spent in making some repairs and alterations in the machinery, caulking the boiler to prevent the escape of steam, and supplying deficiencies discovered on the passage up the river, the return passage was commenced and prosecuted with about the same speed and success. When within about thirty miles of New York, the tubes that run from the boiler into the furnace, one after another gave way until the fires were entirely extinguished, and the remainder of the passage was made by the use of the sails. On arriving at New York she was laid up until a new boiler could be constructed, which was done of heavy sheet copper in about two months' time, when she was again started. From that time she accomplished her trips pretty regularly, but how differently from the boats of the present day. Instead of making a passage in nine or ten hours, she consumed from twenty-four to thirty. The landing of passengers at the different landing places was effected with much trouble and great loss of time, and no little terror to those of weak nerves.

#### MEMPHIS AND CHARLESTON RAILROAD COMPANY.

We have received the eighth annual report of this company, embracing the convention of stockholders held at Huntsville on the 9th of August.

There is certainly much practical good sense and skill displayed in the management of a great public work like this, when results approximate so near to estimates as is shown in the following :—

The board in their last report, estimated the receipts of the road from 1st July, 1857, to 1st July, 1858, at \$1,000,000; expenses at \$450,000—net profits, \$550,000. The actual result of the year's business, shows that the receipts and expenditures are as follows :—

Receipts.....		\$964,410 65
Expenses—Eastern division.....	\$197,714 63	
Western division.....	250,558 12	
		448,272 80
Net earnings .....		\$516,272 85

“The estimates of the board,” continues the president, “for the past year would have been fully realized, but for the extraordinary floods of December and April, which increased its expenses between thirty and forty thousand dollars over and above its ordinary expenses.”

#### SALE OF THE PENNSYLVANIA CANALS.

The Philadelphia *Ledger* remarks :—

The sale of the State canals has been finally consummated, Mr. Moorhead, the President of the Sunbury and Erie Railroad Company, having just concluded with the Governor, State Treasurer, and Attorney-General, the closing act of the entire transaction, namely, the paying over to the Commonwealth, as provided in the third section of the law authorizing the sale, 75 per cent of the excess of the price, three-and-a-half millions, at which the canals were sold to the Sunbury and Erie Railroad Company. This excess amounted to *two hundred and eighty-one thousand two hundred and fifty dollars*. This payment completes this very important sale, and we are glad to see it has been done with a promptness auguring well for the good faith of the companies in the vigorous prosecution of the road to completion. If the president of the company shall succeed in his efforts to complete the road through to Erie during the administration of the present executive of the State, as he promises to do, we think he may fairly lay claim to the title of the Napoleon in railroad enterprise. It will be a great achievement.

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**JOURNAL OF MINING, MANUFACTURES, AND ART.**


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**MANUFACTURES OF PHILADELPHIA.**

EDWIN T. FREEDLY, of Philadelphia, has published a work, entitled "Philadelphia and its Manufactures: a Hand-book exhibiting the Development, Variety, and Statistics of the Manufacturing Industry of Philadelphia in 1857, together with Sketches of remarkable Manufactories, and a List of Articles now made in Philadelphia," which, from the vast amount of information embraced within its pages, should be widely circulated among all classes of our citizens. The details given of all descriptions of goods are most interesting, showing the superiority of Philadelphia manufactures, both in quantity and quality, as to many of the most important branches, over any other city of the Union. If our merchants were to distribute copies of this work among their customers from the various sections of the Union, they would doubtless be amply repaid in the increased demand for the articles they produce or offer for sale. This volume contains the following summary of the aggregate value of articles produced in the city for the year ending June 30th, 1857:—

Agricultural implements, seeds, &c., (estimated).....	\$500,000
Alcohol, burning fluid, and camphene.....	1,022,140
Ale, porter, and brown stout.....	1,020,000
Artificial flowers.....	85,000
Awnings, bags, &c.....	91,750
Assaying and refining precious metals, including actual expenses of United States Mint, \$430,000.....	850,000
Barrels, casks, shooks, and vats.....	715,000
Beer, lager and small.....	1,280,000
Blacking, ink, and lampblack, (estimated).....	500,000
Bolts, nuts, screws, &c.....	411,000
Book and periodical publishing, exclusive of paper, printing, binding.....	818,000
Book-binding, blank books, and marble paper.....	1,230,000
Boots and shoes.....	4,141,000
Boxes, packing, (estimated).....	500,000
Brass articles.....	830,000
Bread, bakers', (including crackers,) ship-bread, &c.....	5,600,000
Bricks, common and pressed.....	812,000
Britannia and plated ware.....	380,000
Brooms, corn and other.....	104,000
Brushes.....	225,000
Candles, adamantine, and oleine oils.....	570,000
Caps.....	400,000
Cards, playing.....	118,000
Carpeting, ingrain.....	2,592,000
Carpeting, rag.....	504,000
Carriages and coaches.....	900,000
Cars and car-wheels.....	550,000
Chemicals, dyestuffs, chrome colors, and extracts.....	3,335,000
Clothing.....	9,640,000
Coffins, ready-made.....	219,000
Combs.....	150,000
Confectionery, &c.....	1,020,000
Copper work.....	400,000
Cordials, bay water, &c.....	200,000
Cotton and woolen goods, exclusive of hosiery, carpetings, &c.....	14,813,968
Cordage, twines, &c.....	810,000

Cutlery, skates, &c.....	\$150,000
Daguerreotypes, cases, and materials, (estimated).....	600,000
Edge-tools, hammers, &c.....	127,000
Earthenware, fire-brick, &c.....	647,000
Engines, locomotive, stationary, and fire.....	3,428,000
Engraving and lithography.....	570,000
Envelops and fancy stationery.....	150,000
Flooring and planed lumber.....	370,000
Flour.....	3,200,000
Fertilizers.....	503,000
Fringes, tassels, and narrow textile fabrics.....	1,288,000
Furniture, (estimated).....	2,500,000
Furs.....	350,000
Gloves, buckskin and kid.....	150,000
Glue, curled hair, &c.....	775,000
Gold leaf and foil.....	325,000
Glassware.....	1,600,000
Hardware and iron manufactures, not otherwise enumerated.....	1,169,000
Hats, silk and soft.....	800,000
Hose, belting, &c.....	175,000
Hosiery.....	1,808,150
Hollow-ware, exclusive of stoves, &c.....	1,250,000
Iron, bar, sheet, and forged.....	1,517,650
Jewelry and manufactured gold.....	1,275,000
Lamps, chandeliers, and gas fixtures.....	1,300,000
Lasts and boot-trees.....	86,000
Lead pipe, sheet lead, shot, &c.....	235,000
Leather, exclusive of morocco.....	1,610,000
Machinery.....	1,912,000
Machine tools.....	350,000
Mahogany and sawed lumber.....	580,000
Maps and charts.....	400,000
Marble work.....	860,000
Mantillas and corsets.....	330,000
Matches, friction.....	125,000
Medicines, patent, and prepared remedies.....	1,300,000
Millinery goods, including bonnet frame wire, &c., but excluding straw goods and artificial flowers.....	360,000
Mouldings, &c.....	300,000
Morocco and fancy leather.....	1,156,250
Musical instruments.....	485,000
Mineral waters.....	350,000
Newspapers, daily and weekly, (estimated).....	1,370,000
Oil cloths.....	289,000
Oils, linseed, lard and tallow, rosin, and railroad greases.....	2,131,230
Paint, zinc, and products of paint mills.....	770,000
Paper.....	1,250,000
Paper hangings.....	800,000
Paper boxes.....	175,000
Patterns, stove and machinery.....	115,000
Perfumery and fancy soaps.....	850,000
Picture and looking-glass frames, (estimated).....	750,000
Preserved fruits, &c., (estimated).....	350,000
Printing, book and job.....	1,183,000
Printing inks.....	160,000
Provisions, cured meats, packed beef, &c.....	4,000,000
Rifles and pistols.....	120,000
Saddles, harness, &c.....	1,500,000
Safes.....	150,000
Sails.....	135,000
Sash, blinds, doors, &c.....	250,000
Saws.....	510,000
Scales and balances.....	145,000
Shirts, collars, bosoms, and gentlemen's furnishing goods.....	1,187,000

Shovels, spades, hoes, &c.....	\$397,000
Show cases.....	55,000
Sewing silk.....	312,000
Silverware.....	450,000
Soap and candles, exclusive of adamantine candles.....	1,487,600
Springs, railroad and coach.....	238,000
Spices, condiments, essence of coffee, &c.....	350,000
Starch.....	155,000
Steel, spring and cast.....	283,500
Stoves and grates.....	1,250,000
Sandstone, granite, slate, &c.....	300,000
Straw goods, including hats.....	600,000
Surgical and dental instruments, trusses, and artificial limbs.....	350,000
Sugar, refined, and molasses.....	6,500,000
Teeth, porcelain.....	500,000
Tin, zinc, and sheet-iron ware.....	1,200,000
Tobacco manufactures, cigars, snuff, &c.....	3,256,000
Trunks and portmanteaus.....	318,000
Turnings in wood.....	550,000
Type and stereotype.....	650,000
Umbrellas and parasols, including umbrella furniture, ivory and bone turning, whalebone cutting.....	1,750,000
Upholstery, (estimated).....	500,000
Yarnishes.....	239,000
Vessels, masts and spars, blocks and pumps, &c.....	1,760,000
Vinegar and cider.....	300,000
Wagons, carts, and drays.....	815,000
Watch cases.....	942,000
Whips.....	175,000
Whisky, distilled.....	630,000
Whisky, rectified.....	2,524,500
White lead.....	960,000
Willow-ware, baskets, &c., (estimated).....	120,000
Wire-work, (estimated).....	260,000
Wooden and cedar ware.....	150,000
Works in wood, not otherwise enumerated.....	100,000
Miscellaneous articles, not otherwise enumerated, (estimated).....	3,000,000
Total annual product of manufacturing industry in Philadelphia.....	\$145,348,738
Add for leading branches in the vicinity of Philadelphia.....	28,500,000
Total for Philadelphia and vicinity.....	\$171,848,738

According to the census of 1850, the average productive power of each person employed in manufactures in Philadelphia was about \$1,100 per annum, a rate confirmed by our own investigations, and the capital invested was about one-half the aggregate of production. Assuming that these relative proportions were correct, though the aggregate amounts were manifestly erroneous, and assuming they are applicable now, the respective items would stand as follows:— Capital invested in manufactures in Philadelphia, \$72,500,000; hands employed, 132,000; product, \$145,348,738.

#### PROGRESS OF THE COAL TRADE.

The statistics of the coal trade for thirty-two years show a remarkable increase in the amount and value of the production of coal. At the present time the value of the coal annually mined in this country is nearly equal to the yearly production of gold in California; and at the present rate of increase the coal crops will soon be of greater value. It appears that in 1820, the first year in

which coal was mined in our State, the amount of production was but three hundred and sixty-five tons all told. The advance to the present time may be judged by the increase at the respective intervals marked below :—

Production in 1825.... tons	34,883	Production in 1845... tons	2,023,052
“ 1830.....	174,764	“ 1850.....	3,332,614
“ 1835.....	560,758	“ 1857.....	7,868,948
“ 1840.....	805,414		

We now are but at the beginning of the development of our gigantic national resources, and the present amount of coal sent to market from our own immediate coal fields will, fifty years hence, appear as inconsiderable as the amount sent twenty-five years ago does to us now. Great Britain, with an area of coal deposits less than 12,000 square miles, and a population of about 30,000,000 inhabitants, raises at the present time nearly 68,000,000 of tons. In the next twenty years the population of the United States will not be less than 50,000,000. The area of coal fields, as at present traced, exceeds 133,000 square miles. Is there any improbability in the inference that, with full development of these coal fields, the annual production in the short period of the next twenty years will be proportionate to that of Great Britain, and that it thus may be made to reach, if demanded, the enormous amount of 750,000,000 of tons?

#### THE PRESERVATION OF WINE.

Wine is sometimes sulphurized as a preservative, and often so excessively as quite to taint it. The sulphur is burnt in the casks and bottles, and then the wine is poured in. If, by chance, the sulphur is arsenical, then a slight dose of arsenic is administered to the public, far too innocent to understand whence comes the side-wind which blows them illness and disease. Cloves, cinnamon, lavender, thyme, and other aromatic substances, are used to weaken the influence of the sulphur, and the combination gives a peculiar taste and odor.

They are burnt in the casks together with the strips of linen dipped in sulphur, and the whole horrible medley of taste and smell passes for “bouquet” by the multitude, who believe what their wine merchants tell them, and praise according to price. In France, one-thousandth part of pulverized mustard seed is put in to prevent any after fermentation; but the greatest secret seems to be to preserve the wine from any contact with the outside air.

Some Malaga wine, which had been buried during the great fire of London—that is to say, in sixteen hundred and sixty-six—was dug up twenty years ago, and though nearly two hundred years old, was found perfectly good, well-flavored, and full-bodied. Exclusion of air alone would not have preserved it; sweet and alcoholic, it bore in itself the elements of longevity; had it not been poor in sugar and rich in acids, it would have been dug up a vinous skeleton. Wine kept in wood loses much of its water by evaporation; the same may be said of that kept in leather and skins. By this diminution of water, the alcohol remaining is concentrated and strengthened; but only originally strong wines can be so treated. With weak and acid wines, the very concentration increases the formation of tartaric acid, and that, without the proper counterbalance of alcohol, spoils all. This evaporation does not go on in glass bottles, and Saint Vincent therefore recommended that all bottles should be secured by bladders, not corks, so that evaporation might not be carried on in them. His advice has not been followed.

## RAILWAY IRON MILLS AT BRADY'S BEND, PA.

A correspondent of the Greensburg *Herald*, writing from Brady's Bend, Armstrong County, Pa., where railway iron is extensively manufactured, stated the following :—

These mills produce over 12,000 tons of iron per annum, of a quality, as proved by actual trial, *unsurpassed* by any in the world, and much *superior* to the *imported* article. The labor required to transform the ore into the finished rail is almost incredible, and must be seen to be realized. When in full operation, they give constant employment to nearly 1,400 men, and from 75 to 100 teams. To furnish the metal requires four fall-blast furnaces, capable of melting 54,000 tons per annum. The blast, with the other necessary machinery, is driven by two engines, each of 8 feet stroke, or an aggregate of 160 horse power. The amount of coal used for coke and fuel averages 2,000 tons (50,000 bushels) per week, and is brought from the mines by railroad, of which the aggregate length is at least 25 miles, nearly 18 of it being under ground. The rolling mill is the most interesting part of the works. The building itself covers an area of 225 feet by 150, containing 25 puddling and 9 heating furnaces, which, with the rollers, &c., requires nearly 450 men. In addition to the mill and furnaces, there are also an extensive foundry and machine shop for supplying the necessary castings and machinery, as all the machinery used is manufactured on these premises. One feature in the management of these works, as it is rather uncommon, may be noticed. The company owns over 6,000 acres, in fee simple, besides a mineral right to a large additional tract, and furnishing dwellings to all their employees, may be said to own a town which numbers a population of not far from 4,000 persons.

## FACTS ABOUT TYPE-FOUNDING.

The casting of types by machinery is a comparatively recent process—invented some thirty years ago, and at present, all, or nearly all, the types produced in American foundries, are cast by machines, with the exception of some styles of large, ornamental type. Machines have been sent from the United States to Europe, and others have been invented there, but they have not been much used, except in Germany. They are well known to type-founders in England, but have not been employed by them to much extent. The use of machines for casting has contributed to reduce the price of type, but it is still an expensive article, not so much from the cost of the material, as from the labor required to cast and finish it, each type having to pass through five separate operations.

The first and most important step in type-founding is to prepare the punches. They are pieces of soft steel, upon each of which the engraver cuts a single letter, with all possible accuracy, and they are then carefully tempered. The face of the punch resembles the finished type. Its impression, made in soft copper, is called a matrix; it is the mould which forms the face of the type. The mould of the shank is made of two pieces of steel, which fit accurately to each other and the matrix, and are enclosed in wood for convenience of handling. The type-metal is poured into a funnel-shaped orifice, at the top, and by a peculiar movement of the caster's arm, is thrown into the cavities of the matrix. When the metal is set, the founder detaches the matrix from the face of the type, and the mould is then opened, and the type removed. The overplus of metal which filled the funnel is next broken off, and the sides of the types are rubbed smooth, after which they are secured in frames, and have their ends cut smooth, and the lower one also ground. The process of bearding, which consists in beveling the angle of the body below the letters, is performed at the same time.

## MINIUM OR CINNABAR.

The first of these is the ancient, and the last the modern, name for the same substance, which is a mineral of beautiful shining red color, and is an ore of mercury or quicksilver. Artificially prepared, cinnabar is much preferred to the native, as a pigment, because of its freedom from earthy impurities, and it has long been an object of chemical manufacture, and is generally known as vermilion. It is a compound of sulphur with mercury, each in equivalent proportions. To manufacture it, about five or six parts of mercury are added to one of melted sulphur, and when thoroughly combined, and constantly stirred, heat and light are evolved, and a violent cracking and spitting indicate the termination of this part of the process. The result is a dirty, blackish red mass; this crude product, after being pounded, is mixed with a small quantity of sulphur; this is placed in a glass flask until it is about half full, when it is closed with a charcoal stopper. The flask is then placed on a bed of hot sand, (kept hot by a slow drawing furnace,) and is left to remain thus red-hot for some hours, at the end of which time the cinnabar is found sublimed in the flask.

In Amsterdam, where it was first made, they still pursue a similar method to the one they have always done, but the one we have given is the essence of them all. Of all kinds of vermilion now made, the Chinese is the best, being sold for about six times the price of home made; it has a rich, (almost inclining to carmine) color, and no foreign substance can be detected in it, except a little glue.

At the present time, we apply the term minium to red lead, which is made by roasting lead in a slow reverberatory furnace, having a broad hearth, so that a great surface can be exposed to the action of the heated air. It is kept continually worked up and down until the whole mass changes to the well known color of red lead. Minium is often used to adulterate vermilion, and it is a fair supposition that the reason why our ancestors called them both by the same name was, that they did not know which was which.

## EXTRACTION OF SILVER FROM COPPER ORES.

Kocubly, in speaking of the extraction of silver from copper ores, at the Malden Smelting Works, near Freiberg, says that the process observed is an economical and efficient one. The copper stone, containing from 50 to 70 per cent of copper, 8 to 15 per cent of lead, and 0.20 to 0.45 per cent of silver, is stamped, sifted, and roasted in a double furnace with two hearths, one above the other, first in the upper hearth, and then in the lower one. During the first stage of the roasting, sulphides of copper are converted into neutral and basic sulphates, which are again decomposed during the second stage of the roasting, giving off sulphuric and sulphurous acids, and being for the most part converted into oxyd of copper, while sulphate of silver and a small portion only of the sulphate of copper remain undecomposed. The roasted mass is again stamped and ground, and mixed with from 4 to 8 per cent of chloride of sodium, and again roasted. By this means the copper is converted into chloride, and chlorine compounds of the other metals are also produced. After this roasting is finished the mass is extracted in wooden tubs, under hydrostatic pressure. At first, lukewarm water is used for this purpose, and when the greater part of sulphate of soda and other salts have been removed, a solution of chloride of sodium is substituted. This dissolves the chloride of silver into precipitating tanks containing copper, which is dissolved while the silver is precipitated.

**THE MANUFACTURE OF SUGAR.**

According to the process of making and purifying sugars due to the ingenuity of Mr. M. Robinson, a saturated mixture of alum and lime is applied to the juice, in the proportion of two pounds of the mixture to a hundred gallons of the juice. These being intimately mixed, the acid is then neutralized by the application of milk of lime, in the proportion of three pounds to a hundred gallons. If there be an excess of acid, it will be discovered by the application of the test-paper usually employed by chemists to detect acids, and more milk of lime is to be added; and if there be an excess of alkali, it may be discovered by the application of the test-paper used for detecting alkalies, and more juice is added. When the mixture ceases to affect either the test for acid or alkali, the impurities will be precipitated, and may thus be separated; and the juice thus purified is to be subjected to the usual mode of clarification and concentration.

Pure raw sugar is now obtained direct from the sugar-cane, without having undergone any subsequent process of decolorization or refining, prepared by affecting the last stages of the concentration of the juice of the cane in a vacuum, at a temperature insufficient to produce any chemical changes in its constituent parts. By this improved and scientific process of manufacture, no molasses or uncrystalizable sugar is formed, and there is consequently an increase in the quantity of sugar obtained of twenty-five per cent. This establishes the fact, that molasses is not an educt of the cane, but merely a product of the former operation, from the intense and long-continued degree of heat employed in the processes. The sugar thus obtained, is in perfect, pure, transparent, granular crystals, developing the true crystalline form of the sugar, and being entirely free from the least portion of uncrystalizable sugar or coloring matter.

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**TANNING DEER SKINS.**

The mode of preparing deer skins for market as practice at the West is as follows:—

Place the skins in a barrel of water, with a sufficient quantity of ashes to make a weak ley. Let them remain till the hair will come off easily by scraping with the graining knife, then grain them with the back of a shoe, butcher, or graining knife—a graining knife is the best. Where shoe or other knives are used, drive the edge of them into a round stick of sufficient length to handle easily—use a buckeye log or some soft wood to grain on. When done, hang the skins up and let them dry till they are hard and flinty, then soak in brain water, with a little soft soap added. Have the water about blood warm. After they become well softened, wring dry by folding the ends of the skin together around some solid post, take a stick and run through the other end to wring with, and wipe off any water with a cloth that may remain in the folds while wringing. After wringing, pull the wrinkles out by stretching with the hands—place your skins (hung loose) in an old barrel or dry goods box over the extremity of a covered trench of suitable dimensions, leaving sufficient space for the smoke to pass to the skins. A trench twelve or fifteen feet long is best, so as to allow the smoke to pass cool. Rotten wood or saw-dust is best to smoke with—smoke well for a day or two—wash through brain water as before. Repeat the operation of braining and smoking three times, and you will have well dressed leather. To prepare the brains for use, take sheep, beef, or hog brains, place them on plates, and roast them gradually before a fire or in a stove-oven till brown. Hack them fine while roasting. They will keep for a year or two. In using, place them in a small bag of thin muslin, so they will wash through in the water by rubbing.

## IMPROVEMENT IN MANUFACTURES.

A successful manufacturer recently informed the editor of the *Hartford Times*, that in respect to the goods produced by American manufactures, of nearly all descriptions, but especially cassimeres, satinets, &c., there has been a greater improvement of the quality, during the last year, than in any other six years combined, since the commencement of our home manufactures in the United States. Contrasted by the side of American broadcloths and cassimeres made ten years ago, the goods of 1858 look like the best imported article; and it is plain that in a few years more the home demand will be supplied by American goods, equal to the best foreign-made fabrics.

## STATISTICS OF AGRICULTURE, &amp;c.

## NINTH ANNUAL OHIO STATE FAIR.

A Cleveland paper remarks that the holiday week of the year is over, and the exhibition has been a grand success. The people congregated to it by thousands and tens of thousands, and, with the exception of the injuries, none of them fatal, sustained by a few persons on the second day by the bolting of a frightened horse from the ring, not an accident occurred to mar the universal enjoyment. The railroads were so carefully conducted that the multitudes were promptly transported without the slightest injury to life or limb; and all the arrangements of the fair grounds, as well as the management of the exhibition by the State Board of Agriculture, their officers and employees, were unusually good and satisfactory to committees, exhibitors, and the people. The citizens of Sandusky spared no effort conducive to the comfort of their guests, and very many will long remember with pleasure the hospitalities enjoyed and the friendships formed or brightened. The conduct of the intelligent masses on the fair grounds was unexceptional, and the entire sobriety and decorum which prevailed from day to day spoke volumes of praise for the present and of hope for the future. Ohio has honored Sandusky with a great State festival, and the men and the women of Sandusky have honored their city and the State with a spirit, an enterprise, and a success commensurate with the occasion.

The attendance during the fair was large, the receipts for single tickets amounting to \$10,101. We clip the following facts and figures touching the financial condition of the Board from the *Sandusky Register*, which exhibited much tact and enterprise in giving full and accurate daily reports as the fair progressed. The receipts for each day were as follows:—

Tuesday, first day.....	\$255
Wednesday, second day .....	4,071
Thursday, third day.....	4,306
Friday, fourth day .....	1,469
Receipts for entries .....	830
Contribution of Sandusky.....	3,000
Rent of dining hall.....	500

The total receipts are, therefore..... \$14,431

By these figures it is easy to approximate very nearly to the daily attendance.

The expenses, as far as estimated and ascertained, are :—

Premiums awarded .....	\$4,500
Expenses of grounds, estimated.....	6,000
Printing, estimated.....	700
Police, estimated .....	600
Clerks, estimated.....	600
Incidentals, estimated .....	2,000
<b>Total .....</b>	<b>\$14,400</b>

These estimates are liberal. In this connection we give the following general statement of the financial condition of the Board :—

Amount on hand in December, 1857.....	\$6,000
Receipts from show licenses and escheated lands .....	4,000
<b>Total .....</b>	<b>\$10,000</b>

Out of this there has been paid as follows :—

Contingent office expenses.....	\$1,000
Secretary's salary.....	1,500
<b>Total .....</b>	<b>\$2,500</b>
Leaving a surplus of .....	7,500

**ECONOMICAL HINTS TO FARMERS.**

1. Have a work-bench and a few tools in your woodshed, or in a little room at one end of your barn. There are many small jobs in the course of a year, which any man of common ingenuity can do as well as a professed carpenter. And there are many rainy days and "odd spells" when these jobs can be done. And how much running to the village, and how much waiting and patience this would save!

2. Have a place for everything and everything in its place. Those tools—why should they be lying around, the auger here, the jack-plane there, and the saw yonder, and the adz and screw-driver nowhere? Don't put away a shovel, hoe, spade, or any implement without cleaning it. This may seem needless care, but in the long run it is a saving of time and money. Rust corrodes and weakens the best made tools. There are men who leave their plows standing in the furrow, or lying by the side of the fence from one year to another. And the "bran-new" scythe is often left dangling from the crotch of an apple tree, month after month. Hear what a sensible farmer says. "Drive in stout wooden pins to hang your yokes upon, nail strips of board from joist to joist to hang chains upon, make a rack overhead for pitchforks, rakes, turning sticks," &c. To all of which we respond—So let it be!

**SUGAR CROP OF LOUISIANA.**

The following is from the annual report of the New Orleans *Price Current* :—

We have compiled from our records the annexed statement of the sugar product of Louisiana for the past twenty-four years, showing the amount of each year's crop in hogsheads and pounds, with the gross average value per hogshead and total, the proportions taken by Atlantic ports and Western States, and the date of the first receipt of each crop. By this statement it will be seen that the total product of Louisiana from 1834 to 1857, inclusive, a period of twenty-four years, was 4,252,413 hlds., valued at \$223,031,836, and that of this quantity

the Atlantic ports took 1,391,768 hhds., and the Western States 2,127,115 hhds. The crops from 1828 (which is as far back as our estimates extend) to 1833, summed up 281,000 hhds., which would make the total product in a period of twenty-nine years, 4,533,413 hhds., or 4,785,334,700 pounds. We would here remark that up to 1848 the product in hogsheads is estimated, and 1,000 pounds taken as the average weight per hoghead, but for the crop since that date we have taken the figures of Mr. P. A. Champomier, as we find them in his annual statements:—

Years.	Total crop.		Average price per hhd.	Total value.	Exported to		First receipts of new crop.
	Hhds.	Pounds.			Atlan. ports,	W. States,	
1834....	100,000	100,000,000	\$60	\$6,000,000	45,500	44,500	October 15
1835....	30,000	30,000,000	90	2,700,000	1,500	23,500	Novemb. 5
1836....	70,000	70,000,000	60	4,200,000	26,300	35,000	Novemb. 1
1837....	65,000	65,000,000	62½	4,062,500	24,500	32,500	Novemb. 1
1838....	70,000	70,000,000	62½	4,375,000	26,500	32,500	October 17
1839....	115,000	115,000,000	50	5,750,000	42,600	58,000	October 13
1840....	87,000	87,000,000	55	4,785,000	38,500	46,500	October 14
1841....	90,000	90,000,000	40	3,600,000	28,000	50,000	October 13
1842....	140,000	140,000,000	42½	5,750,000	63,000	60,000	October 12
1843....	100,000	100,000,000	60	6,000,000	34,000	52,000	October 22
1844....	200,000	200,000,000	45	9,000,000	101,000	70,000	October 3
1845....	186,650	186,650,000	55	10,265,750	79,000	75,000	October 4
1846....	140,000	140,000,000	70	9,800,000	45,500	70,000	October 7
1847....	240,000	240,000,000	40	9,600,000	84,000	115,000	October 2
1848....	220,000	220,000,000	40	8,800,000	90,000	108,000	October 5
1849....	247,923	269,769,000	50	12,396,150	90,000	125,000	October 11
1850....	211,303	231,194,000	60	12,678,180	45,000	123,000	October 17
1851....	236,547	257,138,000	50	11,827,350	42,000	149,000	October 19
1852....	321,931	368,129,000	48	15,452,688	82,000	206,000	October 9
1853....	449,324	495,156,000	35	15,726,340	166,000	185,000	October 6
1854....	346,635	385,726,000	52	18,025,920	122,000	143,000	October 4
1855....	231,427	254,569,000	70	16,199,890	39,133	131,027	October 10
1856....	73,976	81,373,000	110	8,137,360	1,850	39,576	Novemb. 3
1857....	279,697	307,666,700	64	17,900,608	73,885	153,012	Septem. 29
Total .	4,252,413	4,504,370,700		\$223,031,836	1,391,768	2,127,115	

#### TOBACCO IN CONNECTICUT VALLEY.

The Springfield *Republican* remarks, in relation to the growth of tobacco in the Connecticut Valley, as follows:—

The time for the harvest of the tobacco crop has already come. In the adjacent towns large numbers of men are busily engaged daily in cutting, carting, and hanging it. There are some pieces not fully grown, and these will be better cut later, but none can defer this work till frost. Frost is death on tobacco. The tobacco crop is a great and growing interest in the Connecticut River Valley. It is unquestionably the most remunerative crop grown, taking its average product and price for the last twenty years. We believe 1,500 pounds per acre is the average yield in this section, and 10 or 12 cents per pound the average price. The more perfect the leaf, the higher the price. The manner in which tobacco is prepared for market, after it reaches second hands, is an enigma to most growers. By some wonderful hocuspocus, it increases very rapidly in value, so that the same article that to-day was sold for 12 cents by the producer, to-morrow is repacked and sold for from 25 to 50 cents. Tobacco speculators make money even in hard times. We have a man in memory who in a little country village, is reported to have thus made \$5,000 last year. We believe it. There are some men that annually double and quadruple their money in tobacco. We believe a book containing the secrets of the craft would pay. There is no use in decrying book farming any longer. The great, unanswerable argument in its favor is that it fattens the purse. The muscles and bone can do a great deal, but mind and brain can do more.

VINTAGE OF FRANCE.

The London *Economist*, of August 28, furnishes the following summary of the prospects of the vintage the present year in the wine-growing districts of France :—

Great anxiety is experienced at present with respect to the vintage, reports having been circulated by (it is believed) interested speculators, that the dry weather has prevented the growth of the grape. As the question is of general interest, we give our readers a summary of the information collected in the principal wine-growing districts :—

ALBY.—The vineyards are flourishing ; the odium has caused but little injury, and an abundant vintage is expected.

BLOIS.—The black grapes are beginning to ripen ; the white grapes are nearly ripe ; the appearance of the vineyards is perfectly satisfactory.

BOURG.—The vineyards are in the best condition—the grapes are beginning to ripen.

CETTE.—The continued dry weather has prevented the growth of the grape, and we require great rain to repair the injury. The odium had made its appearance, but was arrested by the sulphur applied to the vines. In the Gard the vineyards are magnificent, except in some elevated positions, where the grapes are suffering from the drought.

CORREZE.—The vintage will be as early this year as in 1822. We expect to drink new wine towards the 15th September.

LIMOGES.—The cold weather has retarded the growth of the grape ; nevertheless, we expect an abundant vintage.

MARENNES.—The vines are progressing admirably ; the grapes are visibly increasing in size. There is no disease.

MONTELMART.—The appearance of a good vintage has produced a fall of 2f. the hectolitre. The price is now from 20f. a 22f. the hectolitre.

TARBES.—The vineyards are in the best possible condition. There will be an abundant vintage, and consequently empty casks are selling exorbitantly high.

From these accounts it does not appear that there is any chance of a rise in the price of wine during the ensuing season, particularly when we take into consideration the immense stock in the bonded stores of Paris. In the Bordelais, the fine appearance of the vineyards has paralyzed the efforts of the speculators for a rise in prices. An early and a more than ordinary abundant vintage is expected.

SILK IN AUSTRIA.

The very great interest now excited by the condition of the silk manufacture, and the produce of silk throughout the world, induces us to publish, *in extenso*, the following information recently supplied by Mr. HARRIS, Her Majesty's Consul-General at Venice, and published by the Board of Trade :—

This is the richest production of the Austrian Empire, in which the total mean annual quantity of silk cocoons produced reaches 27½ millions of kilogrammes, about 60,630,600 lbs. avoirdupois, which, at Austrian livres, 430, give a value of 124,000,000 of Austrian livres, equal to about £4,230,000. This production is divided as follows :—

	Kilogrammes.	Pounds.
Lombardy.....	15,000,000	33,075,000
Venice.....	10,200,000	22,491,000
Tyrol.....	1,598,000	3,457,440
Other provinces.....	672,000	1,481,760
Total.....	17,440,000	60,505,200

This statement is based on the reports of the several Chambers of Commerce, on the Statistical Annals of Milan, and on the observations of Jacini and Angela

Mazzold, respecting the results of the year 1852, which is selected as a fair average; 1853 having been, generally, an abundant year, and 1854 and 1855, on the contrary, very scanty.

In the official reports of the year 1847, the production of cocoons in Lombardy was estimated at 19,624,500 lbs., and in the Veneto at 12,899,250 lbs. Assuming this to be a fair approximation, it results that, in five years, the production of cocoons throughout the Lombardo-Venetian kingdom has increased 86 per cent.

The cocoons are converted into raw silk at the spinneries. The number of spinneries in Lombardy, in 1840, was 3,068, with 34,627 caldrons, besides smaller establishments, with not more than one or two caldrons each. The number of caldrons now reaches 42,000, giving occupation to 95,000 persons during 50 days of the year. Each caldron is calculated to produce  $78\frac{1}{2}$  lbs. of raw silk, hence the quantity produced amounts to 3,307,500 lbs., and the total quantity of cocoons spun in the Lombard spinning mills must be reckoned, one year with another, at 41,895,000 lbs; to make up which between 7,000,000 and 9,000,000 lbs. are imported from the Venetian Provinces. The 33,007,500 lbs. of Lombard raw silk (including 551,250 lbs. waste) give, at 2,945 Austrian livres, equal to about £11 the lb., a value of £3,333,000 sterling. The value of the cocoons is, therefore, increased by spinning, £428,000, two-thirds of which are consumed by the expenses of labor and fuel; hence, the net profit of the spinneries is equal to between £102,600 and £140,000 sterling.

In the territory of Venice the spinneries are numerous, but on a small scale, with the exception of a few in the Friulanc, which receive cocoons from Gorizia and the sea coast, and a certain number in the Veronese and Vicentino. These two last provinces contribute the larger portion of the cocoons sent to Lombardy and the Tyrol, owing to which exportation the number of their caldrons decreases annually.

The caldrons in the vicinity of Venice may be calculated at 20,000. They afford employment to 48,000 persons, and spin 16,537,500 lbs. of cocoons, producing 1,503,810 lbs. of silk, the greater part of which is coarse spun, and may be valued at £1,500,000; whence it results that in the Venetian Provinces the raw material acquires an increased value of £165,000, which, deducting expenses, gives the spinners a net profit of £45,000.

The Southern Tyrol, in 1855, possessing 184 large silk spinneries, besides smaller ones, with a total of 5,368 caldrons, employing 11,000 persons, and furnishing 348,390 lbs. of raw silk spun from 3,991,060 lbs. of cocoons. To make up the quantity of cocoons required beyond the production of the country, the Venetian Provinces supplied about 550,000 lbs. The gross profits of the spinneries amounted to £20,500, and the value of the silk produced £2,291,350. The other provinces of the empire produce about 230,000 lbs.

The whole production, therefore, of raw silk in Austria amounts to 5,512,500 lbs., of the value of more than £5,250,000, and the number of persons employed in the spinneries is not less than 160,000.

The raw silk is subjected to a fresh process in the throwing mills.

As the tables of Austrian commerce for 1852 show that 770,000 lbs. were exported by way of Venice, Trieste, Switzerland, and the Italian States, whilst the importation only reached 228,150 lbs., it may be said that of the whole produce of the empire, as before stated, about 5,000,000 lbs. remain for home consumption; two-thirds of which are consumed in Lombardy.

In the Province of Milan there are 93, and in the whole of Lombardy 525 throwing mills, with 1,239,000 spindles; 700,000 for throwing, and the remainder for folding the silk, employing 12,000 persons, namely, 4,500 men, 5,500 women, and 2,000 girls, besides 30,000 bobbin winders, who work also for the Venetian throwing mills.

The total production amounts to 1,555,000 lbs. of tram, and 1,276,000 lbs. of organzine, or 2,826,000 lbs. of brown silk, which at £11 3s. 9d. a lb., give a value of £3,355,870. To produce this quantity, 2,955,000 lbs. of raw silk are required, which, calculated at £11 1s. 1d. a lb., amount to £3,100,000, whence it

follows that an annual gross profit of about £320,000 is obtained by the throwing mills in Lombardy.

The throwing mills of the Venetian Provinces offer the same proportional results as the spinneries do; producing, however, a larger proportion of sewing silk, of which Verona alone (though declined from its former importance in this respect) produces 265,000 lbs. annually.

About 1,320,000 lbs. of raw silk are consumed in the Veneto, producing 1,255,000 lbs. of thrown silk, worth about £1,190,000, reckoning the waste, and employing 18,000 persons, including bobbin-winders working out of the establishments.

The gross profits of the throwsters is about £102,000; their labors increasing the value of the raw material to that amount.

In the Tyrol there are now 57 throwing mills, with 104,903 spindles, besides numerous smaller works, collectively employing 2,100 persons, and producing 335,000 lbs. of thrown silk, of the value of £280,000, for which 347,000 lbs. of raw silk, costing £240,000, are consumed. Including the worth of the waste silk a gross profit is obtained of £38,000.

In Austria the ulterior labor of manufacturing thrown silk into silk stuffs takes place almost exclusively at Vienna, Milan, and Como; a considerable quantity is also wrought up with other material, particularly wool, in the manufacture of damasks, tapestry, &c.; but the greater part of the thrown silk is exported either in a gray state or dyed.

This branch of manufactures is rapidly increasing in the capital of the empire, which alone consumes half of the whole quantity produced, and, including the dyeing establishments, employs a capital of £1,200,000. From 1839 to 1852 the consumption of thrown silk, for weavers' use, increased in Vienna from 542,300 lbs. to 1,188,000 lbs.

Milan is next to Vienna in the importance of its manufactures of silk stuffs. Its productions amount annually to more than £325,000. Como, engaged only in the manufacture of plain stuffs, has a greater number of looms than Milan, and produces to the amount of about £260,000.

There are silk manufactories in the Italian Tyrol, at Ala and Roveretto, and many of the Venetian Provinces, as well as numerous looms at Venice, Vicenza, and Verona, for velvets and ordinary silks. The value of the manufactures thence produced is estimated at about £165,000.

The amount of the silk manufactures, comprising articles made of waste silk and knubs, and stuffs of mixed material, cannot, therefore, be estimated at less than £2,400,000.

Summing up all these particulars, and bearing in mind the increased value which waste silk acquires by manufacture, as also of the silk itself after being dyed, it follows that the cultivation and manufacture of silk in Austria give a general total of nearly £6,250,000 sterling, and support fully 800,000 individuals during the whole or part of the year.

#### AGRICULTURE IN ILLINOIS.

The Legislature of Illinois has passed the following law, which we hope to see followed in all the States:—

##### AN ACT TO ENCOURAGE COUNTY AGRICULTURAL SOCIETIES.

SECTION 1. *Be it enacted by the people of Illinois, represented in the General Assembly,* That the sum of one hundred dollars is hereby appropriated to the use of each and every agricultural society throughout the State, for the purpose of giving them aid and encouragement in the general object of promoting agricultural improvements. And the treasurer is hereby authorized and directed, when called upon for that purpose, to pay over to the treasurer or fiscal agent of each county agricultural society in the State, the sum of one hundred dollars on receiving his receipt therefor, accompanied by the certificate of the county clerk of each county, respectively, where such agricultural society is located,

that such society is organized, and that such treasurer or fiscal agent is authorized to receive and receipt for the money on behalf of the same.

SEC. 2. The grant of one hundred dollars to each county agricultural society, as aforesaid, may be demanded and received, for the year 1857, by each and every county that is now duly organized, or that may be so organized on or before the first day of June next, and a further sum of one hundred dollars is granted to each agricultural society throughout the State, for the year 1858, that is now duly organized or that may be so organized on or before the first day of June, 1858, and the treasurer of this State is hereby authorized and directed to pay over the same, under the same conditions as provided in the first section of this act.

SEC. 3. This act to take effect and be in force from and after its passage. Approved, February 12th, 1857.

## STATISTICS OF POPULATION, &c.

### POPULATION OF DIFFERENT COUNTRIES.

The population of several of the leading countries and their colonies have, according to recent censuses, been as follows:—

	Colonies.	Countries.
British Empire.....	5,224,477	27,435,325
“ Indies.....	151,316,129	.....
France.....	739,496	35,400,486
Denmark.....	118,491	2,296,497
Holland.....	21,786,700	3,241,990
Portugal.....	1,722,140	3,412,000
Spain.....	3,717,433	12,386,841
Austria.....	.....	35,730,112
Prussia.....	.....	16,331,187
Russia.....	.....	66,008,315
Bavaria.....	.....	4,519,526
Belgium.....	.....	4,350,090
Greece.....	.....	637,700
Hamburg.....	.....	188,054
Papal States.....	.....	2,908,115
Sardinia.....	.....	4,650,368
Sweden and Norway.....	.....	4,645,007
Turkey in Europe.....	.....	15,500,000
Two Sicilies.....	.....	8,423,306
China.....	.....	400,000,000

The population of China, that very interesting country, is very uncertain. According to the best native authority the population should now be nearly 400,000,000, but the population is given by Gutzlaff at 367,000,000, and confirmed at about that by other late writers. Comparatively with England and Wales, the proportion of numbers to territory would be as follows:—

	Area square miles.	Population.	Acres per head.
England and Wales.....	37,812	18,065,634	2
China.....	1,298,000	367,000,000	2½

Thus, even at the figures given, the population is less dense than in England. The census returns give, in some provinces of the empire, the population at an average of more than 700 persons to the square mile. But by the last census the county of Lancaster, England, had about 800 per square mile, not to speak of Middlesex, which has an average of 500, or of Surrey, which has about 700 per

square mile. It is also to be observed that these densely peopled parts of China on the sea-coast, have been penetrated by Europeans, are well known to be very fertile, and in every way well fitted to afford a large amount of subsistence to their inhabitants. These facts go to confirm to some extent the large population of China; the more so that the people of that country subsist on a much smaller allowance of food. The density of the population of Holland and Belgium is far greater than that of China.

POPULATION OF CUBA,

The *Home Cyclopaedia*, published in 1854, makes the area of Cuba 32,800 square miles, and classifies its population as follows:—

Creole whites .....	520,000
Spaniards .....	35,000
Troops and marines... ..	23,000
Foreigners.....	10,560
Floating population .....	17,000
Free mulattoes.....	118,000
Free blacks.....	87,370
Slave mulattoes.....	11,000
Slave blacks.....	425,000
Whole number not of African descent.....	605,560
Whole number of African descent.....	641,670

More than half the entire population are negroes and mulattoes. The Creoles, who, it will be seen, make up more than five-sixths of the entire population, aside from the blacks, are generally an ignorant race. They are mostly of Spanish extraction.

POPULATION OF FRANCE,

Departments.	Population.	Births.			Still born.	Deaths.	Mar- riages.
		Legitimate.	Illegi- timate.	Total.			
Ain.....	367,362	9,784	444	10,228	322	9,287	2,861
Aisne.....	557,422	13,552	952	14,504	668	13,937	4,711
Allier.....	329,540	8,935	571	9,506	282	8,074	2,648
Alpes (Basses) .	156,675	4,204	90	4,294	208	4,380	1,301
Alpes (Hautes).	133,100	3,970	130	4,100	82	3,881	890
Ardeche.....	379,614	12,086	284	12,370	97	9,657	2,952
Ardennes.....	326,823	7,772	381	8,153	194	6,485	2,529
Ariege.....	270,535	6,638	417	7,055	100	6,326	1,538
Aube.....	261,881	5,902	424	6,326	257	6,074	2,247
Aude.....	289,661	7,408	297	7,705	152	7,168	1,988
Aveyron.....	389,121	10,930	424	11,354	186	8,627	2,673
Bouch-du-Rhone.	413,918	12,695	779	13,474	514	11,647	3,261
Calvados.....	498,385	8,873	1,077	9,950	299	9,973	3,521
Cantal.....	260,479	6,101	393	6,494	68	5,780	1,728
Charente.....	379,031	8,470	728	9,198	183	8,189	2,767
Charente-Infer..	468,103	10,795	640	11,435	367	11,804	3,728
Cher.....	294,540	9,526	579	10,105	171	7,676	2,429
Correze.....	317,569	9,716	357	10,073	98	8,907	2,834
Corse.....	230,171	6,430	382	6,812	133	4,625	1,513
Cote-d'Or.....	396,524	9,206	651	9,857	441	9,696	3,181
Cotes-du-Nord. .	628,526	18,816	732	19,548	530	14,904	4,571
Creuse.....	285,620	6,596	484	7,080	65	5,288	1,938
Dordogne.....	508,557	13,058	730	13,788	308	12,542	3,568
Doubs.....	292,347	7,059	573	7,632	339	6,812	1,892
Drome.....	320,075	8,749	378	9,127	348	7,195	2,583
Eure.....	423,247	7,608	736	8,344	187	9,231	3,584
Eure-et-Loir ...	292,337	6,947	393	7,340	187	6,358	2,457

Departments.	Population.	Births.			Still born.	Deaths.	Marriages.
		Legitimate.	Illegitimate.	Total.			
Finistere . . . . .	612,151	20,221	747	20,968	829	15,977	4,294
Gard. . . . .	400,381	13,058	578	13,636	332	11,384	3,445
Garonne (Haute) . . . . .	481,988	18,114	958	19,072	353	10,704	5,280
Gers. . . . .	314,885	6,200	314	6,514	145	6,753	2,228
Gironde. . . . .	602,444	12,947	2,123	15,070	355	12,646	5,146
Herault. . . . .	386,020	10,731	376	11,107	272	10,284	3,195
Ille-et-Vilaine . . . . .	562,958	16,403	627	17,030	606	13,285	4,318
Indre. . . . .	263,977	7,298	423	7,721	241	6,137	2,300
Indre-et-Loire . . . . .	312,400	6,809	476	7,285	115	6,841	2,648
Isere. . . . .	598,492	15,644	827	16,471	181	13,458	4,271
Jura. . . . .	316,150	7,462	399	7,861	279	8,317	2,075
Landes. . . . .	298,220	8,499	1,047	9,546	130	6,956	2,114
Loir-et-Cher. . . . .	256,833	6,856	515	7,341	197	6,034	2,161
Loire . . . . .	453,786	14,198	612	14,810	522	11,132	3,219
Loire (Haute). . . . .	307,161	8,733	351	9,084	77	7,339	1,900
Loire-Inferieure.. . . .	517,265	14,866	809	15,675	595	10,588	3,945
Loiret. . . . .	331,633	9,587	699	10,286	361	8,555	2,806
Lot. . . . .	294,566	7,129	280	7,409	108	6,710	1,989
Lot-et-Garonne.. . . .	346,260	6,610	340	6,950	93	7,728	2,706
Lozere. . . . .	143,331	4,253	127	4,380	31	3,780	1,030
Maine-et-Loire.. . . .	504,963	11,802	690	12,492	414	10,150	4,004
Manche . . . . .	604,024	12,474	799	13,273	438	12,011	4,110
Marne. . . . .	367,309	9,198	789	9,987	315	9,474	2,969
Marne (Haute) . . . . .	262,079	5,832	296	6,128	234	5,556	1,955
Mayenne . . . . .	368,439	8,894	522	9,416	309	7,750	2,767
Meurthe . . . . .	445,991	10,547	897	11,444	716	10,403	3,257
Meuse. . . . .	325,710	7,679	444	8,123	292	7,474	2,444
Morbihan. . . . .	472,773	14,480	481	14,961	531	10,828	3,794
Moselle . . . . .	448,087	12,134	749	12,883	334	9,364	2,839
Nievre. . . . .	322,262	9,763	510	10,273	181	7,428	2,746
Nord. . . . .	1,132,930	31,861	3,096	34,957	1,062	28,637	7,708
Oise. . . . .	406,023	9,023	623	9,646	276	9,365	3,387
Orne . . . . .	442,107	8,483	423	8,906	104	7,472	3,149
Pas-de-Calais. . . . .	695,756	17,343	1,578	18,921	630	15,010	5,029
Puy-de-Dome . . . . .	601,594	15,120	505	15,625	340	13,672	4,174
Pyrenees Basses . . . . .	457,832	9,588	974	10,562	29	9,553	2,282
Pyrenees Hautes . . . . .	251,285	5,145	408	5,553	56	4,684	1,376
Pyrenees-Orient.. . . .	180,794	6,205	434	6,639	144	5,105	1,662
Rhin (Bas) . . . . .	580,373	17,847	1,765	19,612	815	14,871	3,696
Rhin (Haut) . . . . .	487,208	15,240	1,301	16,541	735	12,504	3,117
Rhone. . . . .	545,635	13,878	2,087	15,965	835	13,684	4,731
Saone (Haute).. . . .	347,096	8,234	633	8,867	326	8,251	2,294
Saone-et-Loire.. . . .	565,019	15,098	980	16,078	616	13,496	4,633
Sarthe . . . . .	474,876	9,681	835	10,516	355	8,911	3,683
Seine . . . . .	1,364,467	31,409	12,083	43,492	2,813	35,586	13,002
Seine-et-Marne . . . . .	340,212	8,431	361	8,792	277	7,689	3,158
Seine-et-Oise. . . . .	474,955	10,713	630	11,343	412	10,339	4,007
Seine-Inferieure.. . . .	759,990	19,625	2,507	22,132	1,071	20,182	5,931
Sevres (Deux). . . . .	320,685	8,215	431	8,646	147	6,609	2,469
Somme. . . . .	570,529	13,903	1,178	15,081	212	13,457	4,400
Tarn. . . . .	360,679	9,167	264	9,431	162	8,798	2,423
Tarn-et-Garonne. . . . .	242,498	5,111	204	5,315	167	6,023	1,769
Var . . . . .	349,559	8,360	392	8,752	333	9,018	2,763
Vaucluse . . . . .	259,154	7,893	321	8,214	321	7,091	2,195
Vendee . . . . .	376,184	11,495	315	11,810	155	8,524	2,931
Vienne. . . . .	308,391	7,990	414	8,404	176	7,101	2,440
Vienne (Haute). . . . .	314,739	9,294	573	9,867	270	8,009	2,006
Vosges. . . . .	427,894	10,193	953	11,146	470	9,932	2,936
Yonne . . . . .	374,856	9,048	534	9,582	193	8,356	3,334
Total . . . . .	35,400,486	913,840	69,633	983,473	29,874	831,478	270,633

POPULATION OF ARKANSAS.

The *True Democrat* publishes a statement from which we learn that the State census returns of 1858 make the total population of Arkansas 318,313:—

White males.....	136,943
White females.....	120,640
Free colored.....	682
Slaves.....	60,058
Total .....	318,313

VERGENNES, VERMONT.

The oldest and at the same time the smallest city in New England is that of Vergennes, Vt., which was incorporated in 1783. It is the oldest city in Vermont, and in 1850 contained 1,378 inhabitants.

MERCANTILE MISCELLANIES.

OBITUARY OF A BOSTON MERCHANT.

On the 20th of September, 1858, died Ebenezer Francis, Esq., at his residence in Pemberton-square, Boston, Massachusetts, at half-past six o'clock, A. M.

The deceased was born at Beverly, Massachusetts, October 15th, 1775, and at his death was therefore nearly eighty-three years of age. He was the only son of Colonel Ebenezer Francis, who was killed in the battle of Hubbardton, near Ticonderoga, July, 1777.

Colonel Francis was born in Medford, Massachusetts, on the 22d of December, 1743, and in 1764 he removed to Beverly. His opportunities for acquiring an education in youth had been quite limited, but, by diligent self-culture, he had early fitted himself to engage extensively and successfully in business transactions, and to take a respectable stand by the side of the best educated and informed, in the prominent stations he afterwards occupied before the town and his country. In 1766, he was married to Miss Judith Wood, by whom he had four daughters and a son. He was actively engaged in business until the war broke out. Convinced that resort must be finally had to arms in deciding the controversy between this and the mother country, he paid much attention to military science, and encouraged it as far as he could in his fellow-patriots. His three brothers partook of the same martial spirit, and all of them became officers in the revolutionary service. By his stature, which was tall and imposing, as well as by his talents and character, he was well fitted to command. In less than three months from the commencement of hostilities he received a captain's commission from the Continental Congress, which was dated July 1st, 1775. Early in the following year he had risen to the rank of colonel, and commanded a regiment stationed on Dorchester Heights from August to December, 1776. By a commission dated November 19th, 1776, he was authorized by Congress to raise a regiment in the State of Massachusetts, which was raised under the name of the 11th Massachusetts regiment, and retained that designation through the war. At the head of his regiment Colonel Francis marched in January, 1777, to Ticonderoga. With that regard to religion which was a characteristic of his

life, he, previously to setting out on the march, had his regiment assembled to attend religious services in the meeting-house of the first parish. Associated with him on that perilous expedition into the wilderness were many brave and noble spirits, some of them highly educated. His reverend pastor, Rev. Mr. Hitchcock, of the second parish in Beverly, and afterwards minister of a church in Providence, R. I., accompanied the regiment as chaplain. Henry Herrick, a graduate of Harvard College, in 1767, was adjutant of the regiment. Moses Greenleaf, afterwards collector of Newburyport, and father of the late Professor Greenleaf, was a captain in it. On the 7th of July, 1777, the regiment was attacked at Hubbardton, near Whitehall, New York, by the overwhelming forces of Burgoyne. Numbers fell on both sides, among whom were Colonel Francis, who first received a ball through his right arm, but still continued at the head of his troops till he received a fatal wound through his body; the ball entering his right breast, he dropped on his face.

The following are extracts from "Travels in America by a British officer," who was in the battle of Hubbardton, and afterwards quartered as a prisoner in the vicinity of Boston:—

"The rear guard of the enemy was composed of chosen men, commanded by a Colonel F., who was reckoned one of their best officers.

"At the commencement of the action the enemy was everywhere thrown into the greatest confusion; but being rallied by that brave officer, Colonel Francis, whose death, though an enemy, will ever be regretted by those who can feel for the loss of a gallant and brave man, the fight was renewed with the greatest degree of fierceness and obstinacy.

"A few days since, walking out with some officers, we stopped at a house to purchase vegetables. Whilst the other officers were bargaining with the woman of the house, I observed an elderly woman sitting by the fire, who was continually eyeing us, and every now and then shedding a tear. Just as we were quitting the house she got up, and bursting into tears, said, 'Gentlemen, will you let a poor distracted woman speak a word to you before you go?' We, as you must naturally imagine, were all astonished; and, upon inquiring what she wanted, with the most poignant grief, and sobbing as if her heart was on the point of breaking, asked if any of us knew her son, who was killed at the battle of Hubbardton; a Colonel Francis. Several of us informed her that we had seen him after he was dead. She then inquired about his pocket-book, and if any of his papers were safe, as some related to his estates, and if any of the soldiers had got his watch; if she could but obtain that in remembrance of her dear, dear son, she should be happy. Captain Ferguson, of our regiment, who was of the party, told her, as to the colonel's papers and pocket-book, he was fearful they were either lost or destroyed; but pulling a watch from his fob, said, 'there, good woman, if that can make you happy, take it, and God bless you.' We were all much surprised, as unacquainted that he had made a purchase of it from a drum-boy. On seeing it, it is impossible to describe the joy and grief that was depicted in her countenance; I never in all my life beheld such a strength of passion; she kissed it, looked unutterable gratitude at Captain Ferguson, then kissed it again; her feelings were inexpressible; she knew not how to express or show them; she would repay his kindness by kindness, but could only sob her thanks; our feelings were lifted up to an inexpressible height; we promised to search after the papers, and I believe at that moment, could have hazarded life itself to procure them."

This watch is now in the possession of the family of the late Mr. Francis.

Young Ebenezer Francis came to Boston in January, 1787, a poor boy, and obtained a situation in the counting-room of the late Jonathan Harris, with whom he was subsequently several years connected in business. He married the eldest

daughter of Colonel Israel Thorndike, then of Beverly. Of seven children of this marriage, five are dead without issue; the two survivors are the wives of N. I. Bowditch and Robert M. Mason, Esquires.

Mr. Francis was for several years Chairman of the Trustees and President of the Massachusetts General Hospital, and to none more than to him was that institution indebted in its early days, his energy and good judgment having been of the utmost importance to its successful establishment. As President of the Suffolk Bank, he originated the system known as the "Suffolk Bank system," which has proved so efficient a means of securing to our community a sound paper currency. He was the President of the Cochecho Manufacturing Company, and for a long term of years a director in various insurance companies and many corporations.

As Treasurer of Harvard College, he introduced order and system, where, before, there had been a great want of method and exactness; and, on his retirement, a very elegant piece of plate was presented to him, on which is recorded the high sense which the corporation entertained of his financial ability, and the great value which they attached to his zealous and gratuitous services.

Mr. Francis was for many years engaged in active mercantile pursuits, and in all his transactions was distinguished for the strictest integrity and for great intelligence. He was largely concerned with the late Uriah Cotting, Esq., in many of his real estate transactions. Thus the whole title to Central-wharf is derived through Mr. Francis. He was eminently successfully in business, and is believed to have left the largest estate ever accumulated in New England. The will of the late Ebenezer Francis, Esq., is by law provable in Norfolk County, where the deceased had his domicil. His tax in Roxbury last year was \$11,400. By the terms of the will about \$117,500 are given to the descendants of two sisters, and there are sundry other legacies of \$25,000 or \$30,000 more. A trust fund of \$100,000 is created for the payment of certain annuities—the surplus income of each year after the payment of the annuities, to be added to the principal, and after the death of the annuitants, the principal is to be disposed of like the residue of the estate.

The two daughters have direct bequests of \$200,000 each and the houses they now occupy. A bequest and devise to his grandson, E. Francis Thayer, and the interest of that grandson in the residue of the estate, are rendered void by his death without issue before the testator. The remainder of the estate is devised to five trustees—the income is payable to each daughter during life. At the death of each daughter the income of her share is payable to her children during the trust. After the death of *both* daughters, the income for five years is devisable equally among all the grandchildren, and at the end of five years, the whole property is to be divided among the grandchildren, and the issue of any deceased grandchild.

The executors of the will are Nathaniel I. Bowditch, Robert M. Mason, (the sons-in-law,) and Samuel W. Swett, President of the National Insurance Company. The trustees are Nathaniel I. Bowditch, Robert M. Mason, Samuel W. Swett, Israel Whitney, of Boston, and Joel Parker, of Cambridge. The estate is estimated at about \$3,500,000.

## MAKING AND SAVING MONEY.

It is one thing to make money and another thing to save it. What young man has not learned the truth of this remark? Of the thousands who start in life, with the world all bright before them where to choose, with a liberal share of means upon which to set out in business, with troops of friends, with the fairest prospect of success, and perhaps nothing required of them but to follow up the pursuit at which their fathers amassed comfortable fortunes—how few there are who seem wise enough to save their money—to guard their interests—simply to take good care of what they have—to cherish the respect and esteem of all true friends, and on the other hand to discard all the idle insects which flutter about them in the sunshine of prosperity but quickly disappear in the first shadow of adversity. They have no thought of to-morrow. They live only for to-day. From childhood up they have learned to treat money as of secondary consequence. This is the reason why so many men who make plenty of money are always poor, and manage to pay their way only with extreme difficulty. They were not taught its value early in life.

The ingeniousness of youth often leaves the door of their hearts open for imposters and unprincipled "friends," and for petty extortions by that numerous class of individuals who are always "rather hard up," always in debt, always borrowing money, and always idle. A few simple rules, firmly adhered to, will serve as an infallible preventive to the sharp practices of these "gentlemen of elegant leisure."

But the habits of many young men now-a-days almost incessantly lead them into some ridiculous excess, and sap the foundation of many a noble fortune. The countless dollars thrown away upon fashionable tailors, and fashionable ladies—gaudy butterflies, the bright enamel of whose beauty will not bear the gentlest test—the carriage rides in the country—the fast horse (the most superfluous of all extravagances!)—the champagne suppers—the "royal times" spent in the company of dissipated and vulgar acquaintances at the billiard or (much worse) the club room—the summer tour to fashionable watering places—these and similar follies are a serious and generally a fatal hinderance to success in the race of life, and cause deep and poignant regrets, in after years, in view of the most precious time and opportunities wantonly thrown to the winds.

There is hardly a young man with a fair average start in business life who cannot succeed by reasonable prudence and economy. He should see the necessity of being just to himself first—of being just before he is generous. He should be just with his creditors, just to himself by never spending more than he earns, and then generosity may fairly follow.

The world always expects much of young men—they constitute the vital energy of every community—their influence is ever powerfully exerted—their voices are prompt and earnest—their hands are always ready for execution and the first to "clear the way." They should then be useful—they should study to save their money for useful purposes, never forgetting themselves—and of their surplus means they should let the communities in which they dwell derive the benefit—for objects of charity and the general good—for public enterprises—for the support of the Christian religion, which is still happily the crowning glory of our country—for the poor and destitute and distressed who surround their daily path-

way—and for other purposes which will carry their names along with them as benefactors and invaluable men.

But to enable them to do this they must be frugal, temperate, economical—not penurious nor miserly (we would rather see them spendthrifts than misers)—and then the world will go well with them—they will see then that it is half the battle to know how to take care of their money after making it—there will be no need of putting off their creditors or the marriage day—and they can sit down in the mellow decline of life under their own vine and fig tree, and enjoy the incomparable blessings of moderation, domestic felicity and competence, if not absolute wealth.

To all young men in business we would respectfully but earnestly address our words of admonition. Let them keep in daily remembrance Poor Richard's pungent maxims. He understood thoroughly the importance of saving as well as of making money when he advised us to—

“Take care of the pence, and the pounds will take care of themselves.”

#### THE COAL TRADE FIVE HUNDRED YEARS AGO.

The accounts of Adam de Hereyndon furnish some curious proofs of the difficulties which must have attended extensive building works in the fourteenth century. As in earlier times, all the metal work was executed on the spot, and forges and furnaces were built for the smiths and plumbers. These forges and furnaces required fuel, and it had already been discovered that coal was a more efficient material than wood. Owing, however, to the prejudice of the Londoners against that mineral product, on account of its effect upon the external appearance of the habitations, no supply of it could be procured in the metropolis, and the king's master of the works was compelled to buy a cargo at the pit mouth, in the county of Durham. The narrative of the voyage of a ship chartered to carry coals for the works at Windsor, in 1367, affords a striking contrast to the present state of the trade, when thousands of vessels and many lines of inland railways are daily engaged in bringing this important necessary of life into the capital. According to the custom of the time, the king sent his writ to sheriff of Northumberland, ordering him to buy 726 chaldrons of coals, and send them to London. The sheriff purchased them by the “greater hundred,” at Winlaton, in the county of Durham, at 17d. the chaldron. From Winlaton they were conveyed in *kreles* to Newcastle, and there shipped. The freight to the south was at the rate of 3s. 6d. a chaldron. On their voyage to London, the colliers met with “a mighty tempest at sea,” and through that, and by reason of the excess of measure over that of Newcastle, a loss of 86 chaldrons and one-quarter was incurred, the greater part having been thrown overboard during the tempest. Arrived at London, the coals were put aboard “shutes,” or barges, and taken to Windsor at a cost of 1s. a chaldron. The total expense of bringing this insignificant quantity of coal to London, including its cost price, was £165 5s. 2d., to which must be added the barge hire to Windsor.—*Newcastle (Eng.) Journal*.

#### BRITISH EAST INDIA COMPANY.

Having alluded in our September number to the end of the East India Company, the following brief sketch of its history may be interesting:—

In 1497 the efforts of the Portuguese to discover the passage to India were successful, and in their success was the germ of the British East India Company. Efforts were made by the Portuguese, by means of a Pope's bull, to retain exclusive control of the passage to, and the commerce with, India, but with only partial success, for after trying in vain to discover another passage, the English

merchants in 1580 determined to have a share in the lucrative trade then growing up with India by way of the Cape of Good Hope, and Captain Stephens, in 1582, was the first Englishman who made the voyage to India by way of this passage. He was followed by Sir Francis Drake and Thomas Cavendish, in 1588, who, by their glowing reports, and by the rich captures made by the former's vessels, created an intense desire in England to participate in the wealth of which they had long dreamed. To obtain this end war vessels were first fitted out, and in 1793 Sir Walter Raleigh captured a ship of 1,600 tons, the largest ever seen in England, laden with the richest goods that India could furnish. After some efforts of private adventurers, there was formed a corporation, with a charter dated the 31st of December, 1660, entitled "The Governor and Company of Merchants of London trading to the East Indies." Powers were given to the company to elect their governor, directors, and officers; to inflict punishment not in violation of the laws of England; to export goods free of duty for four years, and to have certain privileges in exporting coin. The duration of the charter was limited to fifteen years, with the condition that it might be canceled upon a notice of two years. Such was the origin of the British East India Company, which, in time, extended its sway over the entire Mogul Empire; and but for the hostility of more liberal commercial opinions, would not now have its end chronicled in September 1st, 1858, over one hundred and ninety-seven and three-quarter years after its charter.

The history of the East India Company would tell of ambitious plans, fortunes made and lost, lives spent, health wasted, hopes, fears, wrongs, elsewhere only to be found in a nation's record. From the published life of Hastings, to the tale of the soldier who returns to his native English village with only his scars for his reward, we have the experience of a people, from a despot to a peasant, and all *servants* of this company.

The first expedition to India by the company was in 1601, and consisted of a fleet of five ships, varying from 1,600 to 130 tons, and with an outlay of \$350,000. This trip was so prosperous that through it the company attained a power that was never lost while it had existence.

The hostility of the Dutch was for a time the chief obstacle that threatened the company; but the profits of a lucrative trade were sufficient to make the English company retain their possessions at all hazards. The profits of the trade may be estimated from the fact that the cost of East India goods in England was only thirty-three per cent when brought by Cape Horn, of the same goods brought over the land route through Aleppo; and as the company had a virtual monopoly, their profits were almost incalculable.

In 1645 the company established factories in Bengal, the principal of which was at Hoogly. In 1658 Madras was made a Presidency.

Charles II. confirmed the company's charter in 1661, and conferred on the company the power of *making peace or war* with any nation not of the Christian religion; of seizing and sending to England any British subject found trading in India without their leave. Also, the power of making laws, exercising jurisdiction, etc. Notwithstanding these extensive powers, private traders interfered materially with the trade of the company. In 1664 the French East India Company was formed, and ten years after laid the foundation of their settlement at Pondicherry. The Dutch having prior possession of the principal islands in the Indian Ocean were, however, the greatest rivals. In 1668 the company obtained a valuable possession in the Island of Bombay, through the gift of Charles II., who obtained it as part of the marriage portion of his wife, Catharine of Portugal, and from this time, either by treaty or force the company gradually and annually extended their territories and powers until they extended over all Hindoostan.

The year 1667 is memorable as being the one in which the first shipment of tea, of which we have record, amounting to 100 pounds, was made to England. From this small beginning the trade in time extended until it was the main prop of the company's existence.

With somewhat variable fortunes the company controlled the monopoly of the

India trade until 1698, when the English Government applied for a loan of £2,000,000, offering 8 per cent interest. This the company would not grant, and in consequence a charter was given to an association of merchants, taking the loan, two years before the India Company's charter expired. The result of having two rival companies was disputes, disastrous to both, and which for a time threatened total dissolution. In 1702, however, the two companies adjusted their differences, and formed themselves into one company, entitled "The United Company of Merchants of England trading to the East Indies." With all their powers and a monopoly of trade, it was not until the beginning of the present century, that the East India Company's commerce attained what, according to our present ideas, could be called any considerable magnitude. In 1811 the imports into England were only a little over \$5,000,000.

In 1793 the company's charter was extended until 1814, and a provision inserted for the general opening of the trade to private individuals. For many years the opinion had been gaining ground, that the trade with India could be materially enlarged by such a course. The company had such influence, however, that in 1814, when the charter expired, the trade to individuals was open only on certain restrictions, and the company obtained a renewal of their charter until 1832, with these limitations. Such, however, is private enterprise, that with all the restrictions, the India trade trebled in a few years. In 1832, when the charter expired, there could be no further claims brought forward for a renewal of the commercial privileges; and the act 3 and 4 Will. IV., c. 85, for continuing the charter until 1854, *terminated the company's commercial character*. The wonderful increase that has since taken place in the trade with India, proves the sagacity of the measure, and the justice is even more evident. It is to be hoped that a corresponding improvement in the political condition of the country will take place, now that the company has ceased to exist as a *political power*.

The trade of the United States with British India amounted to \$11,600,000, or more than double the whole commerce of India in 1811. With a more liberal Indian Government, we can expect a great increase in our trade, and with an improvement in the people, the practice of hoarding, which made India a "cess-pool for precious metals," will be given up. The loss to this country alone from this practice, or the "balance of trade" with India, from 1820 to 1857, was \$67,000,000.

#### SHROUDS OF THE ANCIENTS.

We have lately seen a statement of the vast amount of rags imported from the countries bordering on the Mediterranean, especially Turkey and Egypt, and manufactured by New England skill into the sheets daily issued by the *Journal* and other leading newspaper establishments of Boston. The *New York Journal of Commerce* publishes an interesting letter from a correspondent, giving an account of a visit to the paper-mills at Gardiner, Maine, from which the statement was taken. Millions of pounds of rags, collected from Italy and the East, are stored up in warehouses, or deposited in the open air upon the ground.

Cast-off garments of the living, and wrappings of the dead, are crowded together in one promiscuous mass. How ineffectual have been the efforts of man in all ages to achieve immortality of remembrance, or to secure inviolability for the little handful of dust remaining when life's turmoil was over! The names of those who planned the pyramids are unknown, with the names of the millions who toiled in their erection. And now the bodies of prince and peasant, master and slave, are made merchandise of by their remote descendants, or are collected to feed the watch-fires of travelers in the desert. The practice of embalming the bodies of the dead prevailed thousands of years ago, long before Christ and his followers walked the earth. What considerations led to this disposition of the dead, are now matters of conjecture. It may be that the shifting character of the soil of the countries bordering on the desert prevented burial, and that a scarcity of fuel made it impossible to raise the funeral pile, by which to reduce to ashes the beloved remains.

The mode of embalming varied with the various rank of the deceased. The

rich and noble were embalmed with costly gums and spices, for the possession of which, in these latter days, their resting-places have at times been invaded. But we proposed to speak of one mode in particular in which the deposits of the ancient dead have been despoiled. The bodies of the persons embalmed, after having been duly prepared by the removal of the viscera and brain, by being salted, steeped in resinous and other preservative solutions, were wound with linen cloths, each limb and finger separately, and then all together in additional envelops of linen, about fifteen or twenty in number. These envelops are now stripped off, collected, and a considerable part of the rags accumulated at Gardiner consists of these envelops. "How strange a story!" Forms that walked in the streets of Thebes three thousand years ago, after sleeping undisturbed for centuries, are now forced to yield their contributions to modern art; winding sheets of maidens who danced before Pharaoh, transformed into the scented sheets on which young ladies of the present time pen the gushing words of love or friendship, or into the less romantic forms wherein green-grocers and butchers wrap the materials of our mid-day meal.

So it ever is in the economy of nature. Nothing can be lost. A mysterious, inscrutable alchemy is transmuting grossest forms of matter into matchless shapes of beauty and use; these, in turn, crumble back to the magazine of shapeless matter.

"Imperious Cæsar, dead, and turned to clay,  
Might stop a hole to keep the wind away;  
O that the earth, which kept the world in awe,  
Should patch a wall to expel the winter's flaw!"

There is a natural body, and there is a spiritual body. The amount of matter in this world of ours is demonstrable now, just what it was when the morning stars sang together and all the sons of God shouted for joy. But myriads of souls have tenanted, and myriads will tenant, the same substance, molded and remolded into earthly tabernacles, and soul after soul has laid aside, and will put off, these earthly tabernacles, rising to a new life requiring not for its manifestation material forms.—*Nantucket Weekly Mirror.*

#### LONDON OYSTER TRADE.

The oyster season opened in the London market, in accordance with the civic regulations of Billingsgate Market, at four o'clock on Wednesday morning, the 11th of August. Sixteen oyster vessels were present. Oysters are classified in England as dotives, pearls, cullies, barleys, and common. The best natives brought in the London market are \$10 50 per bushel; inferior natives, \$10; pearls, \$3 50; cullies, from \$2 50 to \$3 per bushel. The railway vans brought immense quantities, in addition to the water borne from the oyster beds at Blackwater, Colchester, Burnham, and other fishing towns. When we think of an English oyster, a coppery taste in the mouth involuntarily recurs. There are no oysters in London that an American could or would swallow in New York. It would be rejected as bad; but when a man pays \$10 a bushel he cannot afford to be fastidious. It is one of our American privileges and blessings, for which we cannot be too grateful, that our lines have fallen near good oyster beds, and that a reasonable price commands a better article than Europeans get at extravagant prices.

The above facts ought to prove of some value to our American fishermen. The chances for opening an English trade in American oysters are flattering, and we have often thought it strange that some of our far-sighted tradesmen did not establish a London oyster express, and thus at once build up a luxury now unknown to the English, as well as to afford a valuable trade.

How easy it would be to place on each of our steamships a refrigerator—Sandford's or Schooley's—capable of holding a ton of oysters, and sending it

over full at each trip of the vessel. Suppose ten of these were prepared; it would be no inconsiderable traffic to furnish the English market 1,500 tons of oysters per annum, which would yield a gross revenue of at least \$2,000,000, and a net profit of fully \$1,000,000 per annum.

#### ABOUT STOCKINGS, GLOVES, RUFFS, ETC.

We gave some facts, says the Boston *Herald*, a few days since, relative to the fashions that prevailed in old times, gathered from an article in the New England *Historical Register* for 1852. From the same source the following interesting matters, pertaining to the ancient customs and usages with respect to stockings, gloves, etc., are also collected:—

Stockings were anciently made of cloth or milled stuffs, sewed together. Henry II., of France, was the first who appeared with silk stockings. That was in 1559, and in 1561 Queen Elizabeth was presented by her milliner with a pair. The first pair of worsted stockings knit in England were made in 1564.

Red-colored stockings, whether of yarn, worsted, or silk, were much worn in New England for nearly half a century after the arrival of our fathers.

In 1629, when provision was made for emigrants to Massachusetts, the stockings furnished were accompanied with ten dozen pairs of Norwich garters. At an early period of our country, silk garters were worn by the more fashionable, and puffed into a large bow knot at the knee, but as the custom fell under the notice of the civil authorities, it was forthwith prohibited.

Gloves have been long in use, and it was once a proverb that, to be well made, three kingdoms must be concerned in the making:—Spain to dress the leather, France to cut it, and England to sew it. But France, for a considerable period, is said to have had the preference in all these three respects.

Sixty years ago, pall holders, and other persons attending funerals, wore white leather gloves. In 1741 men and women's "white glazed lamb" gloves were offered for sale in Boston.

Ruffs, however odd it may appear to us, were formerly worn by males as well as females. Queen Elizabeth appointed officers, it is related, to clip the ruff of every person seen wearing it of larger dimensions than the law permitted. A clergyman in 1608 took occasion to allude to a lady who wore a ruff that looked "like a sail; yea, like a rainbow." Ruffs were wired as well as starched. Anne, widow of Dr Turner, for assisting the Countess of Essex to poison Sir Thomas Overbury in 1613, received the following sentence:—"That, as she was the first to introduce the fashion of yellow starched ruffs, she should be hung in that dress, that the same might be held in shame and detestation." In the play of *Albusnazzar*, edited 1614, Arsilina asks Tricalo, "what price bears wheat and saffron, that your band is so stiff and yellow?"

Speaking of starch, it first came into use in England in 1564. It was carried thither by a Mrs. Dinghen Vanden Plasse, of Flanders, who set up business as a professed starcher, and instructed others how to use the article for £5, and how to make it for £20. The *News Letter* of 1712 gives this notice:—"Very good starch, made in Boston by a starch maker lately from London, is for sale."

The picture of Governor Winthrop appears with an elegant ruff. The custom was imported by some of our primitive settlers, but in 1629 this part of the dress became so enlarged that the Legislature of Massachusetts felt obliged to command that it be kept within due bounds.

In the reign of James I. bands succeeded the full, stiff ruff. They were prepared with wire and starch, so as to stand out "horizontally and squarely." They were held by a cord and tassel at the neck.

People of the ton had the strings and tassels of their bands sometimes elegantly scalloped and embroidered, which custom finally attracted the attention of our civil authorities, who, in 1634, "forbade bands to be ornamented with costly work." In 1639 a law was likewise enacted prohibiting the wearing of bands so broad as had been the fashion.

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## THE BOOK TRADE.

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### 1.—*A New Translation of the Bible.* By REV. LEICESTER AMBROSE SAWYER.

Messrs. John P. Jewett & Co., of Boston, are about issuing a new translation of the Bible, by that learned translator, Mr. Sawyer, having in view an independent revision and translation from the original languages, with a chronological arrangement of the Sacred Books. It is said Mr. Sawyer has devoted full twenty years of his life to the accomplishment of this object, and that the natural bent of his mind, together with his well-known attainments as a Greek scholar, peculiarly fit him for this great work. The new features comprised in this translation are the following:—1. To translate from the most improved texts of the originals. Great attention has been paid to the text of the Greek Testament during the last two hundred and fifty years, and many inaccuracies have been detected and removed. A perfect text is not yet attained, and, from the nature of the case, cannot be; but very great improvements have been made in it, and these ought to be made available to the English reader. 2. To translate with the utmost precision and accuracy word for word and particle for particle, but without servility in respect to idiomatic forms and modes of expression. 3. To translate the same words by the same when they mean the same thing as far as may be, and by different words, only when they have different meanings which require a change. 4. To translate different words as far as may be, by different words of corresponding meanings, and each word by the same word. 5. To translate general terms by those equally general, and not the more general by the less general, or the less general by the more general. 6. To avoid all needless indelicacy in the translation. 7. To translate chiefly into the recent and improved style of the languages, in preference to the antique. This involves the rejection of all obsolete words and modes of expression. 8. To interpolate as little as possible; and leave what is implied in the original, to be implied in the translation; and make the translation conform, as far as may be, to the style of the original. 9. To transfer the names of weights, measures, coins, etc., with expressions of their value in brackets, and to include all interpolations in brackets. 10. To arrange the Sacred Books according to their characters and dates, and not arbitrarily or according to their lengths. 11. To divide the Sacred Books into chapters and verses according to their natural divisions, and not to allow chapters to break up closely connected discourses, or verses to separate sentences. The New Testament, which will be published first, will be ready in October, to be followed by the Old during 1859.

### 2.—*Visitations and Search; or, an Historical Sketch of the British Claim to exercise a Maritime Police over the Vessels of all Nations in Peace as well as in War, with an Inquiry into the expediency of terminating the Eighth Article of the Ashburton Treaty.* By WM. BEACH LAWRENCE, editor of "Wheaton's Elements of International Law." 8vo., pp. 218. Boston: Little, Brown & Co.

The right of visitation and search over the vessels of all nations in peace as well as in war, as claimed by the British Government, has long been the theme of discussion among our people, as well as a subject of repeated negotiation among the various nations of Europe. Though the matter, so far as regards the United States, is now understood to be definitely settled, by the acceptance on the part of Great Britain of the exposition of international law presented by our Secretary of State, there is no more important subject than that which attaches itself to the maritime rights of a nation while traversing the high seas, hence the history of these negotiations, involving, as they do, the principles of maritime jurisprudence, cannot be without general interest to our citizens. The author appears accurate and fair in stating facts only—free from either national or party prejudice, and his statements may be relied on.

- 3.—*From New York to Delhi*, by way of Rio de Janeiro, Australia, and China. By ROBERT MINTURN, Jr. 12mo., pp. 488. New York: D. Appleton & Co.

This book, as the author informs us, has grown out of a six months' tour in India, just previous to the outbreak of the present mutiny, and comprises a series of letters originally written to his family while absent, but the interest which now attaches itself to India, and everything Indian, by cause of the recent revolution, has induced Mr. Minturn to publish them, as giving some interesting features in regard to the character of the natives of India, as well as some insight into the policy actuating the East India Company's government of that empire—a system which, though now no longer in existence as an independent power, with a few slight modifications, still constitutes the reigning power over India. It will be found comprehensible and concisely written, giving evidence that the author both knew his subject and what he was writing about—important considerations not always met with in books of this nature, while the last few chapters contain statistical and other information of considerable value.

- 4.—*A Journey due North*; being Notes of a Residence in Russia. By GEORGE AUGUSTUS SALA. 12mo., pp. 459. Boston: Ticknor & Fields.

The author says in vindication of himself for putting this volume before the public, that inasmuch as it is necessary for all those who travel into far and strange countries, not only to understand the commodities and fruitfulness thereof, but also to apply them to the setting forth of the same, that it may encourage others to travel, he has written this neat volume as a partial exposition of Russian life and customs. Mr. Sala appears to be a close observer, and possessed of a happy faculty of telling what he has seen—his style being humorous, and at times even racy—reminding us more of off-hand pencil-sketches than the production of one who had quietly seated himself to write out what he had seen among the people of the Czar. Evidently a socialist, he has given us a fair insight into the various ingredients of society, but seems to have lost sight of his object, and neglected much in dispensing with whatever relates to the physical nature of the country, its trade and commerce—it lacks facts and figures.

- 5.—*The Laws of Health*. By WILLIAM A. ALCOTT, M. D. Designed for Families and Schools. Boston: J. P. Jewett & Co.

This book purports to fill an acknowledged vacancy, as to a successful means of imparting just so much learning in anatomy and physiology as will enable the general reader, of common school attainments, to understand and apply the laws of health. It is certainly a valuable contribution on a worthy subject, yet it seems to contain both too much and too little—too much philosophy and too little elementary matter. The principles of organization must and should be clearly understood, before any one can rightly comprehend organic functions. For pointing out conditions and circumstances in conflict with the enjoyment of health, this book may be of decided utility; but for a reasonable understanding on physiological grounds of why good, as well as bad, attention to the laws of health, as here pointed out, are sooner or later afflicted with disease, it is deficient. It is chiefly valuable in teaching how to avoid known causes of disease, and the more widely spread such knowledge the better, and every effort in this direction is commendable.

- 6.—*Agnes*. A Novel. By the author of "Ida May." 12mo., pp. 509. Boston: Phillips, Sampson & Co.

Is a thrilling story of the revolution, full of reminiscences of those times, and of facts connected with the Moravian Missions, which will be found highly interesting. If the author's conceptions of Indian life are less heroic than those of most other writers, they are nevertheless much more life-like, and whoever has read "Ida May," will find that the author is none the less interesting in "Agnes."

7.—*Battles of the United States by Sea and Land*; embracing those of the Revolution and Indian Wars, the War of 1812, and the Mexican War. Illustrated with numerous highly-finished Steel Engravings. By HENRY B. DAWSON, member of the New York Historical Society, &c. Parts 1 and 2. Royal 8vo. New York: Johnson, Fry & Co.

This bears unmistakable evidence of being a very valuable work. No expense has been spared by the publishers in getting it up—the type and paper are good, while the illustrations are of the highest order. It is published by subscription in parts at twenty-five cents each, semi-monthly, with a guaranty by the publishers that it shall not exceed forty numbers in all. This book will fill an important blank in our country's history, for, as the author says, "the general histories of the country, and even the general histories of the respective wars, embracing, as they do, so much that is general or political in its character, must necessarily be brief in their descriptions of the various movements of the armies, and the various conflicts in which they have been engaged, and thus the student and the general reader alike are left to gather from doubtful sources the information they desire." In its preparation the author has spared no pains or research, by adding elaborate references in detail, for the information of those who would learn the exploits of the army and navy of our Republic from official authorities, which shows a very commendable zeal on his part, and which greatly enhances the value of the work for reference, as well as for popular use.

8.—*Rational Cosmology*; or, the eternal Principles and necessary Laws of the Universe. By LAURENS P. HICKOK, D. D., of Union College. 8vo., pp. 397. New York and London: D. Appleton & Co.

This is a scholarly work on physio-philosophy, reduced to a deeply entertaining style of thought, and the very converse of the pantheistic philosophy of the Germans. "The whole design includes the attainment of a clear conception of what is essential in a Being that must be the Maker of the universe; and then a clear conception, also, of the immutable principles that must determine the laws, and by which we may expound the nature, of the universe. . . . In reference to the theology, there may be a complete satisfaction attained in the use of a true, rational psychology; but the new and severe task demanded is in reference to the philosophy. There is the necessity for the instauration of a *true science of the universe*—A RATIONAL COSMOLOGY." This extract from the introduction may be fittingly applied to the author and his work.

9.—*The Household Book of Poetry*. Collected and Edited by CHARLES A. DANA. 8vo., pp. 797. New York: D. Appleton & Co.

The design of this noble book is to combine in one volume whatever partakes of genius and is truly beautiful among English poesy; and although in the carrying out of this design we have been subject solely to the caprice and taste of the compiler, in judging of the poetical merit of each production, we have not suffered thereby; and again in the happy arrangement of the book in classifying the different productions according to the subjects of which they treat, rather than to the nativity or sex of the authors, Mr. Dana has exhibited an erudition in thus disposing of the incongruous mass with which he has had to deal that cannot but be appreciated by the public. Two well-digested indices accompany the work—one classifying each poem with the subject of which it treats, and the other comprising a list of the authors' names, their nativity, etc., and coupling it with a list of their productions which have been made use of in this collection. We feel that we cannot bestow too much praise on this effort of Mr. Dana's in thus compiling this book of poetry, which will be found worthy to become the familiar friend and companion of every household.