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COMMERCIAL CHRONICLE AND REVIEW,

EMBRACING A FINANCIAL AND COMMERCIAL REVIEW OF THE UNITED STATES, ETC., ILLUSTRATED WITH TABLES, ETC., AS FOLLOWS:

HUNT'S

MERCHANTS' MAGAZINE

AND

COMMERCIAL REVIEW.

JANUARY, 1849.

Art. I.—THE HISTORY AND PRINCIPLES OF ANCIENT COMMERCE.

LECTURE IV.—PART II.

THE COMMERCE OF ANCIENT ROME.

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HAVING considered, in the first part of this article, the Romans as an agricultural tribe, a warlike nation, and an extensive empire, I shall now take a view of those institutions which have a connexion with commerce. These are—

First. The institution of domestic slavery.

Secondly. The institutions for the transmission of letters.

Thirdly. Institutions for buying and selling.

Fourthly. The institutions for insuring property.

I. The institution of domestic slavery. The following accounts are given us respecting the domestic slavery of the Romans:—

Men became slaves among the Romans by being taken in war, by sale, by way of punishment, or by being born in a state of servitude. The masters had an absolute power over their slaves. They might scourge or put them to death at pleasure. When slaves were beaten, they were commonly suspended, with a weight tied to their feet that they might not move. When punished capitally, they were crucified. If a master of a family was slain at his own house, and the murderer not discovered, all his servants were liable to be put to death. We find no less than 400 in one family punished on this account. Slaves were not esteemed as persons, but as things, and might be transferred from one owner to another, like any other effect. They could not appear as witnesses in any court of justice, nor make a will, nor inherit anything, nor serve as soldiers, nor was there any regular marriage among them.

The influence of domestic slavery on ancient commerce was exceedingly injurious.

Slavery prevailed more or less in all ancient nations. The lands were cultivated by slaves—the various branches of manufacture were carried on by slaves. Each landlord had an establishment of slaves, whose labor supplied him with most of the articles necessary for his domestic consumption. In some cases, the slaves sold, for the benefit of their masters, the articles they had made. Commerce was carried on chiefly by freed-men, or the inferior class of citizens.

The result of this was that manufacturing labor was looked upon with contempt. In all slave countries there is an aversion to labor, at least an aversion to that kind of labor which is performed by slaves. At the commencement of the Roman state, agriculture was considered honorable, and the greatest of her sons worked at the plough; but, when agriculture was performed by slaves, the citizens refrained from labor, and Rome imported her provisions from abroad. This change produced disastrous effects. As the poorer citizens could not engage in manual work, they were, when not engaged in war, dependent on the bounty of the state, and received a certain sum for their support. Had not slavery existed they might have become artizans; but, as slaves were artizans, the citizens became paupers.

But this was not the worst. Had the citizens received with quietness the public bounty, the evil would have been comparatively light; but wealthy men, who were ambitious of political honors, sought to attain their object by feasting the poorer citizens. Hence, every rich man had the means of keeping constantly in his pay a turbulent party, who would go any lengths in support of the man from whom they derived their subsistence; and, as they were all soldiers, they were ready to embroil their country in a civil war in support of their patron. It was by means only of his wealth that Crassus obtained the chief honors of the state.

The institution of slavery compelled every citizen to be a soldier. Had no foreign wars been feared, it would still have been found necessary that every citizen should acquire the use of arms, in order to keep down the slaves. A slave country resembles a sleeping volcano—an eruption may take place in a moment—the citizens must be always on their guard. The military spirit which was thus maintained was exceedingly unfriendly to commerce.

Notwithstanding this military spirit, the defensive position of a country is weakened by slavery. In a country where all are free, every man, in case of invasion, will become a soldier: the weaver will leave his loom, the dealer his shop, the husbandman his plough—all fly to arms to fight for their country. But a slave has no country; it matters not to him who may be the proprietor of the soil on which he is doomed to labor. The slaves cannot be trusted with arms to fight for their masters, because they may turn those arms against their masters.

Again, slaves *consume* less than freemen; hence the imports of a country will be less. They are not allowed those comforts and luxuries in which, were they free, they would be able to indulge. Slaves also *produce* less than freemen; hence the exports of a country will be less. It is the interest of a slave to work as little as he can, as his remuneration will be the same; it is the interest of a freeman to work as much as he can, because his reward is in proportion to his work.

Slavery is an obstacle to improvement in the art of production. People who have laid out large sums of money in the erection of machines, sometimes object to the introduction of new machinery, lest they should diminish the value of the old. So, in slave countries, the proprietors do not introduce machinery, because the value of the slaves will thus be diminished; and the slaves themselves do not invent machinery, nor probably would their invention be adopted if they did. In these respects slavery is injurious to commerce.

II. We will notice those institutions that have a reference to travelling, and the conveyance of letters.

Dr. Adams states that the public ways were, perhaps, the greatest of all the Roman works. They were made with great labor and expense, and extended to the utmost limits of the empire, from the pillars of Hercules to the Euphrates, and the southern confines of Egypt. The first road which the Romans paved was to Capua, afterwards continued to Brundusium, about 350 miles long. It was paved with the hardest flint, so firmly, that in several places it remains entire to this day. It was so broad that two carriages might pass one another. The stones were of different sizes, from one to five feet every way, but so artfully joined that they appeared but one stone. There were two strata below; the first strata of rough stones, cemented by mortar, and the second of gravel, the whole being about three feet thick. The roads were so raised as to command a prospect of the adjacent country. On each side there was usually a row of larger stones for foot passengers. The charge of the public ways was entrusted only to men of the highest dignity. From the principal ways there were cross roads, which led to some places of less note. The inns, or stages along the roads, were commonly at the distance of half a day's journey from each other. At a less distance there were places for relays, where the public couriers changed horses. These horses were kept in constant readiness, at the expense of the emperor, but could only be used by those employed on the public service, without a particular permission, notified to the innkeeper by a diploma. The Romans had no public posts as we have.

The first invention of public couriers is ascribed to Cyrus. Augustus first introduced them among the Romans, but they were employed only to forward political despatches, or to convey intelligence. It is surprising they were not sooner used for the purposes of commercial and private communication. Louis XI. first established them in France in the year 1474; but it was not till the first of Charles II., anno 1660, that the post-office was settled in England by Act of Parliament.

The state of its post-office is, perhaps, in modern times, no bad criterion of the state of knowledge and civilization which exists in any country. Nothing is of more importance to a merchant than a rapid conveyance of letters. It is of importance to him to have the earliest information of any events that may affect his trade—of any change in the markets—of the character or failure of his correspondents—of the payment or non-payment of his bills, of the execution of his orders, or of the despatch of his merchandise. In all modern nations the carrying of letters has been undertaken by the government. It is found that when a large number of letters are despatched at the same time, a moderate charge upon each is not only sufficient to bear the expense of the carriage, but leaves a surplus that affords a considerable revenue to the state.

III. Those institutions that have a reference to buying and selling; the chief of these relate to money and banking.

The Romans, like other ancient nations, had, at first, no coined money, but either exchanged commodities against one another, or used a certain weight of uncoined brass. The various names of money also denoted weights, in the same way as with us, who now use the word "pound" to denote a coin, whereas it first denoted a pound of silver. Indeed, we have borrowed this practice from the Romans; and over the figures that denote the pounds, we do not place the letter P., but the letter L.—the first letter in the word *libra*—the Latin word for a pound. The Roman pound was equal to about twelve ounces avoirdupois.

The table of Roman money would stand thus:—

10 *asses* make one *denarius*.
25 *denarii* make one *aureus*.

The *as* was of brass, the *denarius* of silver, and the *aureus* of gold.

All the Roman money was originally of brass; and hence the word *as*, which in Latin denotes brass, is also employed to denote money. Silver was not coined in Rome until the year of the city 484; that is, 269 years before the Christian era,—and gold, 62 years later, or 207 years before the Christian era.

Servius Tullius first stamped pieces of brass with the image of cattle, oxen, and swine. The Latin name for these is *pecudes*, hence, money was called *pecunia;* from which we derive our word pecuniary. The As was a brass coin that weighed a pound. There were other brass coins, weighing one-half, one-fourth, and one-sixth of a pound.

The practice of depreciating the currency, by issuing coins, sustaining the same names as the previous coins, but containing a less quantity of metal, was adopted by the Romans to a greater extent than in our own country. With us, a pound weight of silver that was formerly coined into twenty shillings, is now coined into sixty-six shillings. In the first Punic war money became so scarce that the Romans coined *asses* that weighed only two ounces, or the sixth part of a pound, which passed for the same value as those of a pound weight had done; by this means the republic gained five-sixths, and thus discharged its debts. Such an example could not fail to have imitators among succeeding statesmen. In the second Punic war, while Fabius was dictator, the *asses* were made to weigh only one ounce, and subsequently they were reduced to half an ounce.

The *denarius* was of silver. The Romans had three silver coins—the *denarius*, the *quinarius*, and the *sestertius*. The first was equal to ten *asses*, that is, to ten pounds of brass; the second, to five *asses;* and the third, to two *asses* and a half.

A pound of silver was coined into a hundred *denarii;* so that, at first, a pound of silver was equal to a thousand pounds of brass, a circumstance which proves that silver was then comparatively scarce. But afterwards the case was altered; for, when the weight of the *as* was diminished, it bore the same proportion to the *denarius* as before, till it was reduced to one ounce, and then a *denarius* passed for sixteen *asses*. The weight of the silver money also varied, and was different under the emperors from what it had been under the republic.

We translate the word *denarius* by the word penny, and over figures denoting pence we put the letter D., being the first letter in the word

denarius, the Latin for a penny. But the Roman penny was not made of copper, nor of brass, but of silver, and, at the time of the Christian era, was worth about sevenpence-halfpenny of our money. We learn from the New Testament history, that the Roman penny bore the image and superscription of the emperor, and was used in the payment of taxes; that it was the usual wages for a day's labor; and that twopence would provide a night's entertainment at a public inn.

The *aureus* was of gold. It was first struck at Rome in the second Punic war (207 years before the Christian era,) and was equal in weight to two and a half *denarii*, and in value to twenty-five *denarii*, or one hundred *sestertia*. The common rate of gold to silver, under the republic, was tenfold. At first, forty *rurei* were made from a pound of gold; but, under the later emperors, they were mixed with alloy, and thus their intrinsic value was diminished.

Among the Romans, money was computed by *sestertium*. A *sestertium* was the name of a sum, not of a coin, and was equal to a thousand of the coins called *sestertius*. A *sestertius* is equal in English money to one penny, three-farthings, and three-fourths of a farthing.

The system of banking at Rome was somewhat similar to that which is in use in modern times. Into these institutions the state or the men of wealth caused their revenues to be paid, and they settled their accounts with their creditors by giving a draft or cheque on the bank. If the creditor also had an account at the same bank, the account was settled by an order to make the transfer of so much money from one name to another. These bankers, too, were money-changers. They also lent money on interest, and allowed a lower rate of interest on money deposited in their hands. In a country where commerce was looked upon with contempt, banking could not be deemed very respectable. Among most of the ancient agricultural nations, there was a prejudice against the taking of interest for the loan of money. Hence, the private bankers at Rome were sometimes held in disrepute, but those whom the government had established as public cashiers, or receivers-general, as we may term them, held so exalted a rank, that some of them became consuls.

The Romans had also loan banks, from which the poor citizens received loans without paying interest. We are told that the confiscated property of criminals was converted into a fund by Augustus Cæsar, and that from this fund sums of money were lent, without interest, to those citizens who could pledge value to double the amount. The same system was pursued by Tiberius. He advanced a large capital, which was lent for a term of two or three years to those who could give landed security to double the value of the loan. Alexander Severus reduced the market-rate of interest, by lending sums of money at a low rate, and by advancing money to poor citizens to purchase lands, and agreeing to receive payment from the produce.

The deity who presided over commerce and banking was Mercury, who, by a strange association, was also the god of thieves and of orators. The Romans, who looked upon merchants with contempt, fancied there was a resemblance between theft and merchandise, and they easily found a figurative connection between theft and eloquence, and hence, thieves, merchants, and orators were placed under the superintendence of the same deity. On the 17th of May in each year the merchants held a public festival, and walked in procession to the temple of Mercury, for the purpose,

as the satirists said, of begging pardon of the deity for all the lying and cheating they had found it convenient to practise, in the way of business, during the preceding year.

IV. Those institutions that have a reference to insurances.

The Romans are said to have introduced the practice of the insurance of ships. This is of the highest importance to a nation having many ships. If a register were kept of all the ships engaged in any particular trade, and a record of all those which, during a certain period, had been wrecked, it would be easy, after a time, to construct a table showing what premiums an owner ought to pay to any party who would insure his ship. If the ship is not lost, the insurers have the premiums as their profit, as pay for the risk they have ran; if the ship is lost, the insurers pay the value to the owner; and thus, a loss that might ruin an individual, becomes divided among a number of parties, who can better afford it. Now, such registers are kept, and this kind of business is extensively carried on in most large maritime cities. You have heard of the underwriters at Lloyds. The underwriters are marine insurers. If a person wishes to insure his ship, he submits all the particulars of the ship, the voyage, and the cargo, to these parties, and each individual *under writes* his name and the amount to which he is disposed to insure. To a maritime nation, this practice is of high importance.

The principles of life insurance are the same as those of marine insurance. You must first get a record of the number of persons that die, out of a certain population. These records are called "bills of mortality," and from these are constructed "tables," showing how long a person of any given age is likely to live; this term is called the "probability of life." Having obtained this, you can easily calculate how much a year he ought to pay during his life to entitle his executors to receive £1,000, or any other sum, at his death, taking into account the rate of interest at which these annual payments are presumed to accumulate, and the profits to be made by the party who grants the insurance.

We are not aware that any of the nations of antiquity kept a register of the births and deaths, so as to form the foundation of tables of mortality sufficiently minute for the purposes of life assurance. Such tables are of very modern date even in our own country. The oldest tables we have are the Northampton, calculated by Dr. Price, from the bills of mortality in the town of Northampton. There is an easy rule by which any of you may know the probability of your own lives, according to the Northampton tables:—Take your own age from the number 86, divide the remainder by 2, and that will give the probability of life. Thus:—Suppose you are now 20 years of age; take 20 from 86, that leaves 66; divide 66 by 2, and you have 33, which is the probable number of years that you will live—it is the average duration of life of persons of your age.

Three new facts have recently been discovered in the science of life insurance. First, that people live longer now than they did a century ago. Secondly, that the wealthy classes live longer than the indigent. Thirdly, that ladies live longer than gentlemen.

People live longer now than they did a century ago:—By this it is not meant that the extreme of life is prolonged, but that few people die at an earlier age. Thus, if we compare the Carlisle and the Northampton tables, we shall find the following results:—

	Northampton.	Carlisle.
At 66 years of age, the expectation of life is.....years	13	14
50 " " " "	17	21
40 " " " "	23	27
30 " " " "	28	34
20 " " " "	33	41

And, at birth, the expectation of life by the Northampton tables, is 25 years, and by the Carlisle tables, 38. Thus, the difference between the two tables, at 60 years of age, is only one year, and on the day of birth it is 13 years. So people do not live to a more advanced age now than some persons did a hundred years ago, but fewer die young. This improvement in the expectation of life, is the result probably of increased regard to cleanliness on the part of the poor, to increased attention paid to the public health, to the improvements in medical science, and particularly to the discovery of vaccination. This increased prolongation of life is not confined to England. In France, it has been estimated that the value of life has been doubled since the fourteenth century, and has gained nearly one-third since the year 1781.

Another new fact connected with life assurance is, that the wealthy classes live longer than the indigent. Although the late hours, the crowded assemblies, and the variety of indulgencies enjoyed by the wealthy must be considered unfavorable to longevity, yet, on the other hand, they are exempt from the evils of want, from the scarcity of food, and from the anxieties of business. If unwell, they have the best medical advice, and can immediately remove to any part of the country that is more friendly to their recovery. Hence, the lives of the rich are better than those of the poor.

Though females are exposed to some contingencies from which men are exempt, yet, from being more free from dangerous employments, and from cares and anxieties of mind, and, especially, from being more temperate in the use of wine and ardent spirits, they live longer than men. A medical writer has pleasantly remarked, that one cause of the superior longevity of women may be, that they talk more ; talking, by exercising the lungs, being exceedingly beneficial to health.

The original object of life insurance was to enable a person to secure to his family the receipt of a certain sum at his death. But it is now applied also to a variety of commercial purposes. Some people insure the lives of their debtors, others insure their own lives for the benefit of their creditors. In every form, the system seems to produce unmingled good. It promotes habits of forethought and economy on the part of the insured, and tends, by the accumulation of savings, to increase the amount of the national capital.

We may reasonably expect that this system will be extended and improved. We may hereafter have tables that shall show the expectation of life, not only in regard to people in health, but also to those afflicted with every kind of disease ; and shall also show the effect of different occupations and localities on the duration of life. The system of insurance may be applied to every calamity, as soon as we have tables that will show correctly the probability of its occurrence. We thus find, that the study of statistics, the least inviting in appearance of all the sciences, has produced most important benefit ; and that even Death, capricious as he seems, may have his course previously marked out by the hand of Science.

We have thus, in our present lecture, considered Rome as an agricultural tribe, a warlike nation, and an extended empire. We have also taken a view of some of her social institutions that have a reference to domestic slavery, travelling and the conveyance of letters, money and banking, and marine insurances.

We shall now bring under your notice the commercial character of the Romans.

1. The Romans were honorable men.

However strongly we may condemn the spirit of war, we must not suppose that the profession of arms is incompatible with personal excellence of character. We read, in the New Testament, of an officer in the Roman army who was "a devout man, and one that feared God, with all his house, who gave much alms to the people, and prayed to God alway"—whose "prayers were heard, and whose alms were had in remembrance in the sight of God." And, in the same book, we have a confirmation of the honorable character of the Roman law, which was very different from that which prevailed among Asiatic nations. "It is not the manner of the Romans to deliver any man to die, before that he which is accused have the accuser face to face, and have license to answer for himself concerning the crime laid against him."

A merchant should be an honorable man. Although a man cannot be an honorable man without being an honest man, yet a man may be strictly honest without being honorable. Honesty refers to pecuniary affairs; honor refers to the principles and feelings. You may pay your debts punctually, you may defraud no man, and yet you may act dishonorably. You act dishonorably when you give your correspondents a worse opinion of your rivals in trade than you know they deserve. You act dishonorably when you sell your commodities at less than their real value, in order to get away your neighbor's customers. You act dishonorably when you purchase at higher than the market price, in order that you may raise the market upon another buyer. You act dishonorably when you draw accommodation bills, and pass them to your banker for discount, as if they arose out of real transactions. You act dishonorably in every case wherein your external conduct is at variance with your real opinions. You act dishonorably if, when carrying on a prosperous trade, you do not allow your servants and assistants, through whose exertions you obtain your success, to participate in your prosperity. Yon act dishonorably if, after you have become rich, you are unmindful of the favors you received when you were poor. In all these cases there may be no intentional fraud. It may not be dishonest, but it may be dishonorable conduct.

2. The Romans were patriotic men. They loved their country, and a merchant should love his country. When we say that a merchant is a citizen of the world, and is free from national prejudices, think not we mean that a merchant has no attachment to his country; think not we mean, that the land of his forefathers—the land in which his ancestors lived and acted, and in which their ashes now repose—the land which gave him birth, and the land of his earliest associations—the land, under the laws of which he has acquired wealth, and in whose institutions he participates—the land, the language of which awakens the sweetest and the holiest associations;—think not we mean that he regards this land with no sentiments of filial regard,—no feelings of preference,—no aspirations for her honor and prosperity. No! 'tis a false philosophy that

would tell us to merge all individual or local attachments in one general feeling of philanthropy. He who has no personal attachments, has no general attachments. He who does not love his country has no love for mankind. Local attachment is the basis of general attachment. He who is the best husband, the best father, and the best friend, he it is that will make the best philanthropist. While, therefore, a merchant is free from that littleness of mind which would induce him to despise other nations, he is still susceptible of all the delightful sensations that arise from pure and disinterested patriotism. He should love his country too well to encourage the industry of other countries to the injury of his own. He should pay those taxes or duties which the laws of his country have imposed for the public good. He should readily serve those offices in the commonwealth, though burdensome or expensive, which his station in society impose upon him. He should use his influence in preserving order, in maintaining the rights of property, and in upholding the supremacy of the law. He should liberally support those institutions that have for their objects the preservation of the public morals, the diffusion of useful knowledge, and the relief of the distresses of the poor. Ah! it is here that patriotism gathers her sweetest and her softest laurels,—laurels which will give composure to the head that wears them, and which will maintain their freshness when the blood-stained garland of the conqueror shall have faded into insignificance, or have withered into oblivion.

3. The Romans were grave, methodical, and systematic men.

They conducted everything upon system. They owed their success in arms to their superior discipline. They maintained their dominion by acting upon certain fixed principles, and by the uniformity with which they adhered to those principles. Rome was not built in a day. The Roman empire was not the result of one daring enterprise, one bold speculation, one grand achievement,—it was the result of adhering for centuries to fixed rules of action. The sons adopted the maxims of their fathers, and generation after generation followed up those principles which experience had shown to be adapted to the end in view. This may teach us some important commercial lessons. A nation, a company, or an individual, who shall for a length of time adhere inflexibly to sound rules of conduct, will seldom fail of success. The road to wealth is a beaten road, and it requires but ordinary sagacity to discover the path. Industry, honesty, prudence, and perseverance, these are the finger-posts that will direct your steps; follow their guidance, and the end will be gained. But you who disregard the counsels of experience—you gratify your love of self-indulgence—you nourish the spirit of speculation—you stray from the right path, and meddle with matters that you do not understand—and when you have reaped the fruit of your own doings, then you tell your creditors that you have been "unfortunate;" and the hard earnings of their honest industry are swept away, and their families are pinched in their enjoyments, because you have thought proper to follow a course of unprincipled recklessness.

A merchant should not only be systematic in his adherence to right principles, he should also be so in the details of his counting house. In everything, system is essential to a merchant. He should be systematic in the arrangement of his business, systematic in the division of his labors, systematic in the keeping of his books, systematic in the employment of his time. By system, he saves much time, avoids hurried feelings, and

gets through much more work. I do not think the better of a merchant if I see him always in a hurry; if he tells me he received my letter, but was so hurried that he had not time to answer it, or that he put it somewhere among his papers, and when he wished to answer it he could not find it. A man who acts systematically will arrange his business beforehand, and thus find time to do it all.

4. The Romans were not loquacious men. They were much inferior to the Greeks in vividness of imagination and in affluence of speech. I do not, by any means, intend to recommend taciturnity in general company. Conversation is one of the means by which knowledge is communicated, and the character of mankind is improved. As rough diamonds become smooth by being shaken together in a bag, so the asperities of men are softened down by their intercourse with each other. But it adds nothing to the character of a merchant, to make use of many words in matters of business; this argues either great indecision of character, or great prodigality of time. Time is money; talk as much as you please when you have nothing else to do, but don't talk more than is necessary until your business is done. The late Mr. Wesley, the venerable founder of the body of the Wesleyan Methodists, a body who have done much good in educating the poor, laid it down as one qualification for admission into his society, that the candidate should not use many words in buying and selling. A most excellent rule, and one which, if steadily adhered to, would save much time, and produce other good effects.

Not only should you avoid many words in commercial conversation, you should also avoid too many words in your commercial correspondence. Long letters on matters of business are exceedingly tiresome. Let all your letters be as short as the subject will admit. Come at once to the point, express your meaning clearly in a few plain words, and then close. The man who introduces a variety of unnecessary circumstances, who is fond of using tropes and figures of speech, or has a lengthy, prosy style, is very ill qualified to conduct the correspondence of a commercial establishment. You ought also to be careful to write a plain hand; you impose upon your correspondents a very unnecessary and a very unpleasant tax, if you require them to go over your letters two or three times in order to decipher your writing. It is presumed, that when you write a letter, you write for the purpose of communicating your ideas to the person to whom the letter is addressed; why, then, throw difficulties in the way, by writing in an illegible hand. A business hand is equally opposed to a very fine hand. A letter written in fine, elegant writing, adorned with a variety of flourishes, will give your correspondents no very high opinion of you as a man of business. Some persons have contended that a man's character may be discovered by his hand-writing. It may be doubted whether a man's intellectual powers can be ascertained in this way, but perhaps his moral qualities may thus be sometimes exhibited. For instance, if he write an illegible hand, it may be inferred that he is not very anxious about the comfort of the parties to whom he writes.

5. The great defect in the commercial character of the Romans was their military spirit.

In every age of the world military men have looked upon merchants as a class vastly inferior to their own. And this will always be the case, so long as mankind shall pay more respect to the arts of war than to the arts of peace. But it is more surprising, that merchants themselves, instead

of forming more correct notions of their own importance, have fallen in with the popular prejudice, and aped the manners of the military class. Hence, we find that merchants have sometimes settled their disputes with each other by duelling. That military men should do this may excite no surprise. Though, when we consider, that among the heroic Greeks and the martial Romans the practice of duelling was unknown, it can never be contended that this practice is necessary to maintain the personal courage of our military officers. On this ground we might also permit duelling among the common men. But if military men, when they have none of their country's enemies to shoot, wish to keep themselves in practice by shooting one another, they may allege that they are acting according to the principles of their profession. But nothing can be more out of character than for a mercantile man to be engaged in a duel. When a case came before the late Lord Ellenborough, in which one merchant had attempted to provoke another to fight a duel, his lordship observed, that merchants would be much better employed in posting their books than in posting one another.

One effect of the military spirit is, that it leads to cruelty of disposition. The Romans were cruel men, cruel towards their slaves, cruel towards their conquered enemies, cruel in their punishments, cruel in their amusements. No disposition is more opposed than this to the spirit of commerce, and yet, on some occasions, merchants have become the instruments of cruelty. Is there nothing cruel in selling spirituous liquors to half-civilized nations?—nothing cruel in supplying the munitions of war to untutored tribes who would otherwise remain at peace?—and was there nothing cruel in the African slave trade—a traffic that must be numbered among the blackest of our country's crimes, the most crimson of our national sins? Merchants should not only act honestly in their trade, but should also ascertain that the trade itself is an honest trade. For, although it be true, upon the ordinary principles of profits and loss, that honesty is the best policy, yet we should not practise honesty solely from motives of policy, nor infer the honesty of an enterprise from its apparent policy. Beware of taking a mere commercial view of questions of morality. Crimes the most atrocious have sometimes been profitable. But you see not the whole of the balance sheet. There are items in the account which no arithmetic can express. What estimate will you place upon infamy of character, remorse of conscience, the retributive justice of God in the present life, and his vengeance in the next? Take these into your calculation, and then sum up the amount of your gains.

As commerce extends her sway, the military spirit may be expected to subside, and peace and equity prevail. Commerce will teach mankind that it is their interest to live at peace with each other. Commerce will teach the slave owner that the man who keeps in bondage his fellow man, sins no less against his own interest than against the feelings of humanity and the injunctions of religion. Commerce will show to those who "sit in high places," that the vulgar maxim, "honesty is the best policy," is as applicable to the affairs of communities, as to the transactions of individuals, and that what is morally wrong can never be politically right. Commerce will inculcate upon nations, that the prosperity of one people is not an injury, but an advantage to the others; that national greatness can arise only from superiority in industry and in knowledge; and that nations, like individuals, should seek each other's welfare, and endeavor to promote

universal peace. When these sentiments are acknowledged, the Demon of national discord will be driven from the earth—the clangor of arms, and the shrieks of the vanquished, will be heard no more—and the Genius of War, in his dying moments, will surrender the palm of victory into the hands of Commerce.

Art. II.—MEMOIR OF SAMUEL SLATER,

THE FATHER OF AMERICAN MANUFACTURES.

[WITH A PORTRAIT.]

THERE is no individual deserving a more honored perpetuity in American annals than the one named above. True, he had no far back ancestry, as common in the land of his birth, to nourish a silly pride. Heraldry had no laurels to encircle him. The dazzling splendors of a court had never cast their lustre upon him. Nor is it known that he could cast an eye of complacency on any one of his own blood who had been particularly distinguished in the army, the navy, or the church. No, that blood had descended through successive generations—not by inundating floods and over lofty precipices, to arrest the gaze and call forth the acclamation of impulsive multitudes; but in limpid streams, noiseless and gentle, through the deep mountain passes, till the alluvial plains below were made rich and verdant by their fertilizing agency. His father was a respectable yeoman of Belper, Derbyshire county, in a central part of England. The yeomanry of that country form a distinct class, farming their own lands, ordinarily possessing wealth competent for their own necessities; being a desirable mediocrity in society, equally removed, on the one hand, from all in scouted and unmitigated poverty that is degrading and paralyzing; and, on the other hand, from sudden overgrown riches and unnatural rank in social position.

Verily it is no easy matter to write the biography of such a man as Samuel Slater; we mean to write one that will be generally read in a community like ours. It is not denied that we are a business kind of people, proverbially philosophical and shrewd in all matters connected with the acquisition of property; yet, few indeed think of reading the life of a business man. If urged to do it, the response will be interrogatories like the following;—What has he done that is memorable or calculated to interest mankind? Has he made any brilliant discoveries in science? Has the telescope opened to his enraptured vision hitherto undiscovered planets? Have the laboratories of the chemist enabled him to spread upon some broad and distinct panorama new analyses and combinations, and, as it were, new principles in the government of physical nature? Or, has he fought the battles of his country and clothed himself with martial glory? We cannot answer in the affirmative. We admit, that usually in the life of a business man there is not to be expected much incident to arrest the attention of the sleepy and the dull. If he has acquired great wealth; if at home he gives constant employment and consequent subsistence, year after year, to hundreds or to thousands of mechanics and laborers; if, too, the virtuous poor are furnished by him with comfortable

habitations, at rates the most reduced and advantageous; and, if abroad the canvass of his ships whiten every sea, and the merry notes of his gallant tars enliven every port in the known world; nevertheless his career has been comparatively uniform and monotonous—nothing in it stirring and dazzling, unless it be the grand result, the acquisition of a princely fortune. If now and then a rich cargo, amidst the howling tempest and the upturned elements, sink into the ocean's deep abyss; or if a conflagration in the dark hour of midnight sweep away whole blocks of houses and stores; these are deemed commonplace occurrences, scarcely deserving recollection. Whatever public sympathy may exist tends to another point. The tenants in being thus frightfully driven from their habitations by the flames bursting in upon them; and the mariners also in struggling for life, when shipwreck deprives them of food and all rational means of safety, do indeed excite a deep sympathy, and a memoir of their perilous sufferings would be read by thousands; while the owner of the wasted property is not mentioned or thought of, except by a few personal friends and the insurance offices.

Such are the natural reflections in reference to the biography of a merchant. However, the case of Samuel Slater is somewhat different. For if he hath not like Fulton discovered a new application of principle which has completely changed the social and business relations of the whole world, he has, no one can deny, introduced from a foreign land into our own country and spread over its fair bosom the application of a principle that has already, as with the power of magic, resolved population and wealth into new combinations. What has made the city of Lowell? What is now making the city of Lawrence become a rival sister to her? What has cast the germ of an hundred cities, here and there, all about us in every direction, at present flourishing villages, where only a few years since was a dense forest, the stillness of which has given place to the multitudinous hum of business? The reader scarcely need be told. With the young the story has become a kind of instinct. The hammer and the file of the machine shop, the dizzy whirl of the yarn spindle, and the rattling of the weaver's shuttle, answer the question. Spinning by machinery has mainly done all this. For a moment imagine these germs never to have been thus spread broadcast over our country, and what should we now behold? The answer is obvious. Our wheels of improvement would be set backwards half a century. So far as depending on this portion of our industry is involved, the geographies, the printed statistics, the newspapers printed sixty years ago would tell you with startling accuracy what would now be our condition.

The limits assigned for this article do not admit of much generalizing. They scarcely admit a well connected view of the prominent facts in the life of the individual immediately claiming our attention. He was born June 9th, 1768. We have already alluded to his father, who being in comfortable circumstances, the son received the advantages of a common school education. When at school, he is said to have evinced an inquisitive mental aptitude, for which he was so much noted in subsequent life. With him arithmetic was a favorite branch of study. This conduced to the development of mechanical capabilities, that were the foundation of his principal success through life. And it is justice to remark, that he was indebted only in a small degree for this success to any other cause save intellectual vigor and the most rigid integrity. He was modest and diffi-

dent, which with sensible people always command esteem ; and was completely destitute of that flippancy and bold pretension, which with many appear to be a substitute for genius. It is doubted if he was ever known to profess knowledge he did not possess, or to control means of any kind unless apparently within his power. We have frequently heard him affirm, that it was his *habit* through life, and especially in the early portion of it, not to assume pecuniary responsibilities, without calculating at the time the source from which funds would be received to cancel them. This is a trait of character the more to be admired from the rarity of its existence ; and a man who possesses it would not be inclined to commence, or to profess an ability to complete a machine, unless he had the perspective powers, that from the beginning would enable him at one glance to survey all its constituent parts. Instances indeed occurred, almost as a matter of course, of failure to receive anticipated means ; but, the man who exercised such a habit would not remain long without providing new estimates for the redemption of his responsibilities.

It is probably known to our readers that spinning cotton by machinery, in the boyhood of young Slater, was in its infancy. Richard Arkwright, born in 1732, and brought up to the humble trade of a barber, when about 25 years of age turned his attention to machinery—first, we believe, to an attempt for perpetual motion, and then to the object which has immortalized his name, and given benefits to the world of value surpassing all calculation. He soon obtained a patent for spinning cotton and went successfully into the business. In 1771, Jedediah Strutt, the inventor of the machine for making ribbed stockings, formed a copartnership with Arkwright. Four years afterwards, Mr. Strutt began, on his individual account, the erection of cotton works at Belper, the residence of the Slater family. This prepared the way for the eventful career of young Slater, who, when at the age of fourteen years, became the apprentice of Mr. Strutt, to learn this business ; and, by his father's consent, who died about that time, he bound himself with a regular indenture to perform faithfully the customary duties of an apprentice. Who would have then imagined that such a stripling, by this act, laid the foundation for a large fortune in America, and introduced the elements of a business to employ, in his own life-time, probably more than a million of people ! It seems more like fancy than reality. What conqueror ever produced a revolution in human society so wide and permanent in its character, as that we are contemplating ! A few such boys, each with a corresponding concatenation of circumstances, would revolutionize the whole world.

The signature of young Slater to his indenture, bears a striking resemblance to that written forty years afterwards on the bills of the bank of which he was the president. True, one was the chirography of a boy just from school, and the other of a man of business, and a good penman ; but no one can fail to observe the similarity. To us, this voluntary surrender of himself to Mr. Strutt, under all the legal technicalities in such instruments, is an interesting incident in his life, and was the result of views more comprehensive and collected than is usual with persons of his age. Were it convenient we would give a fac-simile of the indenture, still preserved in the family as a cherished relic of his early life. Just as the world was opening upon him with all its gaudy fantasies, its sensual delights, and its subtle delusions ; when the passions were ripening into full vigor, and the imagination was rampant ; what an idea for a self de-

votion of seven years to the interests and the will of another, with all possible entrenchments against idleness, extravagance, negligence in the care of property, and especially all improper indulgences in pleasure! It would be well if such cases were characteristic of the present age. Such, however, is not the fact. At the present day the lovely period of youth, in effect, is nearly obliterated from the annals of human life. Youth, in all its exterior attributes, is naturally lovely, no one can deny. The countenance is blooming like the flowers of spring. The physical proportions are symmetrical, and the motions are elastic and graceful. And what is far more important, the mind is disposed to receive instruction with a filial submission to authority, whether in age or position. We have sometimes lamented that this charming period of human existence, in olden times so distinguished, had not continued longer. Yet, now-a-days, both boys and girls, with one long stride, are prone to pass instanter from childhood to precocious manhood and womanhood; to assume positions and to exercise functions, as inappropriate and unbecoming, as would be to a dwarf the garments of a giant.

Nor was his new relation an unmeaning formality. He entered fully into the spirit of it. In no one instance is he known to have given cause for complaint. He served his master as faithfully as he was ever afterwards accustomed to regard his own interests. The hours, too, designed for rest and recreation were, to a considerable extent, occupied in experiments on machinery. Such was his fidelity, and so successful were his preliminary efforts in mechanical skill, that he soon became a favorite with Mr. Strutt, and was placed in situations of the utmost importance. Four or five of his last years he acted as an overseer, which with his close habits of observation was of great advantage to him.

But while serving his master faithfully, his mind was active in reference to his own establishment in business when the proper period should arrive. For some time previous to the termination of his apprenticeship, he had thoughts of locating himself in America. This, however, was a secret confined to his own bosom. Had he remained in England, he would unquestionably with less toil and painful anxiety have acquired a fortune; for it is well known that his knowledge of the business, and his peculiar habits of application, would have secured him all needful encouragement. After he left, Mr. Strutt declared that had he known his intentions, nothing should have induced him to part with him. But Mr. Slater apprehended that in his native country the business would be overdone; and from some advertisements in American papers, and from various rumors and reports that reached him, he concluded, and very justly, that here was an entire destitution of the talent which he possessed. Accordingly, he resolved that he would perfect himself as much as possible for the enterprise, and then make a bold and determined effort for its successful termination.

Having made all necessary preparation, secretly and without divulging his plans to a single individual, he bid farewell to the home of his childhood. His friends in the land of his adoption well know that he sincerely and ardently loved his mother, and that to all his family he was kind and affectionate; they well know he could not have left them without a painful struggle; but a youthful ambition animated his soul and enabled him to overcome his emotions. While waiting in London until the vessel was ready, he wrote to his friends, informing them of his purposes. The

eventful day of departure was September 1st, 1789, being at that time only a few months over twenty-one years of age. The laws of England did not admit the emigration of machinists, and therefore he took with him no patterns or drawings, trusting solely to the powers of his memory to enable him to construct the most complicated machinery. But few men could have done this. His memory however was remarkably tenacious, and being a good mathematician, he was enabled to enter into all the nice calculations required in such a labor. It is true he had many perplexities in his way, and many difficulties to encounter, but his skill and perseverance were a sufficient guaranty. No one unacquainted with the nature of them can understand how much talent and resolution were requisite. It must be apparent that he had not only to prepare all the plans in the several departments of the process of manufacturing, but he either had to make with his own hands the different kinds of machinery, whether of wood, iron, brass, tin, or leather, or else teach others to do it. At that period the business in all its ramifications was new in the country. Thus he must have been skilled in several trades, in addition to that in which he had been particularly instructed.

Mr. Slater arrived in New York the latter part of November, 1789, after a tedious passage of sixty-six days. He had no letters of introduction, excepting his indenture. With this he made himself known; and soon after his arrival he made a temporary engagement with the New York Manufacturing Company. But the state of their business being low and inferior, compared with what he had been accustomed to in his own country, he was soon dissatisfied with his prospects. Besides, he did not like the water privileges shown to him in that section of the country. Hence, on learning that attempts were being made at Providence, Rhode Island, for manufacturing cotton by machinery, after a short correspondence with the venerable Moses Brown, he left for that place early in 1790. Here was soon perfected the preliminary arrangements for business, and the following document presents the details of it, being a most interesting fragment in the early history of the business in America:—

"The following agreement, made between William Almey and Smith Brown of the one part, and Samuel Slater of the other part, witnesseth that the said parties have mutually agreed to be concerned together in, and to carry on, the spinning of cotton by water, (of which the said Samuel professes himself a workman, well skilled in all its branches,) upon the following terms, viz:—that the said Almey and Brown, on their part, are to turn in machinery, which they have already purchased, at the price they cost them, and to furnish materials for the building of two carding machines, viz: a breaker and a finisher; a drawing and a roving frame; and to extend the spinning mills, or frames, to one hundred spindles. And the said Samuel, on his part, covenants and engages to devote his whole time and service, and to exert his skill according to the best of his abilities, and have the same effected in a workmanlike manner, similar to those used in England, for the like purposes. And it is mutually agreed between the said parties, that the said Samuel shall be considered an owner and proprietor in one-half the machinery aforesaid, and accountable for one-half the expense that hath arisen, or shall arise, from the building, purchasing, or repairing of the same, but not to sell, or in any manner dispose of any part or parcel thereof to any other person or persons, excepting the said Almey and Brown; neither shall any others be entitled to hold any right, interest, or claim in any part of the said machinery, by virtue of any right which the said Slater shall or may derive from these presents, unless by an agreement, expressed in writing, from the said Almey and Brown, first had and obtained—unless the said Slater has punctually paid one-half of the cost of said

machinery, with interest thereon; nor then, until he has offered the same to the said Almey and Brown, in writing, upon the lowest terms, that he will sell or dispose of his part of the said machinery to any other person, and instructed the said Almey and Brown, or some others by them appointed, in the full and perfect knowledge of the use of the machinery and the art of water spinning. And it is further agreed, that the said Samuel, as a full and adequate compensation for his whole time and services, both whilst in constructing and making the machinery, and in conducting and executing the spinning, and preparing to spin upon the same, after every expense arising from the business is defrayed, including the usual commissions of two and a half per cent for purchasing of the stock, and four per cent for disposing of the yarn, shall receive one-half of the profits, which shall be ascertained by settlement from time to time, as occasion may require; and the said Almey and Brown the other half—the said Almey and Brown to be employed in the purchasing of the stock, and disposing of the yarn. And it is further covenanted, that this indenture shall make void and supersede the former articles of agreement, made between the said Almey and Brown and the said Slater, and that it shall be considered to commence, and the conditions mentioned in it be binding upon the parties, from the beginning of the business; the said Samuel to be at the expense of his own time and board thenceforward. And it is also agreed, that if the said Almey and Brown choose to put apprentices to the business, that they have liberty so to do; the expense arising from the maintenance of whom, and the advantages derived from their services during the time the said Almey and Brown may think proper to continue them in the business, shall be equally borne and received as is above provided for in the expenses and profits of the business. It is also to be understood, that whatever is advanced by the said Almey and Brown, either for the said Slater, or to carry on his part of the business, is to be repaid them with interest thereon, for which purpose they are to receive all the yarn that may be made, the one-half of which on their own account, and the other half they are to receive and dispose of on account of the said Slater, the nett proceeds of which they are to credit to him, towards their advance and stocking his part of the works, so that the business may go forward.

"In witness whereof, the parties to these presents have interchangeably set their hands, this fifth day of the fourth month, seventeen hundred and ninety.

"Wm. Almey,
"Smith Brown,
"Samuel Slater.

"*Witnesses* { Oziel Wilkinson, Abraham Wilkinson."

On the 21st of December, 1790, Mr. Slater started three cards drawing, roving, and seventy-two spindles, which were operated by an old fulling-mill waterwheel in a clothier's shop at the west end of Pawtucket bridge. In this place they continued the spinning until the subsequent erection, early in 1793, of what is called in that village the "Old Mill," and which is believed to be still in existence. It has been remarked that Mr. Slater had many perplexities; and although he had full confidence in his ability to complete what he engaged to perform, yet the pressure upon his mind occasionally would seem to overpower him. In addition to the burden of carrying in his memory all the plans and calculations of such complicated machinery, required in the several departments of the business, which is seemingly what no other mortal could do, the necessity, for the want of competent artisans, of performing so much of the labor with his own hands, occasioned unexpected delays. This at times nearly discouraged his partners. Of this he became aware; a circumstance adding much to other causes of solicitude. There is told of him a curious anecdote connected with the history of his first machinery; and, whether true or fictitious, it may be preserved for the edification of Messrs. Upham,

Abercrombie, Macknish, and other inquirers into the philosophy of dreams. When the day arrived for putting his machinery in motion, great was the joy of the artist and his associates; but, unluckily, it would not move, or at least it would not move as intended, or to any purpose. The disappointment was all but overwhelming to him. Day after day did he labor to discover, that he might remedy the defect; but to no purpose. But what he could not discover waking was revealed to him in his sleep. It was perfectly natural that the subject which engrossed all his thoughts by day, should be dancing through his uncurbed imagination by night; and it so happened that on one occasion, having fallen into slumber with all the shafts and wheels of his mill whirling in his mind with the complexity of Ezekiel's vision, he dreamed of the absence of an essential band upon one of the wheels. The dream was fresh in his mind on the following morning, and repairing bright and early to his works, he in an instant detected the deficiency. The revelation was true, and in a few hours afterwards the machinery was in full and successful operation.

Nevertheless, after the difficulties attendant on manufacturing were overcome—after as good yarn could be spun as in England, there was an apathy in the public mind which prevented the increase of business, as might have been expected. The consumers could not realize that as good an article could be made here as that imported. Hence the demand for it was extremely limited. Of the small quantity made the first two years, several thousand pounds of it remained on hand. It was nearly ten years from the commencement of the business in Rhode Island, before a second mill in that State went into operation. Still the profits were large, so that the company in which Mr. Slater was a party continually gained confidence and strength, and was hence in a condition with favorable changes in public opinion to extend the business. This was accordingly done; and soon after the beginning of the nineteenth century, cotton factories were springing up in almost every direction. As the event proved, Mr. Slater had laid the foundation for a large estate.

The increase of his business, and the brightening of his prospects for permanent prosperity, induced him, probably, to send for his brother. It is believed that the latter reached this country in 1805 or 1806. The presumption is that he brought with him a knowledge of the recent improvements in English machinery. Soon after his arrival a new establishment was projected, to be located in Smithfield, Rhode Island, and the village which in consequence sprang up is called Slatersville. The first spinning was here done in 1807. The establishment was first owned by William Almey, Mr. Brown, Samuel Slater and John Slater, in equal parts; but it is now owned by John Slater and the heirs of Samuel Slater. Here are about eight hundred inhabitants, depending mainly for subsistence on the business thus carried on there; and here may be seen all the evidence of thrift and comfort existing under the most favorable auspices.

The following account of the first meeting of the two brothers may not be without interest. When John Slater landed upon a wharf in Providence, he was seen and known by William Wilkinson, a brother-in-law of Samuel Slater's wife. Mr. Wilkinson proposed carrying him to Pawtucket, where his brother Samuel lived. This he did; and on reaching the house he said to the occupant, "I have brought one of your countrymen to see you—can you find anything for him to do?" Upon which he came up to his supposed countryman, and asked what part he came from?

"From Derbyshire." "What part of Derbyshire?" "Belper." "Ah, the town of Belper, I am acquainted with that place; what may I call your name?" "*John Slater.*" When Samuel left, John was a boy, and he had changed so much he did not recognize him. My readers need not be told that the interview was a joyful one to the two brothers—it might well have reminded one of the meeting of Joseph and Benjamin. The elder of them asked questions more rapidly than they could be answered. "Is my mother yet alive? How are all my brothers and sisters? How is my old master, Mr. Strutt? How is my old schoolmaster, Jackson?"

For more than twenty years from the time of his brother's arrival, Mr. Slater experienced uninterrupted prosperity. His possessions were increasing in number and value with incredible rapidity. The war of 1812 placed the seal upon his high destiny. By that time he had got so far under way, and his preparations were so complete, others stood no chance for competition with him. Cotton cloth then sold for forty cents per yard, and the demand had no limits. The opinion became prevalent, that such was his wealth, such was his general prudence and sagacity, and especially that such were his talents as a financier, no business disaster could reach him. However, in the great revulsion of 1828 among manufacturers, it was made manifest that he was the sole endorser of three or four large establishments among the unfortunate. Now, for the first time, he was known to make his own business a subject of conversation. He became seriously alarmed and distressed; not that two or three hundred thousand dollars, under ordinary circumstances, would ruin or essentially injure him; but such was the general panic in the community, and among the monied institutions of the country, that a man's solvency was estimated in a ratio transverse to the amount of his property connected with manufacturing. But, as usual, the storm at last subsided. The frantic delirium of the occasion passed off, and thousands wondered how they could have been such fools as to have participated in the excitement. And the fiducial ability of Mr. Slater was not like the seamanship of the mariner who simply makes a quick voyage on a calm ocean, but is unable to navigate his ship in a violent tempest; it had long been distinguished for the former, and was now proved eminently sufficient for the latter exigency. Instead of experiencing any ultimate injury, it is believed he was greatly enriched by the occasion.

It would be useless to say anything more regarding the talents of Mr. Slater. No one could do what he did, unless possessing an intellect of the highest order. It would be no more pertinent to raise a question on the subject, than to make a similar inquiry in regard to Franklin, or Washington, or Bonaparte, or Sir Isaac Newton. But Mr. Slater had other claims to consideration. The poor were never turned from his house hungry. The laborious missionary under his hospitable mansion always found a home; and usually on taking his departure, not a heartless benediction, but a memento wherewith to be warmed and filled in coming time. He apparently esteemed it as much on the catalogue of his moral responsibilities to provide the means of education and religious instruction, and consolation for those in his employ, as to provide the requisites for his own household table three times a day. In addition to the general provision adapted to the diversified tastes and prejudices in such a population, he made special and even princely allowance for the maintenance of the religious institutions connected with his own faith.

During the first six years of the existence of St. Paul's Church in Pawtucket, the period which the writer was Rector, his contributions therefor must have been in the range of one thousand dollars annually.

Among the acts of Samuel Slater deserving commendation, and not inferior to any other in importance, was the establishment of a Sunday School for the persons in his employment. This was according to the example of his old master, Mr. Strutt. For no sooner did he find that his business brought together children and youth destitute of all means of instruction, than he opened in his own house a school on Sundays, sometimes teaching the scholars himself, but usually hiring a person to do it. There are, it is believed, persons now living in Pawtucket who attended this school, and were indebted to it for nearly all the education they received. Mr. Slater always supposed that he thus established the first Sunday School in New England. It was a noble and praiseworthy example! It could scarcely fail that Providence would smile on the exertions of one who thus devised means to improve the moral and intellectual condition of such an interesting portion of the community.

The late Rev. William Collier, in early life pastor of a Baptist church in Charlestown, Mass., and all the latter part of it engaged as a city missionary of Boston, received money to pay for his own education from Mr. Slater, as a consideration for teaching in his Sunday School. At that time, the spring of 1796, Mr. Collier was a student of Brown University, the Rev. Dr. Maxcy being president. The latter received an application from Mr. Slater to send him one of the students for the purpose named, and he would allow him a suitable compensation. The president knowing Mr. Collier was poor, and unable to pay his college bills, recommended him for the station. Mr. Collier at first hesitated, from conscientious scruples, fearing that such services might be incompatible with duties appropriate for that day. However, Dr. Maxcy ultimately prevailed on him to do it. And so little was this kind of Christian charity then understood, that one young man of that college was deterred from accepting a similar overture by his father, a clergyman in Connecticut.

It has been affirmed, on the authority of his own declaration, that Mr. Slater labored on an average not less than sixteen hours a day for twenty years after coming to this country. It might therefore be presumed he would have had but little opportunity or disposition to reflect on matters not connected with his business; yet it is a fact, that on many other topics his views were well digested and philosophical. For instance, on the condition of the poor. His sympathy for the distressed, and his kindness and good will for all, were ever warm, active, practical, and efficient, based upon steadfast principles, and aiming at the greatest attainable measure of good. In the relief of immediate and pressing want, he was prompt and liberal; but in measures which he adopted for its prevention in future, he evinced paternal feeling and judicious forecast. His motto was, "Employment and liberal pay to the able bodied promoted regularity and cheerfulness in the house, and drove the wolf from its door." "Direct charity," he would say, "places its recipient under a sense of obligation which trenches upon that independent spirit that all should maintain. It breaks his pride, and he soon learns to beg and eat the bread of idleness without a blush. But employ and pay him, and he receives and enjoys with honest pride that which he knows he has earned, and could have received for the same amount of labor from any other employer."

There was a peculiar quaintness in Mr. Slater's manner of expression on common subjects that gave great force to the sentiment expressed. Without a knowledge of this, many of his remarks that have been repeated by those who knew him personally, to others appear feeble, if not insipid. But when uttering them, there was a curl of the lip, and an expression of the eye, that made an extraordinary impression on the mind of those who witnessed them. We give an anecdote illustrative of this, during a visit to him of President Jackson, when making his northern tour. After the President and his suite had been conducted through the village of Pawtucket, and were expressing themselves as delighted with its appearance, its numerous and well regulated establishments of business, its ample and commodious churches, and especially its intelligent and well ordered citizens, they repaired to the house of Mr. Slater, then confined by a rheumatic disorder, to pay their respects to a man who had thus benefitted our common country.

With the affability and complaisance so peculiar to General Jackson, he addressed Mr. Slater as the father of American manufactures; as the man who had erected the first valuable machinery, and who spun yarn to make the first *cotton cloth* in America; and who had, by his superintendence and direction, as well as by intense labor, erected the first *cotton mill* in Rhode Island, which was the first in the land of the Pilgrims. General Jackson, who had been informed of these particulars, entered into familiar conversation on the subject. "I understand," said the President, "you taught us how to spin, so as to rival Great Britain in her manufactures; you set all these thousands of spindles at work, which I have been delighted in viewing, and which have made so many happy by a lucrative employment." "Yes, sir," said Mr. Slater, "I suppose that I gave out the Psalm, and they have been singing to the tune ever since." "We are glad to hear also that you have realized something for yourself and family," said the Vice-President. "So am I glad to know it," said Mr. Slater, "for I should not like to be a pauper in this country, where they are put up at auction to the lowest bidder."

It is well known that Mr. Slater was constitutionally frugal and prudent in his expenses. The times, too, in his early life were favorable to such a habit. Now-a-days, many young men with five times the income he had the first ten years of his residence in America, instead of laying up money, as he did, so as to extend his business, spend it all as received, in conformity to the fashionable extravagances of the age. Thus he became frugal from habit, as well as from principle, so that, when he became rich, it seemed to require an effort on his part to change his style of living. We distinctly recollect a conversation on this subject, between him and a few of his intimate friends, when he was a little more than fifty years of age, and estimated to be worth half a million of dollars. It was in the front room of the Manufacturers' Bank, where they were accustomed to meet and discuss all sorts of things of interest. At that time he lived in an old wooden house which might have cost two or three thousand dollars—decent and comfortable, it is true, and much like the better sort of houses in the village, excepting, perhaps, half a dozen. He also owned a good horse and *chaise*, the common pleasure vehicle in that part of New England; but he usually rode in an open one-horse wagon. His friends told him it was not right for a man of his property to live in that style; that he ought to build a better house and keep a *coach*.

Mr. Slater replied much in the following manner:—"Gentlemen, I admit that I am able to have a large and costly house, rich furniture, and servants to take care of it; that I am able to have a coach, with a driver and footman to attend me. And it is not that I am miserly, that I do not have them. But it is a duty in me to set an example of prudence to others, and especially to my children. The world is too much inclined to extravagance. If the style you recommend is to be considered an evidence of wealth, and I were on that account to adopt it, others not able might follow my example, in order to be thought rich. In the end, it might prove their ruin, while prudent and honest people would have to suffer for it. And you know I have six boys. If they live, and have families, each will want to live in as much style as their father. Now if I am able to live as you recommend, my property, when divided in six parts, might not be sufficient to support six such establishments; besides, business may not continue as good as it is at present. I wish to set a good example for my children. If they do not follow it, the fault is not mine." Mr. Slater did not himself materially vary his family arrangements in the above particular; but a few years afterwards he married, for a second wife, a lady of talents and a decent fortune, who very properly did it for him.

Although Mr. Slater was much blessed, and prospered in his business, yet he had, especially in the latter half of his life, severe trials. Soon after coming to this country, he married a daughter of Oziel Wilkinson. The family was in the Quaker connection, and was distinguished for unusual talents. Mrs. Wilkinson was as much distinguished for moral excellence, and her daughters seemed to inherit no small measure of her good qualities. Hence, Mr. Slater was fortunate in his domestic relations. His wife had, we believe, ten children; but, in the latter part of 1812, she died of consumption, four of the children having preceded her to the grave. And one after another of those which then survived have passed away, leaving at present but a single individual of the number to sustain the reputation of their father. This is Horatio Nelson Slater, whom we have seen but once for nearly thirty years. He was a remarkably fine boy; and has, we understand, redeemed the high expectations then raised concerning him.

We have space for a few additional remarks only, having already extended this article to a length not intended. His perceptions were quick, almost like magnetic action. He formed his own opinions; and such were his decision and energy that he was never inclined to relinquish them. This is apparent, from his steady and untiring perseverance in perfecting the plans he had formed. Obstacles rather increased than diminished his ardor. In the life of such an individual, an event of real magnitude is not appreciated, or even seen in all its grandeur and importance till subsequent to the time of its occurrence. The memory of common minds is gradually fading away, till completely lost. Common men die and are soon forgotten; whereas great minds appear more brilliant in the retrospect than when immediately before us. The living age is overcast with clouds of mist and dust, which prevent one from seeing clearly. Hence, the cotemporary aspect of things is often confused and indistinct. The historian's breath must pass over the scene to chase away what is light, and frivolous, and worthless; and then he may collect and reduce to an enduring form what is solid and precious. It be-

longs, therefore, to a succeeding generation to place a full estimate on the mental character of Mr. Slater, and of the magnitude of his labors in this country. Nor is this all. A near view, in point of space as well as of time, will often give one less just conception of great men and their deeds, than a more distant view. The people of Pawtucket, constantly beholding Mr. Slater laboring night and day, sometimes, perhaps, like Franklin, with a bale of cotton on a wheel-barrow, little imagined the extent of mental resources, or the magnitude to successive generations, of the enterprise in which he was so completely absorbed. This could have been far better done by persons more remotely situated. For this there are analogies. For instance, the eye placed too near the canvass of the painter, is frequently bewildered with all the separate multitudinous touches of the pencil; but, when removed to an appropriate distance, these all melt into a harmonious living picture.

Mr. Slater died in 1835.

Art. III.—THE LAW OF DEBTOR AND CREDITOR IN TENNESSEE.

NUMBER III.*

OF THE LIENS OF JUDGMENTS AND EXECUTIONS.

Judgments have a lien on the land of the debtor, and *executions* (the *fieri facias*) on the personal property. I am not aware that a *fieri facias*

* The present article, the third relating to the Law of Debtor and Creditor in Tennessee, closes the series, so far, at least, as that State is concerned. Our valued correspondent, HENRY G. SMITH, Esq., of the Memphis (Tennessee) Bar, the author of this article, will furnish us from time to time with any alterations that may be made in the Legislature of that State on the subject. We commenced the plan of furnishing our merchants and business men with the series of articles on the Law of Debtor and Creditor in the several States as long ago as 1840, which we have continued at intervals to the present time. These papers have generally been prepared by members of the legal profession, who were at the time practicing law in the States to which the articles refer. As matter of reference for those who have a complete set of the Merchants' Magazine, we will here enumerate the articles on the Law of Debtor and Creditor published in that Magazine, giving the names of the States, the year, volume, and page, so that the law of any State may be readily referred to. In 1840, volume ii., page 321, we published an article on the Law of Debtor and Creditor in *Maine; Missouri* in 1840, vol. ii., page 412, and 1841, vol. v., page 252; *New Jersey* in 1840, vol. ii., page 481, and in 1841, vol. iv., page 253; *New Hampshire* in 1840, vol. iii., page 63; *Connecticut* in 1840, vol. iii., page 132; *Vermont* in 1840, vol. iii., page 333; *Pennsylvania* in 1840, vol. iv., page 448; *Massachusetts* in 1841, vol. iv., page 549; *Illinois* in 1841, vol. v., page 446; *Alabama* in 1842, vol. vi., page 155, and in 1846, vol. xv., page 580, and in 1847, vol. xvii., page 57; *Ohio* in 1847, vol. xvii., page 469; *Mississippi* in 1847, vol. xvii., page 179; *Wisconsin* in 1842, vol. vi., page 256; *Iowa* in 1843, vol. vii., page 443; *Louisiana* in 1846, vol. xv., pages 70, 471, and 580; *Michigan* in 1847, vol. xvii., page 274; *Tennessee* in 1847, vol. xvii., page 377, and in 1848, vol. xix., page 386. It will be seen, by the references above, that we have given more than one article on the law of several of the States named, and at long intervals. This has been done in order to embrace the changes made in several of the States, or to furnish additional information touching the laws affecting debtor and creditor. Some thirty distinct governments legislate on the trade of the United States; which trade is so intimately connected with each State, that a merchant in New York, Philadelphia, Boston, &c., in a business not unusually extensive, may have property and rights affected by the law of every State. The fact, generally admitted, that professional men are only able to advise as to the law of the State in which they live, shows at once the importance of such a series of papers.—*Ed. Merch. Mag.*

execution has any lien on land until a levy made. Those liens affect *legal* estates only, except as will be hereafter stated. The lien of a judgment takes effect from the moment of its rendition, and expires in twelve months. A sale of land under execution upon the judgment after twelve months from the rendition, derives no benefit or support from the *lien* of the judgment. If such sale be made within the twelve months, the purchaser takes the land against any purchaser from the debtor who bought after the rendition of the judgment, and against any previous purchaser whose deed of conveyance or instrument of purchase was not registered before such rendition. As between an execution purchaser and a purchaser from the debtor, there are two questions to observe—first, whether the execution sale was made within twelve months of the rendition of the judgment; or, second, whether the levy of the execution was prior in time to the registration of the instrument under which the purchaser from the debtor claims. If the sale were within the twelve months, or upon a levy made before the registration, the execution purchaser prevails; otherwise, the purchaser directly from the debtor.

Generally, the lien of the common writ of *execution* (the *fieri facias*) embraces the period of time between the *teste* and the *return* day. The *teste* is the first day of the term of the court preceding the day of the issuance of the execution, and the *return* day is the first day of the succeeding term. A sale of personal property made by the execution debtor within such period, is subject to the lien, and is liable to be defeated by the seizure of it (the property) under the execution. If not seized on or before the return day, the lien is gone, and the sale by the debtor is good to the purchaser. Each execution has its own lien, exclusive of, and without connection with, any other prior or subsequent execution on the same judgment. The lien is not continued by taking out another execution immediately. Observe, however, the operation of the Registry Law. Gifts or sales of slaves must be in writing registered. If the writing were not registered before the lien accrued, it is not any obstacle to the execution, and the slave may be taken by it from a purchaser from the debtor, though such purchase were made before the judgment was rendered. It was said, that generally the lien of execution has relation to its *teste*. The qualification implied is, that the lien is not allowed to reach back behind the actual time of the rendition of the judgment. The common law fiction that the term of a court is all one day, is in this respect disregarded.

The lien of *judgments* depends upon their being rendered in the court of the county in which the debtor resides, or if rendered in another county, upon their being registered in the county of his residence. When rendered or registered in such county, the lien embraces all his lands within the State. If not rendered or registered in such county, there is no lien until levy of execution.

The lien of an execution embraces only the personal property of the debtor in the county in which the writ is running. Without doubt, the creditor may have several executions running in several counties at the same time, but a sufficient levy of one will satisfy all.

By judicial construction or legislation, in regard to the lien of unsatisfied judgments upon lands acquired by the debtor subsequent to the rendition of the judgments, the law is declared to be, that after acquired, lands stand subject to such lien for twelve months from the time of acquisition, in the same manner as lands owned at the time of the rendition. Decrees

in Chancery for money, and executions on such decrees, have the same liens as judgments and executions at law.

In case the execution of a judgment be prevented by a writ of error, or an appeal in the nature of a writ of error, or an injunction, the lien of the judgment upon the lands of the debtor begins with its rendition and continues for twelve months after the affirmance of the judgment or the dissolution of the injunction.

The judgments and executions of justices of the peace, have no lien until levy.

The act of 1832 (c. 11) declares in substance, that a judgment or execution at law shall not bind equitable interests in real or personal estate, or other property, or legal or equitable interests in stock or choses in action, unless a memorandum of the judgment be registered within sixty days after the rendition of the judgment, in the county where the land lies, and in all other cases in the county where the debtor resides, and the lien shall cease unless a bill in Chancery to enforce the lien be filed within ten days of the return of the execution unsatisfied.

EXECUTORS AND ADMINISTRATORS, AND THE ADMINISTRATION OF ESTATES OF DECEDENTS.

Administrators are appointed, and executors and administrators are qualified by the county court, which consists of three justices of the peace, elected annually for that purpose by the justices of the county, and which county court sits the first Monday of each month. Administrators give bond with sureties in double the estimated value of the personal estate of the decedent for the faithful administration of the estate, and executors give a like bond unless specially exempted from so doing by the terms of the will. The theory in Tennessee is, that the office and powers of an executor begin with his qualification by the court, and not at the death of the testator. The court can, on sufficient cause, remove from office executors, &c.

The office and power of an executor, &c., appertains only to the personal estate, not to the realty. Real estate vests in the heir or devisee immediately on the death of the decedent, and can be subjected to the payment of his debts only after the legal exhaustion of the personal estate. An actual waste of the personalty may be made by the administrator, &c., so as in fact to prevent the collection of the debt of a creditor, but this does not enable the creditor to resort to the realty. He must in such case pursue the administrator, &c., to personal liability, and make the debt out of him or his official sureties. The realty is not liable until there be an ascertained legal exhaustion of the personalty.

Executors and administrators are not suable for the debts of the decedent until six months after their qualification, nor can execution issue against them until after twelve months. They are not permitted to confess judgments or to suffer themselves sued within the six months.

They are not required to distribute the surplus of the estate to legatees and distributees short of two years after qualification. At the expiration of two years, they are required to divide and pay over, receiving from the distributees, &c., bonds to refund in case further debts appear.

Persons having debts or demands against decedents or their estates, are required, if not residents of the State, to sue the executor, &c., within three years of his qualification, and if resident in the State, within two

years; otherwise their debts or demands are absolutely barred, and it is *waste* in the executor, &c., if he fail to plead the statute in bar of the debt or demand. Debts not due at the time of the qualification of the executor, &c., have probably the two and three years after due, before they are barred. Persons under age, of unsound mind, and married women, have one year after coming of age, sound mind and discoverture, to sue and avoid the bar in such case.

In regard to the *dignity* of debts, scarcely any occasion to regard this occurs in Tennessee, there being modes prescribed by statute for administering insolvent estates of decedents, which place all debts and demands on equal footing. So far, however, as *dignity* is concerned, the law stands much as when our forefathers brought it from England, the chief modification being that debts owing upon bills, bonds, notes, and settled and liquidated accounts, are made of equal and chief dignity by the act of 1786.

If the estate be insolvent, it is the duty of the executor, &c., to report the same to the clerk of the county court for administration under his direction, if less than $500 in value; and if the value exceed $500, the executor ought to file a bill in Chancery against all parties concerned, including creditors, &c., for administration and settlement of the estate in that court. When in Chancery, creditors have abundant cause to know "the sickness of heart which comes of hope long deferred." The statute under which the proceeding is had, contemplates an administration sufficiently speedy, but the practice has "dragged its slow length along" with a tardiness quite equal to the proverbial pace of equity.

In cases before the clerk of the county court, he prescribes a day by which all claims against the estate are required to be filed with him or are otherwise absolutely barred, and he causes publication of the appointed day to be made in some convenient newspaper. After the day, he ascertains and allows or disallows the claims filed, and from time to time declares and makes distribution as funds come to his hands from the administrator, &c. In cases in Chancery, the creditor ought to have a lawyer, and it is needless to undertake to detail here the mode of proceeding.

When administration is in Chancery, the settlement of the accounts of the executor, &c., is of course made in that court. When the administration is before the clerk of the county court, and in the ordinary cases of the administration of solvent estates, the settlement of the executor, &c., is made with the clerk of the county court, and is reported by him to the court in session, which if it approves the settlement confirms it, and thereupon it is taken and deemed *prima facie* correct, as against all persons concerned.

The compensation of executors, &c., is adjusted by the Chancery court, in cases in Chancery; and in other cases by the clerk of the county court, subject to the correction of his court. It rarely exceeds five per cent on the amount of receipts.

NEGOTIABLE PAPER.

The commercial law, as expounded in the common law courts of the United States and England, is the law of Tennessee, with little variation. In regard to negotiable instruments, the doctrines declared in Story's Treatises, touching the qualities, title, transfer, dishonor, liability of parties,

&c., &c., are for the most part the recognized doctrines of the courts of Tennessee.

By statute of 1786, all bills, bonds or notes for money, as well those with seal as those without seal, those which are not expressed to be payable to order or for value received as those which are so expressed, are declared to be negotiable. A very common paper is the sealed note. It is in form as a promissory note, with a scrawl for the seal. The seal has the effect to except it from the operation of any of the statutes of limitation, to prevent any question at law as to the want, failure or fraud in the consideration, and generally attaches to the instrument the qualities of a specialty.

The plea of *non est factum*, and any plea which denies the execution or indorsement of any instrument which is the foundation of the action, are required to be put in on oath.

Bonds with collateral conditions, bills or notes for specific articles, or for the performance of any duty, are assignable; that is, may be sued on at law or in equity in the name of the assignee.

A note for money payable in bank notes, is not *negotiable* paper in Tennessee.

The transfer of negotiable paper in payment of a precedent debt, is not deemed to be in the due course of trade, and is therefore subject to any equities or defences in favor of the maker or any prior parties on it, which would affect it in the hands of the indorser or party transferring it. This decision was made while such was the current of the courts in New York, and before the question was otherwise settled in the Federal courts. Thus, precisely opposite rules would be applied to the same commercial question, in the State and Federal courts in Tennessee. It is understood that the Supreme Court of Tennessee is not satisfied with the rule as declared in that court, and that the application of it will be limited as much as can be consistently done. As a general rule, all the parties upon negotiable instruments may be sued together, joined in the same action. It is said, that the acceptor of a bill of exchange cannot be joined with other parties. The law declares it to be the duty of the sheriff or other officer having an execution upon a joint judgment of this kind, to make the money out of the parties, in the order of their liability upon the paper.

INTEREST.

The constitution declares that the rate of interest shall be fixed by the Legislature, and shall be equal and uniform throughout the State. The Legislature in 1835 established the rate at 6 per centum per annum, upon all bills, bonds, notes, and liquidated accounts signed by the parties, from the time when due, unless otherwise specially expressed. Bills, bonds and notes payable on demand, draw interest from the time of demand actually made. The charters of the banks authorize the taking by those institutions of 7 and 8 per centum upon the discount of paper having time to run to maturity beyond certain specified periods. The validity of these clauses in the charters has been seriously questioned, in reference to the constitutional requirement that the rate shall be equal and uniform, but I am not aware that the question has ever been before the Supreme Court.

The statute does not give any interest upon debts due by open account. But it is generally allowed by jurors upon trials, in the shape of damages for detaining or not paying the debt.

The taking of usury is prohibited, and is a misdemeanor punishable by indictment and fine equal to the usury actually received. Contracts in writing, which are upon their face usurious, are void; that is to say, no action can be sustained on such instrument. Usury actually taken, is recoverable from the usurer, either by the debtor or by any of his creditors. In an action upon a bill, bond or note, which does not appear upon its face to be usurious, but which in fact embraces usury, the defendant may put in his plea on oath setting forth the usurious amount, which plea is deemed to be true, and avoids the excess over legal interest, unless the creditor puts in on oath a denial of the plea, in which case an issue is made up and tried, and the usurious excess, if any be shown by the evidence, is avoided, and judgment given the creditor only for the actual debt and legal interest. There is no forfeiture of the debt, or other punishment for usury than the indictment and fine above mentioned.

SET-OFFS.

These stand much as in the law of England. The statute allows set-offs where there are mutual *debts* between the *plaintiff* and *defendant;* or if either party sue or is sued as executor or administrator, where there are mutual debts subsisting between the decedent and either party, one debt may be set off against the other. Set-offs are therefore *at law*, only of debts between the parties to the action. Chancery allows set-offs in other cases, upon its own principles, which cannot be well detailed here.

BOOK ACCOUNTS.

A creditor or his executor may, by his own oath, prove an account for merchandise or service (not for money lent or the like) not exceeding $75, and which has not been due over two years, and when it is a book account and the creditor has no other means of proving it than by his own oath.

So creditors, residing in other counties or States, may prove their accounts to any amount and without reference to time other than so far as the general statutes of limitation operate. Such proof is made by affidavit that the account is correct, before a justice of the peace, whose official character must be certified by the clerk of the court of his county. The account so proved is taken to be true, unless denied by the debtor on oath, in which case it is tried and determined by jury upon evidence.

THE PRACTICE UPON EXECUTIONS.

The circuit courts which have original cognizance of all actions at law, (except debts under $50,) sit in each county thrice yearly. In regular practice as prescribed by statute, the pleadings ought to be made up at the first term after the beginning of the suit, and trial and judgment had at the second term. Such is the usual course of practice in actions of debt where no substantial defence is made. In causes seriously litigated, further delay is not unfrequent.

The clerks are directed by statute to issue and place in the hands of the sheriffs, within 20 days after the end of the term, executions upon judgments rendered during the term. Executions are returnable upon the first day of the ensuing term, and the sheriffs have until that day to make the money upon them, and do not generally obtain it sooner.

The property which may be seized and sold under execution, is the

personal and real property of the debtor in which he has the *legal* estate or title ; and in regard to personalty, that which is tangible, corporeal, susceptible of actual seizure and delivery. The statute directs the sheriff to make the money of the personalty of the debtor, if practicable, rather than of his real estate. A mode exists of subjecting to the execution debts owing to the debtor by process of *garnishment.* It is done by the sheriff who has the execution serving upon the supposed debtor of the debtor written notice to appear at the next term of the court, and answer upon oath what he owes the execution debtor, or what of his effects he has in his hands. If the garnishee debtor do not appear and answer at the next term after service of notice, a conditional judgment for the whole debt is rendered against him in favor of the original (garnishing) creditor, to be made absolute at the following term unless he appear at such term and put in his answer on oath. If he appear and deny his indebtedness and having effects, he is discharged. If he admit indebtedness, judgment is entered up against him to the extent of the amount admitted, not however exceeding the debt owing on the original judgment. If he admit effects, an order is made on him to deliver them to the officer. The answer of the garnishee debtor is conclusive, and the practice requires a clear admission of debt to authorize a judgment against him. Uncertainty entitles him to a discharge ; as where the answer was, that he had executed to the judgment debtor a negotiable note which remained unpaid, but whether it was still owned by the judgment debtor, the garnishee did not know.

When personal property is levied on, the debtor is allowed to receive back and retain the property until the sale, upon giving a bond with sureties in double the value, for the delivery of the property to the officer at the place and time appointed for the sale. This is called a delivery bond. If the property be forthcoming according to the condition, the bond and the sureties are discharged. If it be not thus delivered, the bond is forfeited (as it is called) and the sureties and parties in it stand liable for the debt, and the officer, if there be time before the return day, levies anew, and makes the debt of the property of any of the parties who joined in the bond. In case there be not time to levy anew before the return day, the officer returns the execution with the delivery bond, and thereupon a new execution issues against and is made out of the parties included in the bond. The forfeiture of the bond extinguishes the original judgment and discharges its liens, together with all liens of execution accruing or existing prior to the forfeiture. The forfeited bond is deemed a *quasi* judgment. Parties in the original judgment who do not join in the bond, are discharged of the judgment.

Land levied on is sold, and the absolute title vested in the purchaser, subject to be divested by redemption. This may be done within two years of the sale, by the debtor or any judgment creditor of the debtor. The purchaser, if a creditor, may advance or increase his bid to the extent of his debt, at any time within 20 days of the sale. A creditor, upon redeeming, pays the purchaser the amount of his bid and interest thereon at 6 per cent per annum, and likewise gives the debtor a credit upon his (the redeeming creditor's) demand, to the extent of 10 per cent or more of the amount bid at the execution sale. The process of redemption may be continued through an indefinite series of creditors, and the debtor may redeem from the last, within the prescribed time, by paying the accumulated amount. It may be added, that the right of redemption extends to all sales

of land under executions, decrees in Chancery, deeds in trust, and mortgages. There is, however, an exception. Lands sold by decree in Chancery, may be ordered by the court to be sold upon a credit of not less than 6 months, in which case the sale is absolute and no redemption is allowed.

When execution on the judgment of a justice of the peace is levied on the land of the debtor, the execution with the levy indorsed, together with all the original papers in the case in the justice's hands, is returned into the next circuit court of the county, which enters up a judgment accordingly, whereon is issued an order of sale by virtue of which the land is sold.

Proceedings against Sheriffs, &c. If the sheriff or other officer make a false or insufficient return of an execution, or fail to make return in time, or fail to pay over the money when made, the creditor may have judgment forthwith by motion against the defaulting officer and his official sureties, for the amount of the debt, interest and costs, together with $12\frac{1}{2}$ per cent damages. Notice is not required to be given to the officer when the motion is made, at the term to which the execution is returnable. When made at a subsequent term, five days' notice to the officer is prescribed.

Art. IV.—COMMERCIAL CITIES OF EUROPE.

NUMBER X.

MONTPELLIER.—NISMES.

SITUATION—INSTITUTIONS—FACILITIES FOR COMMERCE AND AGRICULTURE—MANUFACTURES—BLANKETS—COTTONS—CHEMICAL PRODUCTS—LIQUORS, ESSENCES, PERFUMES, BRANDY, AND SPIRITS—OTHER MANUFACTURES—COMMERCE.

MONTPELLIER, the chief place of the department of Hérault, in the south of France, lies near the Mediterranean, in latitude 43° 36′ 16″ north, longitude 1° 32′ 30″ east from Paris. Its population is about 36,000.

Institutions. Montpellier has a chamber of commerce, a tribunal of commerce, a celebrated medical faculty, a botanical garden, which is considered the second in France, a cabinet of natural history and physics, a museum, an establishment for loaning money on pledges without interest, (the only one of the kind in the country,) commercial and agricultural societies. There is a discount branch of the Bank of France established here, as also a national entrepot.

Facilities for Agriculture and Commerce. Montpellier is one of the most industrious of the French cities, and is a very important place in the southern commerce of the republic. Nature has done much for its prosperity. The department of Hérault, in which it is situated, is one of the most fertile districts of France, and produces a great abundance of articles important to commerce, as well as the raw materials for many branches of industry.

The city is connected by various land communications with the two ports of Cette and Agde on the Mediterranean, and by various canals uniting these ports, and extending inland from them, it communicates, on one side, with the basin of the Garonne and the Bay of Biscay, and, on the

other, with the basin of the Rhone. By these means it is connected with the entire inland navigation of the country; so that, should maritime wars put a stop to the trade which it carries on with various parts of the globe, it would still find ample encouragement and reward for its industry in the demands of its domestic commerce. The city is further connected with Cette by a railroad.

Montpellier is one of the most salubrious cities on the Mediterranean. Its pure air, delightful climate, and beautiful environs, make it a favorite resort of invalids.

Manufactures—Blankets. The manufacture of woollen blankets is a very important branch of the industry of Montpellier. Even as far back as 1789, it was carried on with success. At that time, Neckar furnished the manufacturers of the place with samples of English blankets. These were imitated with great exactness, and considerable quantities of the fictitious article were exported to Louisiana and to New England.

After the wars of the Empire, the house of Granier sent persons to Great Britain to study the manufacture; and by the information and skill thus gained, they were soon enabled to compete with the English exporters in the markets of Louisiana and most of the slave States, where the consumption of French blankets has, for a long time, been of considerable importance. The blankets are purchased for the use of the slaves.

Montpellier has three blanket factories. The most extensive of these manufactures from 4 to 500 a day, and sells yearly at New Orleans, between 1,500,000 and 2,000,000. The wool used in this manufacture is mostly that of the Barbary States, and is purchased at Marseilles. It is spun in the factories.

Cottons. The manufactures of cotton are always progressing. Some years ago, they were represented by the following figures:—Spinning, 2,000 spindles, producing 16,000 kilograms. Weaving, 280 looms, producing 7,100 dozens of handkerchiefs, 2,000 pieces of calico, and 6,700 pieces of striped and checked cotton.

It was the manufacturers of Montpellier who naturalized, in France, the dyeing of cotton thread, an article formerly obtained only in the Levant. They invited Greek dyers to their city, learned their art, and carried it to the highest perfection. Their red and violet threads have made the fortune of the manufacturers of Chollet, Mayenne, and a part of Normandy. To the manufacturers of Montpellier belongs also the credit of having invented the stuff called *côte pali*, of which the warp only is cotton, the woof being of silk dyed raw, which covers and protects the warp perfectly. This stuff is manufactured in handkerchiefs and in cloth for robes.

There are various manufactures of cotton in the department, as well as of canvass, hempen cord and rope, slippers, &c.

Chemical Products. Its manufactures of this character, as well as those of liquors, essences, perfumes, spirits and brandy, Montpellier owes especially to the character of its climate and of its soil.

Verdigris has been manufactured at this place for a very long period. It was long believed that the vaults of this city alone were adapted to the production of the article, but its manufacture is now extended throughout this department and even beyond it. This manufacture has made great progress by the substitution of grape skins for vinegar, in oxydizing the copper and detaching its crust.

A few years ago, there were forty factories of chemical agents in Mont-

pellier, and their number must now be still greater. They produce alum, Prussian blue, sulphuric acid, nitric acid, mineral salts, &c. The factory of M. Beraed is the most ancient in the south of France. It was founded in 1783 by Count Chaptal, to whom the world is indebted for many discoveries and improvements in this branch of industry.

Liquors, Essences, Perfumes, Spirits and Brandy. The manufacture of liquors, essences, and perfumes at Montpellier is very ancient, and its products have always been celebrated. Of late, however, this department of industry has declined in importance.

Nearly 30,000,000 gallons of the wine of the department are annually converted into brandy and spirits, in more than 200 distilleries, 70 or 75 of which are in Montpellier. We do not consider, in this calculation, the number of proprietors who distil their own wines. The processes most generally used are those of Adam and of Baglioni.

Other Manufactures. Ordinary hats are manufactured in considerable quantity at Montpellier. The tanneries of the city produce about 300,000 francs a year. The products of the potteries and tile kilns of the arrondissement, are about 40,000 francs in value. The number of oil mills is 74. The importance of that industry may be judged of by the quantity of land employed in the cultivation of the olive, which is, in the whole department, about 18,000 acres, and in the arrondissement of Montpellier about 7,000, and this without calculating the great number of olive trees that grow in the vineyards and tillage lands.

Besides the articles we have already mentioned, Montpellier produces painted paper, a considerable quantity of beer, corks, surgical and medical instruments, carpets, &c.

Commerce. Montpellier sends to the interior and abroad, large quantities of wine and spirits. Most of the old wine is sent to England. Considerable quantities of imitated Portugal wine is exported to Brazil.

The other products of the neighborhood, which are important in the foreign and domestic commerce of the place, are olives, dried fruits, liquors, olive oil, chemical products, &c.

NIMES.

NIMES—MANUFACTURING INDUSTRY—MANUFACTURES OF SILK—OTHER MANUFACTURES—TRADE AND COMMERCE—WINES AND SPIRITS.

Nimes, an important manufacturing city, is situated in the southern part of France, near the river Rhone, and about 180 leagues S. S. E. from Paris. Its population is about 43,000. It has a Chamber of Commerce, a Commercial Tribunal, an Agricultural Society, and a School of Design and Mechanics.

Manufacturing Industry. The manufactures of Nimes are of a various and changing character. They consist chiefly of articles of export and articles of dress. Hence foreign competition, and the caprices of fashion, often put a sudden stop to the industry of the place, until its people can find new markets, or produce new objects of consumption. In order as much as possible to avoid these revulsions, many houses manufacture at the same time the most heterogeneous articles, such as shawls and gloves, bonnets and robes. If to these disadvantages we add the fact that the city is without water for nearly three months in the year, and that a single source supplies both its manufactures and its consumption, the energy and

perseverance by which its people have made the city important for its industry will appear astonishing.

Manufactures of Silk. The manufacture of silk at Nîmes is very ancient. For two hundred years it has furnished the markets of Paris with sewing silk and lace. This place is also the cradle of the art of stocking weaving. In 1640, two mechanics of the city, Felix and Pastres, brought from England the art of constructing stocking looms. The manufacture spread rapidly, and in 1710 this city alone counted 2,000 looms.

The manufacture of silk stuffs and thread, and the dyeing of silk, were encouraged by Henry IV., who granted a pension to one Crocard of this city, at the same time giving him permission to plant mulberry trees wherever he might think proper. But the revocation of the edict of Nantes, and the prohibition of the introduction of foreign silk into Languedoc, were severe blows to this branch of industry, which for a time was nearly abandoned.

At present the products of the factories of Nîmes are chiefly silk and cotton stuffs and fancy goods, such as shawls, robes, cravats, underclothes, &c. The manufacture of robes was for a long time by far the most important, but its place was taken some twenty years since by the manufacture of shawls, which in 1834–6 was in its turn displaced by that of cravats, scarfs, and waistcoats.

The printing of silk stuffs is of great importance in the industry of Nîmes. It has of late been carried on with great activity, and has become of no less importance than weaving to the working classes. Nothing but a good supply of water is needed to enable the manufacturers to give a great extension to this branch of their business.

The manufacture of silk hose, though less important at Nîmes than in some other places in the neighborhood, still deserves notice. At Vigan and Uzès, there are about 3,000 stocking looms; at Nîmes about 1,000.

Other Manufactures. Nîmes has many distilleries, 7 or 8 tanneries, and an extensive manufactory of oil of palma christi, which is sent into every part of France. The manufacture of carpets was recently introduced here to furnish labor to the hands thrown out of employ by the decline of the shawl manufacture. Besides these, there is a manufactory of indigenous sugar at Nîmes, the success of which is greatly hindered by the difficulty of obtaining a supply of the raw material, the neighboring cultivators being generally unwilling to plant the beet.

Trade and Commerce. The transit commerce of Nîmes is chiefly limited to its relations with Alais, Saint-Jean-du-Gard, Saint Hippolyte, and other towns of Cevennes. It is rarely that the merchants of these places send to the places of production to supply their demands. Nîmes furnishes them with the colonial products. The olive oil of inferior quality coming from Corsica, Spain, and Italy, and not used in the manufacture of soap, finds a certain market in the mountains of Cevennes, and this trade is the exclusive monopoly of the merchants of Nîmes. Other articles the Cevennois obtain indifferently from Nîmes and Montpelier.

Nîmes is the general entrepôt of raw and prepared silk for the south of France. From its storehouses these articles are usually sent to the places of manufacture, though sometimes the spinners and dyers prefer to send to Lyons or Paris.

Nîmes is also a centre of trade in medicinal and tinctorial plants, in grass seed and in *tournesol en drapeaux*, or cloth colored with *croton tinc-*

torium, which is sent to Holland to be used in coloring cheese. The most important seed exported from Languedoc is that of lucerne, since this seldom arrives at maturity in the northern part of France. The exports of clover seed are less considerable. These articles are sent to London, Hamburgh, Lubec, and St. Petersburgh.

Wines and Spirits. The most important trade of the department is that in wines and spirits, and nearly all the transactions are at Nîmes. For many years great quantities of wine were sent from this place to Lyons, Châlons, Besançon, and into Germany, but of late this trade has greatly diminished in extent and importance.

These wines were mixed with those of the north, in order to color and strengthen them. As the export of spirits has increased with the falling off of that of wine, it is to be presumed that they are used for the same purpose.

Art. V.—COMMERCIAL CITIES AND TOWNS OF THE UNITED STATES.

NUMBER XIV.

RICHMOND, VIRGINIA.

Richmond, the political and commercial capital of Virginia, is situated on the north side of James River, in latitude 37° 42′ N., longitude 77° 26′ W., about 130 miles from the entrance of Chesapeake Bay. The situation is eminently beautiful, on an amphitheatre of hills; the bases of the upper ones washed by the rapids of the river, which is here interspersed with numerous islands, and spanned by a railroad bridge 3,000 feet long and about 50 feet high, while the tide flows to the foot of the hills at the eastern portion, meeting the rapids about midway of the city. At their junction terminates a deep and winding valley, through which flows a small stream, dividing the eastern and western portions of the city. A bridge for common vehicles crosses the river from this valley to the small town of Manchester, and near this a second railroad bridge is about to be erected.

Splendid views of the city and surrounding country are presented from various points, each varying the scene. The river flows over a bed of granite, of which there are inexhaustible quarries on its banks, and which is now being extensively used for building and other purposes. There are some handsome public structures in the city, and many private ones. It is supplied with water forced up from the river to a reservoir above the level of the most elevated sites, but is not lighted either with oil or gas.

The capitol contains a statue of Washington, (by Houdon, a celebrated French sculptor,) the only one ever taken from life, and considered by his cotemporaries perfectly accurate. It is certainly desirable that copies or casts of this statue should be made and extensively distributed. In the event of its destruction (as was the case with Canova's splendid work at Raleigh) there would remain no representation in marble of the features, figure, size, and even costume of our national father, exactly as he appeared in the prime of life. Even as a matter of profit it would be worth the attention of a competent artist to make copies.

The climate of Richmond is salubrious, and the hilly and undulating surface of the city is favorable to health and cleanliness. The markets are well supplied with meats and vegetables, tolerably so with fruits, but in these there is great room for improvement.

A descent in the river of about 80 feet within a few miles above the city furnishes a great amount of water-power for propelling machinery, and it is used to a considerable extent, though far less than its capacity. The best bituminous coal is mined from 8 to 20 miles above the city, and iron ore abounds in the country beyond. Copper ore is also found at no great distance and mined to a small extent. Some gold mines are now worked probably. With all these, and many other elements of prosperity provided by nature, there is wanting, to bring them into full and active operation, an accession of such an enterprising, active, and industrious class of citizens as exist in New England, and developes her less abundant resources. Such a population is gradually but slowly forming, but the prevalence of slavery is a bar to its rapid increase. Virginia, like the States south of her, is, in a great measure, dependent on the superior industry and enterprise of her eastern brethren for many of the simplest and most necessary articles in ordinary use, from brooms, buckets, and axe helves, up to shoes, clothing, and carriages.

The population of Richmond is between 27,000 and 30,000, of which probably two-fifths are blacks. The increase within the last 10 or 15 years has been more rapid than at any previous period.

The principal manufactures are of tobacco, flour, iron, cotton, and woollens. Of tobacco there are thirty-five to forty factories, and ten or twelve stemmeries, which work up more of that useless weed than is manufactured in any other place whatever—not less than 12,000 to 15,000 hogsheads annually. It is distributed to every part of the world, chiefly from New York, Boston, &c. About two thousand five hundred black operatives are employed in the manipulation.

Richmond possesses, besides some minor establishments, two of the most extensive flour mills in any country. The "Gallego" and "Haxall" mills, each running twenty or more pair of stones, and each capable of turning out, under favorable circumstances, from 800 to 900 barrels of flour in the twenty-four hours; but there is not a regular supply of wheat to keep them at work throughout the year. This flour ranks higher than any other, and forms a large portion of the supply to the Brazilian market—say from 60,000 to 70,000 barrels annually. Attached to these establishments are mills for making kiln-dried corn meal to a large amount.

For the manufacture of iron there are three rolling mills, and the quality of what they make is such as to give it preference in the navy-yards. Heavy rails are also rolled out at these works. Attached to one of them is a foundry for the casting and boring of cannon for the navy and fortifications, and an establishment for the same purpose, exclusively employed, exists a few miles above the city. Cannon balls and shells are furnished by foundries higher up the river. An extensive nail factory (the Belle Isle) is erected on one of the islands in the river, producing about 75,000 pounds of nails per week. Besides these, there are several foundries and machine shops in the city for making all sorts of heavy machinery, steam-engines, locomotives, &c. Four cotton mills, in Richmond and Manchester, work up nearly 3,000,000 pounds of cotton per annum, and a woollen mill converts about 600,000 pounds of raw material into blankets and

flannels—the weekly product being about 2,600 blankets and 12,000 yards of flannels. Nearly all the wool is imported, although there is no finer region for raising sheep than the mountains and valleys of Virginia.

An extensive paper mill is now in successful operation, but this, as well as several of the establishments above mentioned, was commenced by a joint stock company, and few of them succeeded until managed by individual enterprise.

The coal trade of Richmond is considerable, but since the introduction of anthracite the export demand is chiefly confined to the supply of iron works in the northern and eastern States.

The supply of pig iron from the upper country has been gradually on the increase, but the means of transportation are so imperfect and expensive as to limit the business to a tithe of what it might readily become with proper facilities.

There are three banks, with branches in the smaller towns. The aggregate capital appropriated to Richmond is about $2,200,000. The funds of three insurance companies, and as many savings banks, add to the money facilities.

The foreign export trade is chiefly in tobacco to all parts of Europe,* flour and grain occasionally, and in flour to Brazil. The export of Indian corn and meal may become large should a continuance of foreign demand encourage an increased production. Vessels drawing more than 10 or 11 feet water cannot come up to the city, and such load at City Point, Bermuda Hundred, or Port Walthall. Vessels lying at these ports load indiscriminately from Richmond and Petersburgh; it is, therefore, difficult to designate their respective proportions. The whole are embraced as exports from James River. The principal obstacles to the removal of the bar, seven miles below the city, are constitutional scruples or strict constructions. The import trade direct from Europe, or other countries, is now inconsiderable, having gradually diminished with the increased facilities of New York by her regular packets and steamers to Europe.

The inspections of tobacco in Richmond of late years have been—

1841	hhds.	18,267	1845	hhds.	21,902
1842		23,129	1846		19,572
1843		22,829	1847		19,993
1844		19,147	1848		15,733

In addition to which, from 10,000 to 16,000 hogsheads are here received from other inspections in the interior.

The tonnage on the custom-house books is only 7,800 tons, and but 1,950 of this in foreign commerce.

The James River Canal is the principal channel of trade with the interior. This work is completed as far as Lynchburgh, a distance of 147 miles, and is in course of construction to the base of the Alleghany Mountains. When this extension shall be completed there will probably be a great increase in the iron trade, as well as that of other branches; but until the lines of improvement shall be extended to the Ohio and Tennessee Rivers, the amount of transportation will be inadequate to compensate for the outlay, which has already exceeded seven millions. The

* For exports, inspections, etc., of tobacco at Richmond for a series of years, see Merchants' Magazine for November, 1848, page 545—and for inspections of flour at Richmond in each year from 1819 to 1848, see Merchants' Magazine, same number, page 546, vol. xix., No. 5.

other existing lines of internal improvement connected with Richmond are railroads, extending across the State from the Potomac to the Roanoke, connected with which is the Louisa Railroad, running westwardly, and in course of construction to the Blue Ridge. The two termini of the southern line from Petersburgh connect with the North Carolina railroads to Raleigh and Wilmington, and efforts are making to extend these to the great South Carolina lines—the only gap which remains between the North and South.

A second southern line of railroad has been commenced from Richmond, passing through a part of the coal region, (where one already exists,) to extend to Danville, on the upper Roanoke. This will somewhat conflict with several existing improvements by canals and railroads.

The policy, or rather the impolicy of Virginia in her system (or want of system) of internal improvements, has prevented the completion of a great western line of communication. When one work is proposed, a number of others in different directions are simultaneously suggested; and by the "log rolling" system, one great stem is obstructed by many minor ones, and the resources of the State being inadequate for all, either the whole fail, or many are authorized which prove abortive. Another impolitic, if not unjust course has prevailed. When a useful and profitable work has been completed, a rival one has been chartered, and the resources of the State granted in aid of it; and if completed it is not only unprofitable in itself, but renders the previous one also unprofitable, and thus some millions have been thrown away, and one of the rival works ultimately goes to decay. The funds which have been expended in Virginia, if judiciously applied, would have completed one great line of improvement through the State from east to west and one from north to south, with which lateral branches might have connected, to the benefit of every part. Richmond is well provided with churches for all denominations and with good schools. Her Medical College has attained a high rank in that department of science, but she lacks an University and an extensive public library.

Art. VI.—THE GOLD REGION OF CALIFORNIA.

The earth "hath dust of gold."—Job xxviii, 6.

From time to time since the conclusion of the treaty with Mexico, ceding Alta or Upper California to the United States, rumors, vague and disconnected, and too indefinite to be called reports, reached us from the Pacific that gold had been discovered in the newly acquired territory, in large quantities. The stories were barely credited, for no other reason, that we are aware of, than the time-honored one, that they were too good to be true. Here the moralist and philosopher will perhaps object that if only what is good is incredible, there was no reason in the world for disbelief. They will point to the warnings of old philosophy, the admonitions of the wisest of men, and the classic anathemas of the poets against the *auri sacra fames.*

However that may be, whatever view be taken of the good or the evil of the possession of much treasure of gold and silver, whatever applica-

tion the sad lessons taught by the experience of Spain and Portugal with their American mines may be thought to have to this age and our race, there is no longer any doubt about the fact that gold in immense quantities has been found in California. It is attested by the written statements, official and private, of eye-witnesses, well authenticated, detailed, and matter of fact, and which are all the more astounding from the entire absence of any attempt at exaggeration. The difficulty under which the writers labored, seems to have been not to convince others, but themselves. Their subject was too great in itself for any exaggeration in treating it. Mr. Thomas O. Larkin, late United States Consul at Monterey, writing on the 28th June last, and referring to a previous letter, says, that before sending it he showed it to several friends, because he "doubted his own writing," and it was only when convinced of the truth of his own statements by others, that he dared to send his account. Colonel Mason, Governor of California, excuses himself for not reporting to the War Department a discovery made in February until the middle of August, because he could not bring himself to believe the reports that he heard of the wealth of the gold district, until he visited it himself. This unaffected astonishment of the narrators themselves, their unwillingness to believe, and their fear of not being believed, are more expressive and convincing than the most labored rhetoric. One writer only is made eloquent, not so much by his subject, as by the fear of disbelief in the friend to whom he writes. "You are now all incredulous," he says, writing on the 10th September last, "you regard our statements as the dreams of an excited imagination; but what seems to you mere fiction, is stern reality. It is not gold in the clouds, or in the sea, or in the centre of a rock-ribbed mountain, but in the soil of California—sparkling in the sun, and glittering in its streams. It lies on the open plain, in the shadows of the deep ravine, and glows on the summits of the mountains, which have lifted for ages their golden coronets to heaven."

Thus, the rumor which came at first, indefinite and vague, has burst forth into a vivid and golden reality, like the sun when, breaking through obscuring mists, from which it had loomed out dim and yellow, it overpowers, almost more than pleases, by excess of light.

With this certainty before us, our prayer for the country cannot be for delivery from temptation, but must be for power to overcome it, and educe from it good.

In addition to the letters of the 1st and 28th of June last, from Mr. Larkin to Mr. Buchanan, Secretary of State, the letter of the 10th September, published in the Washington Union, and the report of Colonel R. B. Mason, Governor of California, to Adjutant General Jones, dated August 17th, 1848, we have a letter from Rev. Walter Colton, Alcalde of Monterey, to the editor of the Journal of Commerce of New York, written on the 29th August last, and the *Californian*, newspaper, of September 28th, 1848, published at San Francisco, which contains statements prepared apparently with care, and with a view to circulation abroad.

But we have not only accounts of gold—we have the gold itself to see, and handle, and assay.* Lieutenant Loeser, of the 3d artillery, and Mr.

* For an official account of an assay of $36,492 worth of this gold, made at the United States Mint, see the letter of R. M. Patterson, Esq., Director of the Mint, addressed to R. J. Walker, Secretary of the Treasury, in a subsequent part of the present number of this Magazine.

David Carter, who went out to California early in the war as a government agent, arrived at New Orleans by the way of Playta, in Peru, and of Jamaica, on the 3d of November last, having left Monterey on the previous 30th August. Lieutenant Loeser was the bearer of Governor Mason's despatch. He brings, besides, 230 ounces of gold, a mixture made up of samples from various parts of the gold district, and also seven specimens in single pieces, from one to five ounces in weight.

Finally, the discovery is announced by the highest official authority in the President's Message of December 5th, 1848, and is made the basis of a recommendation to Congress of the establishment forthwith of a mint in California. The President dwells, naturally, with much satisfaction upon these brilliant developments. Cortes himself did not dilate upon the treasures of gold which his Mexican victories poured into his hands with greater complacency, although his language may have been less restrained by the moderation of modern official decorum, than that with which our chief magistrate dwells upon the golden results of the second conquest of Mexico.

In truth, the real El Dorado seems to have been reserved for men of another age and race than that of Cortes. The hopes which brought the adventurers of Portugal and Spain to the New World in quest of a land of gold, were not destined ever to be literally fulfilled. The many ornaments of gold which Columbus and the voyagers who followed him saw upon the persons of the Indians of the islands and of the mainland, and which they were ready to exchange for trinkets of the smallest value, kindled the wildest expectations as to the wealth of gold on the continent.

The result of their searches and their conquests was not gold, but silver; silver, however, in such immense quantities as to make up for the inferior value of the metal. The mines of Peru, worked by the Incas before the Spanish conquest, and of Guanaxuato and Zacatecas in Mexico, which in the latter quarter of the last century began to flood the world with precious metal, are of silver, although a proportion of gold is generally found in the veins of silver. Brazil, Colombia, and Chili, it is true, have always yielded more gold than silver; but taking the sum total of precious metals obtained from both continents since the discovery of America, the proportion of gold is small, being equal to only about one-forty-sixth of the value of silver, and justifies the general statement that the mineral wealth of America has *hitherto* consisted in silver. From January, 1772, when the increase in the silver mines of Mexico began, to 1809, the value of silver coined at the city of Mexico was $696,107,230. The value of gold coined was $28,337,686.

But the treasures of California are gold, not silver. In several of the letters lately received the writers speak of the gold *mines*. This is a common use of the word. It is silver that generally occurs in veins, and is mined. The shafts of the Mexican mines descend to a great depth, the veins running at an angle of 45°. Gold is commonly found in particles, of greater or less fineness, in dust, grains, and in pieces sometimes several ounces in weight. It is washed from the sand or earth as in the auriferous beds of sand in Siberia and the Ural Mountains, or dug from the earth, or cut from the rock. This difference was familiar to the author of the Book of Job. He says:—"Surely there is a vein for the silver and a place for the gold, where they fine it."—Ch. xxviii, v. 1.*

* See Jacob's Inquiry into the Precious Metals. Vol. I., p. 5.

With the gold itself before our eyes, and with the respectable witnesses whom we have arrayed to bear us company in our illusion, if illusion it be, we proceed to throw together the leading facts relating to this great discovery, and to form such conclusions as to the amount produced, and likely to be produced, the extent of the gold region, and the immediate and ultimate effects of this addition to the mineral wealth of the country and the world, as the accounts received thus far furnish ground for.*

In the first place it will be well to get some idea of the district of country in which the treasure is found, to find the precise local habitation of the "golden joys," to fix the metes and bounds of the happy valley.

Two ranges of mountains traverse the territory of California, approaching each other towards the south, but diverging towards the north, the one branching off to the north-east, the other, the Sierra Nevada, running north-west, and parallel to the coast of the Pacific. Between the two lies the great Basin of California, a waste of sand, it is supposed, unexplored by white men, and which the reports of the few Indians, who lead a precarious existence upon it, represent as barren and dry. It is described by Fremont as more Asiatic than European in its appearance. Perhaps further exploration will complete the resemblance; and as the steppes of Asia, and the Ural Mountains to the west of them, abound in auriferous sands, our own Sierra Nevada, in which gold has just been discovered, may prove the western boundary of another great golden desert. Between the Sierra and the coast there is another and lower chain of mountains called the Coast Range; and between the Coast Range and the Sierra Nevada lies the valley of the Sacramento, some one hundred and fifty miles long, and varying from twenty to fifty miles in breadth. Through the whole length of this valley runs the River Sacramento, whose head waters are to be found somewhere in the neighborhood of the lofty Mount Shaste, in lat. 41° 30′ N., about one-half a degree south of the former boundary line between the United States and Mexico. The Sacramento running south-east, parallel to the ocean and the Sierra, and receiving the waters of several branches, all of which enter it from the east, flowing from the Sierra, and the chief of which are the American, Feather, Cosmenes, and the St. Juan, pours its waters into the noble bay of San Francisco. The American River taking its rise in the heights of the Sierra, which here range over 9,000 feet above the level of the sea, first rushes down, a torrent rather than a river, through rocks of white granite, which prevail in both ranges, and through forests of pine, a species of which, called *pinus colorado*, abounds on the heights; reaching the lower ground, it flows with a width of about one hundred yards, through a valley of exquisite beauty, in which are found the white oak and cedar, and enters the Sacramento at a point about fifty miles from its mouth. The entire

* A letter has been published by a chemist of the city of New York, Mr. E. Kent, giving the results of assays made by him. Without throwing any discredit upon the well authenticated statements which have been received of gold being found in the valley of the Sacramento, it may furnish a clue to the almost incredible character of some of the statements. He says that he examined two specimens of the metal, one from the district called the "dry diggings," the other from the river sand. The former, of a bright yellow color, in flakes, proved gold fully of the average quality; the latter, in grains, of a darker yellow, proved—not gold at all, but a copper ore. While, therefore, we do not deny the existence of gold which our eyes have seen, it may be well to look out for an admixture of dross in some of the golden stories. At any rate, the estimate we see in one of the daily papers of $10,000,000,000 in four years, is a little too much in advance of the mail.

course of the American was traced by Col. Fremont in 1844, from its rise in the pass of the Sierra, to its mouth. The character of the rock in the valley of the Sacramento is described as volcanic.

At the mouth of the American River stands New Helvetia, founded by Captain J. A. Sutter in 1839. Captain Sutter, a Swiss, formerly an officer in the army of Charles X., obtained from the Mexican government a grant of thirty leagues square at this point. Here the river is about three hundred yards wide. Sutter's Fort is considered the head of navigation in the dry season. Above, the banks are marshes for miles back, and overgrown with the tula, a species of bulrush. The face of the country is uneven. Between the coast and the Coast Range is a high and level plain; east of the Coast Range occur numerous ridges with intervening valleys and ravines, whose prevailing direction is north and south, but which are interrupted by hills and valleys in all positions.

It is in this region, on these heights, and in these valleys, that thousands of our fellow republicans, of all bloods, breeds, and creeds, Indian, Mestizo, Spanish, German, and Anglo-Saxon, Catholics, Protestants, and Mormons, are realizing the luck of Sindbad the Sailor in the Valley of Diamonds, who had but to put forth his hand to clutch with his fingers the treasure lying palpable on the ground before him.

We owe the discovery neither to the enterprise of capital, nor to the sagacity of science. It was a pure accident. Gold, it is true, was long ago found in the district of Sonora, at Pimena Alta, in lat. 31° N., about two degrees south of the river Gila, the present southern boundary of our territory. A piece weighing several ounces is said to have been found there in alluvial soil, about eighteen inches beneath the ground. Small quantities also had been found in Oaxaca. It was known, also, that gold had been obtained in the Mission of San Fernando, south of Monterey, but the region had ceased to be worked for want of water. Some accounts state that the Mormons had discovered gold at the great Salt Lake, on their way to California, and Col. Mason reports that they had returned thither, probably to search for it, as there was no other assignable motive for such a movement.

The region of the Sacramento had been repeatedly visited by men of science; by Captain Wilkes in the course of the exploring expedition, by Col. Fremont in 1844. The latter mentions seeing Indian squaws pulling up tufts of common grass to eat, near the banks of American River. The roots of the sweet onion were pulled up for food by one of his companions, who wandered for several days among the neighboring woods. But neither Indian nor White man was so fortunate as Diego Hualca, when he pulled the shrub with a silver root at Potosi. No ornaments of gold seem to have been worn by the Indians; in short, there was no suspicion of the existence of it in the valley of the Sacramento, until the occurrence of the circumstances we will now narrate.

Fremont speaks of pines on the heights of the Sierra Nevada ten feet in diameter, and of a cedar twenty-eight feet in diameter. Captain Sutter lacked lumber, and in the fall of last year contracted with Messrs. Marshall and Bennett for the erection of a mill for sawing pine timbers on the American River, fifty miles above its mouth. In the winter and the spring of 1848, the mill and dam were completed. In constructing the tail-race, Mr. Marshall, in order to carry off the loose earth and stone, and to increase the width of the race, allowed the water to flow with full

force through the race, at the foot of which a bank of mud and sand was thus accumulated. Early in February, (according to the Californian of September 27th, on the 10th of February, 1848,) Mr. Marshall, while walking along the race toward the deposit of earth, noticed glittering particles lying on the edge. He was not long in doubt as to what they were. He communicated the secret to Captain Sutter, but secret it soon ceased to be. The news spread like magic. The workmen deserted the mill for the mill-race.

At first the reports were barely credited at San Francisco. Now and then a solitary believer, half ashamed of his credulity, would steal off to a launch and make across the bay for the mouth of the Sacramento. In May, the gold itself began to come into the town. And then began the rising and the rush. All classes and all pursuits, all races and both sexes, traders and tavern-keepers, lawyers, editors, and printers, sailors from men-of-war, sailors from whaling vessels, deserters from the military stations at Monterey, San Francisco, and Sonoma, the disbanded volunteers of the New York regiment, *not* without their colonel, men with pickaxes, spades, shovels, and knives, with willow baskets and tin pans, women with the indispensable tea-pot, whole families with their teams and household goods, all swelled the mighty procession to the valley of gold. Business of any kind but the literal getting of gold, and in any way but literally picking it up, is at a stand-still. Only women are left in the towns, which are said to look as if nature knew no other sex.

Governor Mason's proclamation of July 25th, was issued in consequence of the desertions. He calls upon the soldiers to return to their duty, and in case they are harbored by the people in the gold district, he threatens to take military possession. The greatest part of the region thus far explored is public land.

Meanwhile the hitherto quiet valley of the Sacramento has gained in life all that the seaports have lost. Tents and bush-arbors are pitched on the banks of the rivers. On the American, the Feather, and the Cosmenes, thousands are busy in digging and washing the earth and sand. On the hills, and in the valleys and dry ravines also, it is found. It is cut with knives from the granite rocks. The metal, it is said, is found in "three distinct deposits; sand and gravel beds, on decomposed granite, and intermixed with a kind of slate." It has been found at a depth of eighteen inches from the surface. Whether it all lies near the surface, or how much deeper it descends, we have as yet no means of judging.

Of course there has been no time for procuring any but the simplest implements; the spade to loosen the earth, the tin pan and the basket to shake it in, and with water to wash the gold dust and grain, and knives to detach the particles from the rock. The only contrivance complex enough to be dignified by the name of "machine," or "cradle," is a trough hollowed from a tree, or made of boards, about ten feet long and two wide, and placed on rockers, with a sieve at one end and open at the other, and into which the earth is thrown. Water is poured upon the earth, the trough is rocked to and fro, and the earth washed out with the water at the lower end, the gold grains mixed with sand remaining at the bottom, being prevented from running out with the water and earth by cleets about an inch high, nailed at intervals across the hollowed bottom. This machine requires four men to work it; one to dig the earth, another to carry it to the cradle, a third to pour water, and a fourth to

rock. For a machine of this kind Mr. Larkin gave $120 in gold dust. He states that common spades worth a month before one dollar, brought ten on the 1st of June.

As to the extent of the gold region of California, and the amount of gold obtained, or likely to be obtained, we have as yet, of course, no very definite information, and can therefore come to no conclusion as to the amount which will be added to the supply of precious metals, and the consequent effects which will be produced upon business and society at home and abroad.

There are two considerations connected with this discovery, which, to our minds, are specially satisfactory. We rejoice, in the first place, that the El Dorado was revealed not to adventurers, actuated by no other motive than the vulgar lust of gold, and carried thither by the hope of easy gains, but to the hardy emigrant, who went out to make, not find fortune, and whom fortune has found; to the citizens of a republic ready to labor with their own hands, rather than compel the Indian and Negro to undergo unrewarded toils.

We rejoice, also, that the treasure is gold, not silver. Silver, being found in veins, often descending deep into the earth, and requiring shafts of great length to be sunk, cannot be procured without large outlay of capital. In the mines of Mexico the veins descend at an angle of forty-five degrees, and the ore is brought up on the backs of the laborers, through passages many feet in length. But gold is found in small particles, is washed from the sand of the plain and of the river, is cut from the surface of the rock, and requires less capital than silver. The reasons are obvious, therefore, why the government of Russia adopts a different system with its silver mines from what it pursues in regulating the gold regions. The silver mines are worked by the crown itself. But any private individual may make application for an allotment of unappropriated ground in the sand plains of Siberia. He obtains his allotment free of rent, and works it at his own expense and his own risk. The gold obtained is sent on to St. Petersburgh, and after a deduction of 15 per cent for government dues, the balance is returned to the owner.

The gold region of California is the property of a Republic. It is held for the benefit of the people. A policy less liberal than that of Russia would neither be compatible with the nature of the subject and the interests of California, nor with the spirit of our institutions.

Governor Mason recommends the renting, for a limited period, of allotments of a few yards square, or the sale of the land at auction, in lots of from 20 to 40 acres. Whatever course is pursued, whether the land be sold or leased, we trust that no system will be introduced to impair the facilities or lessen the chances which the region affords to men of small means. As it is, the laborer is now the capitalist in California. With his food for a month, a bush-arbor to sleep in, and a few tools, he is ready to go to work on his own account. The capitalists who have gone to the ground with laborers, have not, it is said, been able to retain them in their service, each being eager to begin operations for himself. Of course the co-operation of intelligent men and better methods will lead to more profitable working of the ground, but there is no room for the exclusiveness and monopoly of capital. Let the necessary regulations be adopted, under a territorial government, for the preservation of peace and order; let a mint be established, and such a land system introduced as will give

all a chance, and we vouch for it, that California will be more quickly peopled, and the amount of gold obtained will be greater, than if any other course is pursued.

A few details will give some idea of the amount of gold obtained. In Mr. Larkin's letter of June 1st, he states that $20,000 had been received in exchange for goods at St. Francisco; that one man in the gold district averaged $25 per day. Writing on the 20th, he supposes that there were 2,000 men at work on the American, Feather and Cosmenes rivers. Fifty men, at one point, obtained in May and June an average of $1,000 each.

Governor Mason, in his report of 17th August, states, on the authority of Mr. Marshall, that the searchers obtained from 1 to 3 ounces daily. At Weber's creek, two ounces were the daily yield. At Feather river, Mr. Dye, with fifty Indian washers, in seven weeks and two days, obtained 273 pounds, his nett share of which was 37 pounds. A soldier absent on a furlough of twenty days, returned with $1,500, the fruits of one week's search. A party of four averaged $100 per day. Gold was sold at $12 an ounce, and was worth $16 in trade. Col. Mason estimates the number of men on the ground at 4,000, (of whom one-half are Indians;) the total yield per day $30,000 to $50,000. A small ravine was shown him from which $12,000 had been taken. Hundreds of similar ravines were yet untouched. Those that had been worked were little more than scratched. No serious impression had as yet been made. Gold was believed to "exist on the eastern slope of the Sierra Nevada," and there was every reason to believe that in the space of 500 miles, between the region of the Sacramento and the mission of San Fernando on the south, of which *Puebla de los Angeles* is the chief town, there must be many rich deposits.

If our suggestion, that the great basin of California, east of the Sierra, possibly contains auriferous sands like those of Siberia, who shall attempt to estimate the amount of precious metals which within a few years will be added to the present supply?

In his letter of August 29, Mr. Colton states, that the district already explored extends 200 miles north and south, and 60 east and west. And every day, new explorations extended the area. Some searchers averaged ten ounces a day, the least active one or two. Four men in ten days obtained $1,500 each. Another obtained 2½ pounds of solid gold in fifteen minutes from a basin of rock not larger than a wash bowl. These instances were cases of men whom he personally knew. He estimates the yield at over one million of dollars, a month.

In the Monterey letter of September 10, the writer calculates the amount of grain gold received per month, at over two millions of dollars. People carried the gold dust around in goose quills, for change. Public meetings had been held to consider the subject of a mint. Gold was being shipped off to Mexico, Chili and Peru, to be coined. The writer thinks about 4,000 persons were in the gold region at the time.

The Californian of the 28th September states the receipts of gold dust at St. Francisco to have been, during the first eight weeks of searching, $250,000; during the eight weeks ending on the 28th, $600,000. The number of persons engaged probably exceeded 6,000, including Indians. One ounce in a day was the lowest average for each. It was "fully ascertained that gold exists on both sides of the Sierra Nevada, from latitude 41° north, as far south as the head waters of the San Joachin river, a distance of

400 miles in length and 100 in breadth." The gold region already explored was sufficiently extensive to give profitable employment to 100,000 persons for generations to come.

It will be seen that these statements indicate a monthly product of one to two millions of dollars.

Some of the immediate effects of the publication to the world of these brilliant accounts are sufficiently obvious. Already hundreds are preparing to leave the Atlantic seaboard at the first opportunity. Ships with cargoes for the California market have already sailed. Flour is said to be selling there at $36 a barrel, and wisely, therefore, does Captain Sutter, while others desert their wheat fields for the gold *placer*, quietly continue the cultivation of his lands.

Of course a great impulse will be given to emigration. California will need a territorial government immediately, and Congress will doubtless make provision for a mint at its present session.

Of the ultimate effect upon business and monetary affairs at home and abroad, it is yet too early to speak. Those who talk of ten hundred millions added to the supply of precious metals within a few years, may possibly be right, are probably a little extravagant. We have not the data to confirm or refute.

An increase of currency causes a rise of prices; because, the amount of commodities remaining the same, there is more money to represent them. Such is the effect of large issues of bank paper, and an increase of metallic currency is in this respect the same. But while paper money rests upon credit as its basis, gold and silver coin, which lie at the foundation of that credit, are self-sustained, and a rise of prices arising from an increase of metallic currency is more natural and healthy. If, the quantity of precious metals remaining the same, there be a large increase in commodities produced and exchanged, the effect is the same as a decrease of precious metals. It is stated, that during the hundred years following the discovery of America, the quantity of precious metals was increased four or five fold. The consequence was an increase of prices at the same rate. The pious Catholic of England attributed this, probably, to the change of religion, and hence, we presume, the complaint of the old song, that,—

> "Or 'ere the vriars vent 'ence,
> A bushel of the best vheat vos sold for vourteen pence."

When Mr. Jacob wrote his "Inquiry into the Production and Consumption of the Precious Metals," in 1831, he came to the conclusion that the quantity of them was decreasing, that the supply of gold and silver was growing less, while the production of new values was greater every day, and that, in consequence, a gradual decline of prices had been going on during the twenty years preceding.

Twelve years before Mr. Jacob wrote, a discovery had been made of auriferous beds of sand in the Ural Mountains; and two years before, similar beds were found in the plains of Siberia.

The product was comparatively small at first, so small as to receive hardly a passing notice from Mr. Jacob, but of late it has increased rapidly, enormously. In 1846, the gold region of Russia yielded 1722 poods of 36 pounds each, or 61,992 pounds, being more than one-tenth of the entire amount obtained since 1819. The silver mines, also, worked by the crown, are very productive. All remember the relief afforded by Russia

to the Bank of England, in the crisis of 1847. That power bid fair, through her precious metals, to assume as controlling a monetary as political position. But if the accounts from California are no more than half confirmed, the Great Republic will soon be placed on an equal footing, at least, with the Great Empire.

The effect of streams of the precious metals pouring into the channels of trade from both east and west, would seem to be, inevitably, a rise in prices, and a consequent impulse to industry and enterprise. Such doubtless would be the immediate result. But as a commodity falls in value as its quantity increases, while prices nominally rise, the coin in which they are paid is depreciated. While more is given for what is bought, more is received for what is sold, and the account seems balanced. Apart from the impulse given to industry and enterprise, the chief benefit of a rise of prices from an increase in the supply of precious metals, would probably accrue to those whose incomes exceed their expenditures, and to those who have old debts to pay, and at the same time the holders of mortgages at a fixed rate of interest would lose.

If, as has been supposed, the supply of precious metals has been falling off, possibly as large an amount as was likely to be received from Russia and all other sources heretofore known, would be no more than enough to maintain the balance and prevent a decline of prices. On the other hand, what an enormous production of new values in every direction has been taking place within the last half century. Emigration has been sending forth divisions of the peaceful army of civilization to the uttermost parts of the earth: to Australia, to Brazil, to Oregon, to the Indies. The steam-engine has been at work, spinning, weaving, forging. Within twenty years, railroads have been introduced; within ten years, ocean steamers; within five years, the electric telegraph.

We believe that at no period more momentous, more opportune than the present, could a large addition, a very large addition to the supply of precious metals be made. A great work is to be done, not by the arm of despotic power, like that which built the pyramids, but by the arm of enterprise, and the power of credit and of money. The great system of steam communication on land and on sea, which has but made a beginning, is to bring nations into near neighborhood, and bind the ends of the continents together. The steam-engine is to spin and weave for the world. For all this gold is needed. Gold to represent the new values, created and to be created, the new commodities produced, and give them circulation; to displace paper, if possible, if not, to become the broader and safer basis of a larger paper currency. Like the air we breathe, which, while it yields no nourishment to the body, imparts energies without which food would do no good, the precious metals, losing their own intrinsic value when used as a currency, represent and give circulation to all other values.

More gold then, say we. It brings its temptations; it brings also the means of great good, of glorious results. If we fear or hate it, why confine our maledictions to the poor yellow ore alone? The only gold is not that which glitters. Food, raiment, is gold in another form; all that is without us, that may be bought and sold. Food itself is not more needful to the body, than an enlarged and safer currency to the growing enterprise of the world. They who dwell upon commonplace and out of place warnings, applicable to other times and circumstances, mistake the spirit and men of the age.

Art. VII.—PROTECTION OF SHIPS FROM LIGHTNING.

To Freeman Hunt, Esq., *Editor of the Merchants' Magazine, etc.*

In the June number of the Merchants' Magazine for 1846, I made some remarks in reference to the protection of ships from damage by lightning. In that communication I stated that in 1839 a commission was instituted by the Parliament of England to inquire into the cases of damage by lightning to vessels in the service of that government. That commission was for a long time engaged in this service, and made an elaborate report, in the conclusion of which they say, "*And no instance, so far as we are aware of, has ever occurred of a ship sustaining injury when struck by lightning, if the conductor was up at the masthead, and the continuity uninterrupted to the water.*"

I also included in that communication a copy of a letter addressed to me by the Hon. David Henshaw, Secretary of the Navy, dated Navy Department, August 2d, 1843, in which he says:—"*None of our ships have ever been injured by lightning if the conductors were up.*"

That communication contained a list of vessels injured and of vessels destroyed by lightning, as registered by me in 1841, 1842, 1843, 1844, and part of 1845. I will continue the record in my next communication for the residue of 1845, 1846, 1847, and 1848.

I have been informed by John A. Stevens, Esq., President of the Bank of Commerce, that during the time his father, General Stevens, was navy agent at New York, a vessel arrived in the bay from the Brandywine Mills loaded with gunpowder for the government. The tide was not favorable for the vessel to proceed up to the powder house, and they anchored it in the bay. General Stevens sent on board to ascertain if the vessel was furnished with a lightning conductor, and was informed that there was no lightning rod on board. He immediately sent a rod to the vessel and ordered it put up. In two hours after the vessel was struck by lightning, and the lightning passed away on the rod.

During the last two years, I have called frequently at the office of the Atlantic Insurance Company in this city, to converse with the very intelligent officers of that company in reference to the extra hazard which vessels run by neglecting to provide lightning conductors to the ships. Since the first call I made at that office on the subject, the company have paid near $30,000 losses to ships and their cargoes by lightning.

Iron ships are never struck by lightning, and steamboats rarely struck, and when struck are but little injured. One thousand dollars would probably cover all the damage by lightning to steamboats since the introduction of steam navigation, and not one life has been lost on board a steamboat by lightning.

These facts are too plain to require comment. I have never heard of a case of loss of human life in a vessel or building furnished with a lightning rod, reared for the purpose of protection.

I have never heard of a warehouse filled with iron being struck by lightning. A store in Rochester, containing some iron, was struck by lightning. During the present year, my investigations of lightning phenomena have brought to my notice some facts that deserve particular mention.

Some years since the packet ship New York, bound from New York to Liverpool, was struck by lightning. The lightning entered the cabin and

stopped all the chronometers, and also all the watches but one, and that was thrown upon the carpet. On the arrival of the ship at Liverpool, the chronometer was sent to Messrs. Roskells to be put in order. The steel works were found to be converted to magnets, having been thoroughly manipulated by the lightning.

A silver watch hanging up in a house in New Orleans was struck by lightning, and the steel works were thoroughly manipulated and converted to magnets, and had to be all taken out before the watch could be repaired.

Heating these steel works to redness would divest the steel of its magnetic properties.

On the 19th of June, 1848, a terrific lightning storm passed over Trenton, New Jersey. The rolling mill and furnace belonging to Peter Cooper, Esq., of New York, contained at that time about 2,000 tons of iron, some of which was in a fluid state, some heated, and the residue cold. There were 200 to 300 men in the works at the time. As the lightning storm was passing, one of the workmen was probing the melted metal in the furnace with an iron stirrer, and received an electric shock from the melted iron. Another workman attempted to lower the iron damper by laying hold of the chain, and received a shock which knocked him down. A second took hold of the chain and shared the same fate ; a third laid hold of the chain and received a severe shock.

In the summer of the present year, the shop of a blacksmith in Oswego county, New York, was struck by lightning ; the blacksmith at the time was holding a piece of red hot iron in the forge with a pair of tongs. The hot iron was vivid with brilliant scintillations, and the blacksmith was raised from the floor several inches by the shock, communicated from the hot metal through the tongs.

These cases of magnetic manipulation by the lightning, and of absorption of electricity by red hot iron, are wonderful and very instructive, and future observations in relation to this phenomena may lead to important results.

In 1846, 1847, and 1848, several vessels and their cargoes have been destroyed by lightning, viz :—The ship Oscar was burnt by lightning in Port of Spain, September 15, 1846 ; the packet ship Thomas P. Cope, bound from Philadelphia to Liverpool, was with her cargo burnt by lightning November 29, 1846 ; the ship Christopher Columbus, bound from New Orleans to Havana, burnt by lightning February 11, 1847 ; the British ship Columbia was sunk by lightning June 14, 1847 ; an American ship with her cargo burnt by lightning on the French coast in the autumn of 1848 ; brig Rebecca C. Fisher, bound from Apalachicola to New York, was with her cargo burnt by lightning April 19, 1848. The English brig Bayfield, with a cargo of gunpowder and spirits, was burnt by lightning on the western coast of Africa on the 25th of November, 1845. The brig Columbia, when near the south-west pass of the Mississippi, was struck by lightning on the 3d of July, 1846, and set on fire, six of her men who were aloft reefing topsails were knocked into the sea and lost, and the captain was the only person saved on board. The ship Huguenot, of 1,000 tons burthen, bound from New Orleans to Liverpool with a cargo of cotton, was struck by lightning June 12, 1846, the cargo set on fire, and she had to put into Savannah to extinguish the flames. The ship Independence, bound from London to New York, was on the 14th of January struck by

lightning twice during one hour, in latitude 49° north, longitude 23° west, six of her men were knocked down and two disabled. The pilot schooner Four Sisters was sunk by lightning on the first of July, 1848. This vessel was afterwards raised and repaired. The Thomas P. Cope lost one person by suffocation, the Christopher Columbus one person by exposure, the British ship Columbia four men by being drowned, and the brig Columbia six men knocked into the sea, and English brig Bayfield three men by starvation and exposure in an open boat to escape the flames. The ship West Point, on a voyage from Liverpool to New York, was struck seven times by lightning during thirty minutes, on the 29th of February, 1848. She had 300 passengers on board. Two of her men were instantly killed by lightning. I will omit the residue of the catalogue for my next communication, and here append the particulars of the burning of the Thomas P. Cope by lightning, as follows :—

"Ship Thomas P. Cope.—One of the crew of this vessel informs us, that the day on which the ship was struck by lightning, the wind was fair and blew strong from the north-west until about 4 P. M., when the sky became obscured with dark and heavy clouds, threatening a storm. In half an hour afterwards, all hands were called to shorten sail, which they continued doing until the ship hove to under a close reefed maintopsail, the wind blowing a gale, accompanied with hail and snow, thunder and lightning. About half past 6 P. M. the ship seemed wrapped in fire for an instant, when an explosion loud and terrible shook her fore and aft, and left the eyes of the main rigging on fire. The electric fluid exploded on the main cap, then darted along the maintopsail sheets into the hold, and probably was conducted through the sides of the vessel by some of the copper bolts.

"Men were immediately sent aloft and water passed to them to put out the fire, but before they could effect their purpose the rigging was consumed and the mast began to totter; therefore, in order to save themselves, they descended to the deck again. The lanyards of the weather rigging had been cut, and as the vessel rolled to leeward, the mast went over the side about four feet above the deck, without having been cut away. It took with it the mizzenmast close to the rigging, and all the after yards, and also carried away the foretopsail yard. The foresail, which had been blown away while shortening sail, was replaced by bending a foretopsail reefed, under which the ship was again hove to, with the weather clew hauled up.

"In the meantime the passengers rushed on deck, declaring the ship was on fire below; and one poor woman, Mrs. McNeil, while saving an infant child, left below a little girl five years old, who was suffocated by the smoke! The mother's agony was heartrending in the extreme. Still the gale blew with unabated fury; the lightning flashed, the thunder rolled, and the snow and hail descended with bitter violence. The hands were employed in pouring water down into the between decks, for the purpose of extinguishing the fire; but this had no other effect than to keep it under without extinguishing it. A raft, composed of studding-sail booms and other spars, was constructed, and the boats were got in readiness, whenever it should be necessary to abandon the vessel. Pouring water into the hold and pumping it out again was the principal occupation of all hands, until they were rescued by the ship Emigrant, as reported yesterday. The ship had not any lightning conductors on board!! The captain saved his chronometers, instruments, and clothing, and the crew a part of their effects; but the poor steerage passengers lost their all, and are now entirely destitute, and are worthy objects of charity."

"Some further particulars of the loss of the Thomas P. Cope may not be unacceptable to your readers. These I learned from Mrs. L., of Philadelphia, who, with her four little children, were cabin passengers on board the unfortunate vessel. The ship was struck by lightning on Sunday, the 29th ult., at 6½ P. M., at which time most of the passengers had retired, or were about doing so. The mainmast being the attraction, it was instantly on fire, while at the same time the fluid descended into the hold, and communicated itself to the combustible cargo. A scene of terrible confusion at once commenced, which was, however, speedily quieted by the cool and decided conduct of Captain Miercken. The mainmast was cut away, carrying with it the mizzenmast and everything forward but the stump of the foremast. The steerage passengers were got upon deck, though in such haste they were unable to save their clothing, and many were thus exposed to the storm in their night dresses. So great was the haste necessary, that one little child was forgotten before the hatches were caulked down, that the flames might, if possible, be smother-

ed. All the other passengers were eventually saved. Every precaution was used to keep the flames under, but in vain. But the measures which were adopted proved successful in preserving life. The decks were kept constantly wet, and occasionally holes were bored in them and water turned down. For the first night men, women, and children were exposed to a violent storm of snow and sleet, and it would be difficult to imagine a more distressing sight than poor Mrs. L. with her infant and other children thus exposed. As soon as circumstances would permit, the women and children were got into the forecastle, though it was impossible to remain in such a crowded situation long at a time. The crew and male passengers were, of course, obliged to keep the decks day and night, and it is said that Captain Miercken, whose conduct was admirable throughout, never quitted the deck. In this situation the ship remained until the next Saturday afternoon, the decks growing hotter, thus giving evidence of the increasing fire, and threatening all with a horrible death. Several sails were seen during this time, but at a great distance. On Saturday, just as hope was giving place to despair, they fell in with the British barque 'Emigrant,' Captain Faber, bound to St. John's, New Brunswick. Although short of provisions and water, Captain Faber could not hesitate in regard to his duty. He commenced transferring them on board on Saturday evening, and when his work was half done, darkness and a gale set in. The feelings of Captain Miercken and those who remained on board may not be described. The fear that the flames would burst out upon them at any instant, and that the gale might separate the vessels, must have constantly preyed upon them. But the dawn of morning showed their succor near at hand, and they soon joined their companions. As they left the hatches were taken off, and the noble ship was soon wrapped in flames. The conduct of Captain Faber is spoken of in the highest terms. He, with his crew, cheerfully went upon the same allowance of half a pint of water each, which was all that could be afforded to his numerous guests. A few days afterwards the Washington Irving, a Boston packet, Captain Caldwell, homeward bound, hove in sight. Captain C. cheerfully took them all on board, and supplied the emigrants with provisions and water. Captain Faber had made them as comfortable as his limited means would allow; but when on board the 'Washington Irving,' they felt, as it were, once more at home. The unremitting attentions of Captain Caldwell will never be forgotten. They were just such as every one who knows that gentleman would have expected of him, and one can scarcely conceive of a purer satisfaction than he must enjoy, in being the instrument of Providence in feeding the hungry and caring for the destitute, abundantly able as he was to do, from the liberal manner in which the owner of the Boston packets always supplies his vessels. On Sunday morning the 'Washington Irving' arrived in Boston, and I gleaned these particulars from Mrs. L. on board the boat."

None of these vessels were furnished with lightning rods. The storm which set the Thomas P. Cope on fire, passed my place of observation at from 3 P. M. to 3 35 P. M. of the 29th of November; it was a storm of lightning, thunder, wind, snow, rain and hail. My place of observation is in latitude 41° 41′ 50″ north, longitude 73° 59′ 30″ west. The storm was 35 minutes passing. The Thomas P. Cope when she was struck was about 9 degrees east, and a few minutes north of my place of observation. The length of the storm cloud was measured by the time it was going 9° east. It would give it a great length of surface, and it made great speed. The meteoric, magnetic and electric wires upon which I made my records fell during the storm 6° to 48°, then rose 3½°, and again fell to 48°. The weather that day on the mountains of south-western Virginia, 1882 feet above the sea, was beautiful, and the temperature a perfect equilibrium of 12 hours duration. The day previous an earthquake shock was felt at Porto Rico, which was doubtless the parent of this storm. At Syracuse, New York, the temperature changed but 2° for 12 hours on the 29th, and at Cobourg, on the northern shore of Lake Ontario, the weather was very pleasant. At my place of observation a sound like that of heavy thunder was heard at 3 A. M. of the 29th. Lightning storms are probably in every instance the result of earthquakes, and vessels are greatly exposed to injury and destruction by these electric discharges, and should be pro-

tected against the visitation of the fire of the clouds by metallic conductors, to lead the electric discharge from the clouds to the water.

I have heard of the case of a ship being struck by lightning which was furnished with one rod to one of the masts—the lightning struck one of the masts not protected. This was the packet ship Louis Philippe. Each mast should be protected.

In the communication referred to as published in the Merchants' Magazine in June, 1846, I include the copy of a letter received by me from Commodore Stringham, in which he states that the iron wire used for conductors on board of ships of the line and frigates is five-sixteenths of an inch in diameter, and for sloops of war one-quarter of an inch diameter.

My meteorological records are probably the most extensive of the kind of any kept on the surface of our globe. They embrace four points of observation, viz: on Long Island; on the mountains of south-western Virginia, 1882 above the sea, south-west; on the borders of Lake Ontario, north-west; at Franconia, N. H., north-east. My records on Long Island are made hourly, from 4 A. M. to 10 P. M., and during lightning storms every 60 seconds.

NAVY DEPARTMENT, *November* 17, 1848.

SIR:—Your communication of the 14th instant, upon the subject of "lightning conductors," has been received, and referred to the Bureau of Construction, Equipment, and Repair, and I have the pleasure to enclose herewith, for your information, a copy of the Report of the Chief of that Bureau in relation to the contents of your letter.

I am, respectfully, your obedient servant, J. Y. MASON.

EBEN MERIAM, Esq.

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION, ETC., *November* 16, 1848.

SIR:—In reply to the inquiries proposed to the Navy Department by E. Meriam, of New York, and referred to this Bureau, I have the honor to state, that there is nothing on record in this office to show that any damage has been sustained by vessels of the United States from lightning since the period referred to by Mr. Meriam,* or that any steamer of iron or wood has been struck with lightning.

In this connection, I would state that the subject being one involving important consequences, and the conductors now in use on board United States ships being very imperfect, and liable to constant injury and destruction from the motion of the ship, as well as by the passage of the electric fluid, the Bureau has been for some time in correspondence with the agent of Sir W. S. Harris, patentee of the improved permanent conductor, introduced into the British navy, and that a conductor of that construction is expected to arrive shortly from England, to be examined, and, if approved, recommended for introduction into the Navy of the United States. Those in use at present are connected links from the mast-head to the water. If made of sufficient strength to bear a shock, they are so heavy as to break with the jerking motion of the ship, and become useless. Wire rope has been tried both in the British and our own service, but have been laid aside, being liable to chafe, stiff and unmanageable. The researches of Mr. Meriam on the subject of electrical phenomena, would be highly interesting as well as useful. Those of Sir W. S. Harris are in possession of the Bureau. Mr. M.'s ideas on the best form for ships' conductors and mode of application, would be received with pleasure and meet the most respectful attention.

I am, sir, respectfully, your obedient servant, CHAS. WM. SKINNER.

Hon. J. Y. MASON, *Sec'y of the Navy.*

NAVY DEPARTMENT, BUREAU OF CONSTRUCTION, ETC., *December* 1, 1848.

DEAR SIR:—I send you the copy of a letter from Commander Kelly, of the United States ship Albany, also a minute from the log book of the United States ship Delaware,

* The period referred to was the second of August, 1843. On that day Mr. Secretary Henshaw, in a letter addressed to me, says:—"None of our ships have ever been injured by lightning if the conductors were up."

giving an account of those ships being struck with lightning, and the effects. In both, you perceive the conductors were destroyed, proving the necessity of improving these conductors.

I am, respectfully, your ob't servant, CHAS. WM. SKINNER,
EBEN MERIAM, Esq. *Chief of the Bureau.*

EXTRACT OF A LETTER FROM COMMANDER JNO. KELLY, U. S. NAVY, TO COMMODORE C. W. SKINNER, DATED PHILADELPHIA, NOVEMBER 20, 1848.

"On the 4th of September, 1848, in latitude 25° N., longitude 80° W., during a heavy squall of wind and rain, the Albany was struck twice, at an interval of about one minute. The first shock was received by the forward conductor, the second by the main.

"In reply to your interrogatory, Were the conductors rigged in the usual manner when the accident occurred? they were.

"*Secondly.* Did they receive and conduct the fluid off safely? I reply, they did; no part of the spars or ship receiving the slightest apparent injury.

"*Thirdly.* Were the conductors injured any way by the shock? The forward conductor was literally torn to pieces, from the lower end of the spindle down, scattering the fragments abaft the mainmast, the greatest portion of it, however, going overboard. The main conductor sustained the shock without any apparent injury, conducting the fluid off safely.

"*To the fourth question,* Were the metallic points at the masthead fused, or otherwise injured? I reply, they were reported to me as uninjured by Lieutenant Gibson, the first lieutenant of the ship.

"The conductors were composed of straight pieces of iron wire about 15 inches long, connected by rings 1¾ inches in diameter, the whole conductor made from ⅜ wire."

EXTRACT FROM THE LOG BOOK OF UNITED STATES SHIP DELAWARE.

"*Delaware, at sea, May* 11, 1843.—At ten A. M. squally from the northward, with thunder and lightning and rain. The lightning struck our fore conductor, shivering it to pieces, but did no other damage."

These two cases, the Delaware and the Albany, present the same results as that of the packet ship New York on the 19th of April, 1827, in its second shock. A passenger on board that ship gave a detailed account of the lightning shock, as follows:—

"PRINCE'S DOCK, *Liverpool, May* 12, 1827.

"The operation of the second shock was very different from the former, and is more deserving of attention, as furnishing a new instance in proof of the efficacy of lightning conductors as a protection at sea. We had a chain conductor on board, but it not being the season to expect much lightning, and the first shock coming on quite suddenly, it was not up at the time. The morning squall was over. It continued, however, to blow fresh all day, and about noon heavy clouds began to gather in on every side, rolling their volumes apparently among the rigging. We had reason to expect more lightning; the conductor was prepared, and Captain Bennett ordered it to be raised to the main royal mast head. It consisted of an iron chain, having links one-fourth of an inch thick and two feet long, turned with hooks at each end, and connected by rings of the same thickness and one inch annular diameter. The chain was fastened to a rod of iron half an inch thick and four feet in length, with a point well polished and tapered, in order to receive the fluid with facility. It was secured to the main royal mast, the rod extending two feet above the mast head, and thence it was brought down over the quarter, and repelled by an oar, protruding say ten feet from the ship's side, and sinking a few feet below the surface of the water. I have been thus particular in stating the dimensions of this chain for the double purpose of conveying some idea of the force of this shock and of impressing the necessity of providing larger conductors. The chain, however, in this instance performed its office, and it was up in a happy moment to avert a blow, that, in the opinion of all on board, must have sent this staunch ship in an instant to the bottom. At two o'clock we were astounded by another shock like that in the morning, the flash and sound simultaneous. I happened to be in the cabin with another passenger. A ball of fire seemed to dart down before us, at the same moment the glass of the round house came rattling down below. Those on deck agreed that the whole ship appeared to be in a blaze, from the vividness of the principal flash, which they distinctly saw darting down the conductor and agitating the water. All parts of the ship, as before, was filled with smoke smelling of sulphur. The ship was again thoroughly examined. The conductor had been rent to

pieces by the discharge, and scattered to the winds. Small fragments were found on deck. In saving the ship it had literally yielded itself to the fury of the blast. The pointed rod was found to be fused and shortened several inches, and covered over with a dark coating. Some of the links have been snapped off, and others melted. The whole operation was singularly striking, and affords another of the rare cases where the conductor yielded to the violence of the shock, while it effectually averted the shock from the object it was designed to protect."

These cases do not alter in the least the position I have assumed, that in no case has there been loss of human life in a vessel or building having the appendage of a metallic lightning conductor *reared for the purpose of protection.*

It is a serious matter for a vessel to be without a rod to each mast, and if one of these is carried away by lightning, another, or others, should be kept in store to replace the one destroyed. The same provision that is made as to spare spars, should be made in regard to spare lightning rods.

Permanent conductors are valuable beyond all question, and the greater quantity of metal in them the better the security. A vessel built entirely of iron is absolute security against lightning—that is, no iron vessel has ever yet been struck by lightning.

I am strongly inclined to the opinion, that had the lightning chain on board either the Delaware, Albany, or New York been in a single piece, there would have been no impediment to the free passage of the electric discharge from the clouds to the sea.

I will, in another communication in the next number of the Merchants' Magazine, make some further remarks on this subject. E. M.

Art. VIII.—THE PRESERVATION OF VESSELS FROM FIRE.

No human foresight can prevent such occurrences on shipboard. All available means should therefore be adopted towards the extinguishment of the fire, and the preservation of lives and property.

The water valve proposed for this purpose, is a new and additional attachment to vessels of all descriptions, in inlets, bays, rivers and lakes, as well as on the ocean.

The lower piece of this valve is a cylinder of copper or other metal. It passes upwards through the bottom of the vessel, and is secured in its place by bolts rivetted; by wrought nails clinched; or by screw bolts, or any other means, fastened to a corresponding plate of copper or other metal on the inside of the planks. It is open below for the admission of water, or only covered with a grating to exclude chips, sea weeds, &c., which might obstruct the valve. This lower piece is firmly closed above by brazing or otherwise. On two of its opposite sides are two perforations, the diameters of which four conjointly, are equal to that of the outer opening above mentioned, and a little more than equal to allow for the increase of friction through the small perforations.

The cap or upper piece of this valve is also of copper or other metal, closely fitted to the lower piece above described, and having two perforations on each side to correspond in size and position with the four perforations in the lower piece; it is effectually closed at the top like the lower piece. It has a band or circular projection a little below its upper mar-

gin, forming a shoulder, by which it may be secured from being lifted up or displaced by accident. This lifting or displacement is prevented by a plate or collar adapted to the shoulder, and secured to the ceiling of the vessel or to its timbers.

This cap or upper piece of the valve has a shank of iron, copper, or other metal, one end of which is effectually secured to the top of the cap, by brazing, rivetting, or other means, for the purpose of turning it, and thereby of opening and closing the valve at pleasure. This shank must be long enough to extend through the upper deck, and be there covered by some kind of a hatch, the key of which will be always kept by the captain. The wrench in the upper end of this shank, is the means by which the cap is turned about one-fourth of a circle, and water thereby let into the hold of the vessel until the fire is extinguished. It is then turned back one-fourth of a circle for the purpose of again closing the valve, that no more water may be admitted than is necessary, and that the water so admitted may be pumped out to free the ship.

The size of the water valve cannot be specified, but may vary with the size of the vessel, and the pleasure of the owner or of the captain. The number of them in each vessel may also be varied by those circumstances. The location also, or part of the vessel in which constructed, may probably be varied at the pleasure of the parties.

In steamers they will probably be attached to one or both of the pipes passing through their bottoms, by which water is received into or discharged from the boilers. In other vessels they will be placed where supposed to interfere least with the cargo or stowage, and be least subject to injury from accident or design. Some will prefer the pump well for its location; some will place it against the bulkheads of the forecastle or of the cabin, either within or without the partition; and some will enclose this shank in a cast iron pipe, to protect it from injury. Others may think proper to bore out one or more of the stanchions like a pump, and pass the shank through the whole length of the stanchion, taking up no room and running no risk whatever. Others may prefer that it should be inserted into the bottom just below the water line, and have the shank pass up the side, between the ceiling and the planks, to the edge of the deck. Every owner must judge for himself; and in large vessels, some valves will be let in between decks, as water will seek its own level. As they may be made more efficient and certain by extending them upwards from the bottom through the lower deck, as high as the line to which the vessel sinks when loaded, I prefer that such a water valve be attached to the pump well, either within or outside of it, and that a copper pipe be brazed to it, extending with the shank through the upper deck. To this pipe the suction hose of a fire-engine may be promptly coupled, and the engine worked by the same gearing which pumps the ship.

Although two perforations on each side of the valve are made in this model, that number is not insisted on as essentially necessary; their proportion jointly to the outer opening in the lower piece of the valve, is deemed essential in their construction; they should be rather greater in the aggregate than that of the outer opening, to allow for the increased friction.

Besides the facilities of extinguishing fires in the hold of a vessel, where no access can be had to it, because of the flames and suffocating smoke, all the means usually employed on shipboard for extinguishing fire

in the upper part of the hold may still be used with as much advantage as ever, while the water is flowing through the valve to prevent the fire from extending into the lower hold. By means of this valve a vessel may be washed out every day or two, and kept free from the stagnation and offensive smell of the bilge water, which is so prejudicial to the health and comfort of the passengers and crew. The awful diseases which sometimes originate and rage on shipboard, may be mostly prevented by such facilities for promoting cleanliness and comfort—for the preservation of health, life and property.

The fire-engine provided by law for steamers, can only work while the steam-engine works, and the stream of water which it may discharge cannot be pointed at the fire or discharged directly on it, if in the hold of a vessel filled with suffocating smoke in which no human being can live. A fire-engine with suction hose may be serviceable if kept on deck, and would there assist in extinguishing a fire between decks, while the water valve prevented its extension downwards into the hold.

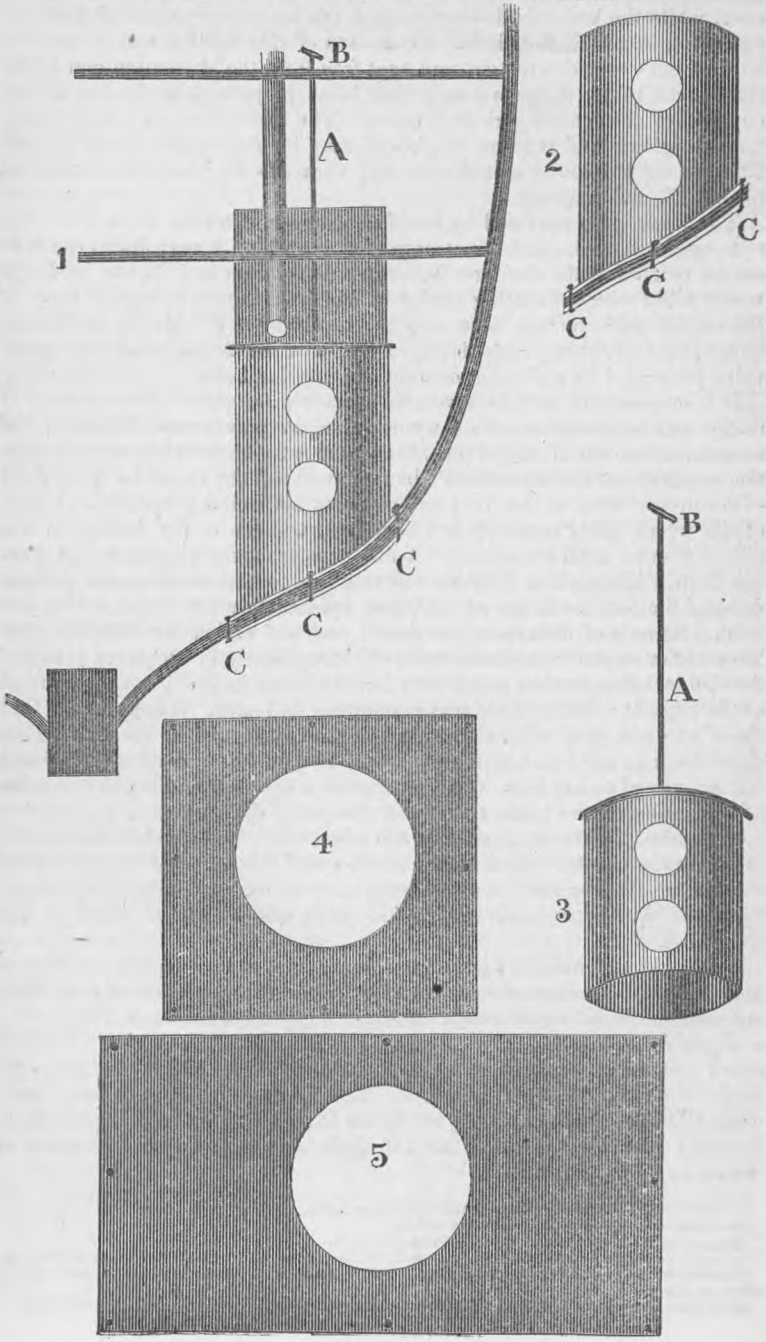
It is common for merchant vessels to have a freight of gunpowder. If that vessel be furnished with a water valve, the powder may be all stowed near it, and on an alarm of fire, the water may be instantly turned upon the powder, and the immediate abandonment of the vessel be prevented —the preservation of the lives and property be probably secured. A case of fire which lately occurred in Charleston, will show the feeling of our fellow men on such occasions. A fine new schooner arrived in the harbor from Philadelphia. While steering up to the wharves, the captain ordered the hatches to be opened, and immediately fire appeared in her hold. Signals of distress were made, and aid called for from the city. Two of the engine companies went off immediately in steamers provided for the occasion, but on going near her they first hailed her and inquired of the captain whether there was gunpowder on board. When assured that there was not, they went alongside and soon extinguished the fire. Had there been powder on board, they would only have removed the crew and left the vessel to her fate. Let us suppose a cry of fire on board of a man-of-war, and that the gunner who has charge of the magazine sees that it is near him. If the magazine be furnished with a water valve, he swamps instantly the powder which surrounds it, saves the ship and her crew from certain destruction, and leaves a probability of extinguishing the flames. Ships of war should always be supplied with such a valve in the magazine.

I will not endeavor to excite your feelings as to the deplorable loss of your late noble packet, the Ocean Monarch. I cannot pretend to say that she and the perishing hundreds on board might have been saved by having a supply of such water valves through her bottom, but I think so. Neither can I pretend to assert that the more recent total loss of lives and property in the lamented steamer Goliah, on Lake Huron, could have been prevented by these water valves; but if she had powder on board as reported, I cannot doubt for a moment that all might have been saved by means of water let in by such valves.

Jos. Johnson.

1 represents a section of a vessel with the water valve entire.
2 represents the lower piece of the valve separate.
3 represents the upper piece of the valve, with the shank.
4 represents the plate within the planks, to which the lower piece is secured by bolts or other fastenings.
5 represents the collar fitting the shoulder of the third or upper piece, and secured to the ceiling by wood screws or nails.
A the shank. **B** the wrench by which it is turned. **C** the screw bolts.

[For explanation of the following engravings, see preceding page.]



MERCANTILE LAW CASES.

CASES UNDER THE NEW CONSTITUTION OF NEW YORK.*

This is the first volume of a series of the Reports of our Supreme Court under the new Constitution, and in the language of the reporter we remark, that the decisions contained in this volume convey a very favorable impression of the learning and ability of the judges, and demonstrates the soundness of the principle which gave to the people the power of electing their judges.

By this volume we are made acquainted, not only with the judicial talent of our judges, but are also instructed in the method of conducting business under our new constitution. There are no cases yet reported containing the practice under the code of procedure, but many questions that arise under the recent organization of the judiciary, are discussed in the volume before us. The judges of our Supreme Court have decided many cases which are interesting, not only to the lawyer, but also to the general reader, besides some questions of international law.

One case is an exceedingly important one to our commercial community, and contains an extended commentary upon the law abolishing imprisonment for debt, and to punish fraudulent debtors. His Honor, Judge Edmonds, in delivering his opinion, says that this act has a double aspect, one as a civil remedy, and the other as a criminal proceeding. That the proceedings under the act are never for the benefit of creditors at large of the debtor, except in the single instance of an assignment after the debtor has been convicted of a misdemeanor. That the prosecuting creditor is entitled to a preference over the creditors generally, either for himself alone, or for himself and others of a certain class.

That after the rendition of a judgment against a defendant, it is not necessary that he should be guilty of any fraudulent or criminal conduct to entitle a plaintiff to a process of arrest; but that if the defendant, in violation of law or in contravention of the statute, withholds payment of a judgment or decree rendered against him, though he may make an assignment of all of his estate, *bona fide*, to all of his creditors, yet the plaintiff is entitled to a prior claim over creditors who have not obtained a judgment, and the debtor will be committed unless he yields possession of his property to the plaintiff in payment of his judgment. We notice, also, another decision in the matter of Bruni.

This was a case arising under the treaty between France and the United States, in relation to the apprehension and delivery of deserters from French vessels in ports of the United States.

The defendant or prisoner was arrested upon the request of the French Consul in New York, as one of the crew and as a deserter from the French steam vessel called the Philadelphia, then in port, on a voyage from Havre to New York and to return. The defendant had been committed by one of the police justices of this city, and sued out a certiorari to the Supreme Court to review and quash the proceedings of the committing magistrate.

The Supreme Court decided, on argument, that no court, judge, justice or other magistrate of this State, can lawfully assume to execute the laws of the United States under this treaty, or those with other foreign nations in regard to the apprehension and delivery of deserters from foreign vessels in the ports of the United States; and that the Act of Congress in relation to this subject, passed March 2d, 1829, confers no power upon any but courts and officers of the United States. The prisoner was discharged.

The next case in this volume of Reports which we will notice is that of *Metyzen*, a prisoner who was arrested as a fugitive from justice from France, and was

* Reports of Cases in Law and Equity in the Supreme Court of New York. By Oliver L. Barbour, Counsellor at Law. Vol. I. Albany: Gould, Banks, & Gould. New York: Banks, Gould, & Co., 144 Nassau-street.

accused of embezzling money to a large amount while he held the office of a public notary in one of the departments of that country, and was demanded by the French minister at Washington to be arrested and surrendered under the treaty with France of 1843.

The prisoner had been arrested on application to a police magistrate in this city, and been discharged on appeal to the Circuit Court of the United States, and then an application was made to the District Judge of the United States Court, in the city of New York, and on hearing, had been adjudged a fugitive from justice. A warrant of commitment had been signed by the District Judge, and thereupon the President of the United States had issued his mandate to the marshal of New York, commanding him to surrender the prisoner to the diplomatic agents of the French government.

Before the surrender had been actually made, a writ of habeas corpus issued, directed to the marshal, returnable before Edmonds, a judge of the Supreme Court of this State. The Supreme Court, on a review of all the proceedings, held that the President of the United States has no authority, by virtue of a mere treaty stipulation, and without an express enactment of the national Legislature, to deliver up a resident of this country to a foreign power.

That under the treaty of 1843, the President cannot execute the power of extradition without both legislative and judicial sanction, previously obtained. The prisoner was accordingly discharged.

This case affords a striking illustration of the benign power existing in our State governments to check the action of the national government when its officers exceed their jurisdiction. Our country is a land of laws, and no part of the law affords the citizen greater security than that which is within the legitimate exercise of State authority.

There are many other subjects contained in this volume which we would be glad to notice, but our limits admonish us to close.

ACTION TO RECOVER EXCESS OF DUTIES PAID UNDER PROTEST.

In the United States District Court, (November, 1848.) Charles Kentgen *vs.* Cornelius W. Lawrence, Collector of the port of New York.

This was an action to recover an excess of duties paid under protest on a quantity of patent leather, or varnished calves' skins, imported by the plaintiff, and which were charged by the custom-house authorities with 30 per cent duty under the schedule C, of the tariff of 1846, as embraced in the clause "manufactures and articles of leather, or of which leather shall be a component part, not otherwise provided for;" while the plaintiff claimed that they were subject to 20 per cent duty under schedule E, under the clauses "leather, upper of all kinds," or "skins, tanned and dressed, of all kinds; skins not otherwise provided for." The only other special provision in relation to skins is in schedule I, subject to 5 per cent duty, which includes "raw hides and skins of all kinds, whether dried, salted, or pickled, and not otherwise provided for."

The plaintiff claimed that this patent leather was known in commerce as "upper leather," solely being used for the uppers of shoes and boots, and occasionally for the uppers of harness. The defence contended that the Tariff of 1842 had put a legal definition as a "manufacture of leather" upon this article in the following clause: "leather bottles, patent leather, and all other manufactures of leather, &c.;" and that as the Tariff of 1846 only repeated "all acts and parts of acts repugnant to the provisions of this act," this legal definition of patent leather as a manufacture of leather was still in existence, and must be applied in levying the duty.

The jury, under the charge of the Court, returned a verdict for the plaintiff, the defendant taking exceptions so as to carry up the case to the Supreme Court of the United States.

CONSTRUCTION OF THE TARIFF—GARDEN SEEDS, ETC.

In the United States District Court, (November, 1848,) Judge Nelson, presiding. H. Boving & M. Witte *vs.* C. W. Lawrence, Collector.

This was an action to recover back a duty of 20 per cent which had been charged on mustard, cardamom, fenugreek, and caraway seeds. On the part of the plaintiffs, it was contended that those seeds were free, as coming under that clause of the Act which provides that garden and all other seeds not otherwise enumerated, shall be free. On the part of the defence, it was contended that the clause which provided that garden and all other seeds shall be free, embraced only such seeds as are imported for the purpose of gardening or agriculture, and that those seeds did not therefore come under that clause; and secondly, that the seeds in question came under the clause which imposes a duty on medicinal drugs, roots, or leaves in a crude state; and that those articles were used and known as drugs. In support of this proposition, two witnesses testified that those articles were used as drugs, and known to druggists under the name by which those articles were now designated. On the other hand, several witnesses, who are commercial men, and in the habit of dealing in those articles, testified that they are universally called seeds, in the language of commerce, and are considered to be such.

The Judge in his charge inclined to the opinion that the articles came under the clause of the Act which provides that garden and other seeds not otherwise enumerated are free, and the jury, without leaving their seats, brought in a verdict for plaintiffs for $365, being the amount claimed.

INSURING AGENTS.

Fourth District Court—Insurance Decision. Thomas W. Woodland *vs.* Kellog & Clark.

In this case the plaintiff set forth in his petition that the defendants had in 1847, in their capacity of forwarding and commission merchants in New Orleans, shipped several lots of western produce for him, and had also (for him) insured such lots of produce in the Sun Mutual Insurance office of New York, whereof L. Mathews is agent in New Orleans. Petitioner further sets forth that premiums paid into said office on such insurances amounted to $950 95, and that by the charter of the company the insurer is entitled to a certificate of stock in the company to the extent of the premiums paid in. Petitioner averred that defendants, Kellog & Clark, although they had acted as his agents, in effecting the insurances above named, refused to give him an order for a certificate of stock in the insurance company, and withheld the same for their own benefit. The case came up for trial before Judge Strawbridge. The Judge decided that defendants deliver to plaintiff a certificate of stock in the insurance company above mentioned, to the amount of $150, and pay the costs.

LIABILITY OF COLLECTORS OF CUSTOMS.

In the United States District Court, Felix Brisac and Edward De Fontaine *vs.* C. W. Lawrence, Collector.

This was an action to recover the value of a case of goods, bonded at the custom-house, and not forthcoming when called for. The goods remained in the custom-house about a month, when the duty was paid on them, and a demand made for the delivery, but they could not be found. For the defence, it was contended that the Collector was not personally responsible for the negligence of his subordinates. Verdict for plaintiffs, $452, being the amount claimed.

COMMERCIAL CHRONICLE AND REVIEW.

THE MONEY MARKET—EXCHANGES—DIVIDENDS OF THE NEW YORK BANKS FOR LAST EIGHT YEARS—BANK DIVIDENDS OF NEW YORK, BOSTON, AND PHILADELPHIA COMPARED—ADVANCE IN BANKING PROFITS—CAUSES LIKELY TO RENDER MONEY CHEAP—CALIFORNIA GOLD DISCOVERIES—PREVIOUS DISCOVERIES OF GOLD IN THE SOUTHERN STATES—FINENESS OF GOLD—ADVANCE OF STOCKS—IMPORTANCE OF A BRANCH MINT IN NEW YORK AND CALIFORNIA—EFFECTS OF GOLD FLOWING OUT OF THE UNITED STATES—FAVORABLE CONDITION OF THE NATIONAL TREASURY—DEBT OF THE UNITED STATES—PRICES OF UNITED STATES STOCKS—CAPITAL INVESTED IN RAILROADS OF THE UNITED STATES—REVENUE OF THE PHILADELPHIA AND COLUMBIA RAILROAD—NEW YORK AND ERIE RAILROAD REVENUE, ETC.—RECEIPTS OF HARLEM AND ERIE RAILROADS COMPARED—NEW YORK AND PENNSYLVANIA CANAL TOLLS—PRODUCE ARRIVED AT TIDE-WATER VIA NEW YORK CANALS—UNITED STATES IMPORTS AND EXPORTS AND CUSTOMS DUTIES, ETC., ETC.

In our last number we pointed out some of the causes in operation to produce more ease in the money market. These have continued to affect favorably the market, and the rate of interest has declined as well on mercantile paper as "for call." Money is now had freely on stocks at *par* at 5 per cent per annum. The imports at the port of New York have continued to decline as compared with the same period of former years, while the exports continue to be considerable and exchanges gradually decline, the rates being now, for sterling bills, some 8 a 8½ per cent. The dividends of the New York banks, for the past year, have considerably exceeded those of former years, and average nearly 8 per cent per annum on a capital of $23,284,100. The details are as follow:—

DIVIDENDS OF THE NEW YORK BANKS FOR 1845-6-7-8.

		1845.		1846.		1847.		1848.	
BANKS.	Capital.	Div.	Amount.	Div.	Amount.	Div.	Amount.	Div.	Amount.
	Dollars.	*p. ct.*	*Dollars.*	*p. ct.*	*Dollars.*	*p. ct.*	*Dollars.*	*p. ct.*	*Dollars.*
Bank of New York§	1,000,000	4 3	80,000	4 4	80,000	5 5	100,000	5 5	100,000
Merchants'†	1,490,000	4 4	119,200	4 4	119,200	4 4	119,200	4 4	119,200
Mechanics'*	1,440,000	3½ 4	108,000	4 4	115,200	4 4	115,200	4 9	187,200
Union*	1,000,000	4 4	80,000	4 4	80,000	5 5	100,000	5 5	100,000
Bank of America‖	2,001,200	3 3	120,072	3 3½	130,078	3½ 3½	140,084	3½ 3½	140,084
City*	720,000	3½ 4	54,000	4 4	57,600	4 4	57,600	4 4	57,600
Phœnix‖	1,200,000	3 3	72,000	3 3	72,000	3 3	72,000	3 3	72,000
North River‖	655,000	3½ 3½	45,850	3½ 3½	45,850	3½ 4	45,850	4 4	52,400
Tradesmen's‖	400,000	5 5	40,000	5 5	40,000	5 10	60,000	5 5	40,000
Fulton*	600,000	5 5	60,000	5 5	60,000	5 5	60,000	5 5	60,000
Butch. & Drovers'‡	500,000	3½ 4	37,500	4 5	45,000	5 5	50,000	5 5	50,000
Mech. & Traders'*	200,000	3½ 3½	14,000	4 4	16,000	4½ 5	19,000	5 5	20,000
National§	750,000	3 3½	48,750	3½ 3½	52,500	3½ 4	55,750	4 4	59,000
Merchants' Exch.‖	750,000	3½ 3½	52,500	3½ 4	56,250	4 4	60,000	4 4	60,000
Leather Manufac‡	600,000	3½ 3½	42,000	3½ 3½	42,000	3½ 3½	42,000	3½ 3½	42,000
Seventh Ward.‖	500,000	3 3	30,000	3½ 3½	35,000	3½ 3½	35,000	3½ 4	37,500
State*	2,000,000	3 3	120,000	3 3	120,000	3 3	120,000	3 3½	130,000
Bank of Commerce‖	3,447,500	3 3	196,465	3 3	206,850	3 3½	223,871	3½ 3½	241,092
Mech. Association†	632,000	3½ 3½	44,240	4 4	50,460	. 3½	22,120	3½ 3½	44,240
Americ'n Exchange*	1,155,400	3 3	69,324	3 3	69,324	3½ 3½	80,878	3½ 4	86,655
Manhattan Co.‡	2,050,000	....	.....	. 3	61,500	.....	.....	3 3	122,000
Greenwich*	200,000	....	.....	....	.....	.....	.....	4 4	16,000
Total	23,284,100	6.31	1,433,907	7.09	1,554,912	7.00	1,572,173	7.82	1,836,971

* Dividend paid May and November. † Dividend paid June and December. ‡ Dividend paid February and August. § Dividend paid April and October. ‖ Dividend paid January and July.

The average dividend for the year 1844, on the same capital, was 6.13 per cent, and the amount, $1,373,600. The dividends this year are better by 1¾ per cent average and $463,371 in amount. The line of discounts of the New York banks in November, 1847, was high, and was gradually reduced under an advancing rate of interest, circumstances favorable for Bank profits. In Philadelphia, the divi-

dends on $5,635,880 capital has been $403,577, or nearly 7 per cent. The three cities of Boston, Philadelphia and New York compared, show rates as follow:—

BANK DIVIDENDS IN 1848.

	Capital.	Dividend.	Av. p. c.
Boston	$18,980,000	$1,428,350	8.50
New York	23,284,100	1,836,971	7.82
Philadelphia	5,635,880	403,573	7.02

In each of these cities there has been an advance in banking profits. In Boston the demand for capital for railroads has sustained the rate of interest, to the advantage of the banks. In Philadelphia, there has long been a desire to increase the banking capital, but the dominant party in the State Legislature uniformly opposed bills for that object. The late elections have effected a revolution, and the probability now is that many old banks will be resuscitated and new ones chartered.

For the coming year, from various operating causes, money is, however, likely to be cheap; the more so that the report of the Secretary of the Treasury has presented a satisfactory state of the finances, and removed fears that were entertained in relation to further loans by the government. The means of the Treasury are now quite adequate to its wants, with every prospect that the actual receipts of the customs will overrun the estimates. The exports of the country are large, and will in all probability continue so, involving a return of the proceeds in dutiable goods that must swell the revenues. A new and remarkable element has also made its appearance, to excite speculation and stimulate that desire for enterprise which has long lain dormant. We allude to the gold discoveries in the California regions. This is by no means the first gold excitement to which our markets have been exposed. In the year 1803, a negro found in North Carolina a lump of gold weighing 27 lbs., worth some $8,000, and since that time many mines have been discovered and worked in Virginia, North Carolina, South Carolina, Georgia, Alabama and Louisiana. In 1830, nearly as great an excitement prevailed in relation to them, as does now in reference to California. Persons from all quarters crowded into those regions, and the product was then estimated at $5,000,000 per annum. Gradually, however, hopes failed to be realized. Although the mines became *richer* as they were worked, the business was found in the long run less profitable than others. Hands were withdrawn to cotton fields. Companies dissolved, and the work was continued only by farmers and others, who dig gold only when otherwise unemployed. The census gave the number of smelting concerns at 156, and the product for 1839, $529,405. From 1824 down to 1848, about $14,000,000 has been realized from those mines. The new excitement in California is sustained by official reports, and by the arrival of considerable quantities of gold in this city of great purity, say 22 carats fine. A "carat" is a weight of 4 grains, used in weighing diamonds, but used in reference to gold, the mass is supposed to weigh 24 carats, 12 grains each, and "22 carats fine" means there are 22 carats of pure gold and 2 carats of alloy, and this 22 carats is about the fineness of our gold coin; or, as expressed in the mint term, 22 carats is 917 thousandths fine.

Already the prospect of great abundance of gold has promoted a desire to speculate; stocks have generally advanced, and more inquiry for real estate is apparent. Should the very necessary recommendations of the President and Secretary to

establish branch mints in California and New York be carried out, the products of the new mines will be made profitable to all interests. We have for many years contended for a mint in New York, not as a local but a national object; yet last year the bill was defeated through the inconceivably narrow-minded jealousy of certain members, who wanted one at Charleston, where gold never arrives, as an off-set to one in New York, where $20,000,000 per annum is sometimes received. If the gold is coined where it arrives, and passes into general circulation, every section of the Union is benefitted by the digging, because the rise of all property and wages will be general, and the full currency will overflow in all quarters to the general welfare. To prevent the establishment of a mint at the point demanded by commerce, through stupid sectional spleen, is wantonly to close the gate against a national benefit.

The effect of abundance of gold flowing out of the United States as a domestic product in exchange of the products of European industry, will be immensely to enrich the country. The example of Spain is sometimes held up as an instance of the ruinous influence of gold. They, however, *forbade its export.* They supposed that gold was a good *per se,* whereas its profit is in parting with it, and its benefit in those articles received in exchange. Freely exported, the labor of the world becomes tributary to our own. Should the California mines, in connection with those of Russia, cheapen gold as compared with silver and property, it may become necessary in the United States, where silver and gold are both standards, to revise the gold bills of 1834-37, the object of which was to adjust the relative value of the two metals. By the old law, gold was to silver as 16 to 1. This was supposed higher than the commercial value, leading to the export of gold in exchange for silver. The new value of 15 to 1 is supposed too low, leading to an export of silver. The abundance of gold will enhance this difficulty, and may ultimately lead to the abandonment of one of the standards.

Although this suddenly created gold fever has promoted speculation, money was daily becoming more abundant, and is now so ample in supply, under the influences indicated in our last number, that it is offered at 5 per cent upon stocks, and mercantile paper is freely done, although many heavy payments fall due in December. The highly favorable reports of the state of the national finances, as given by the Secretary of the Treasury, removing fears in relation to further loans, and showing a surplus from ordinary revenues, have tended to relieve the market. The total United States debt, including Treasury notes, is given at $65,804,234 56, and will not be increased. Stocks have continued to advance in the market, and are now, as compared with last year and some former dates, as follow:—

PRICES OF UNITED STATES STOCKS.

	5's, 1853.	6's, 1856.	6's, 1862.	6's, 1867.	6's, 1868.	Treas. Notes.
Dec. 1847	91 a 92	97½ a 98	98⅛ a 98¼	99 a 99½	.....	99⅛ a 99¼
Aug. 1848	93½ a 93¾	103 a 103¼	103¼ a 103½	104½ a 104¾	104½ a 104¾	104⅛ a 104¼
Dec. 1848	99½ a 100	103½ a 103⅝	107¼ a 107½	107⅝ a 107⅞	107¾ a 108⅛	107⅞ a 108⅛

These prices are all quoted without interest, and it will be observed the advance is 8½ a 8¾ per cent. The coupon stocks are mostly in advance for foreign investment, as affording the most ready transfer. A movement has been made in Congress to open a transfer office in New York, to facilitate the transactions. As, however, the option with the subscriber by law is to receive the stock with coupons attached, that mode of issue supersedes transfer books.

The following table shows the number of miles of railroads completed, and the capital expended annually in the United States:—

RAILROADS OF THE UNITED STATES.

Years.	Miles comp'd.	Capital.	Years.	Miles comp'd.	Capital.
1830	155	$2,510,000	1840	279½	$4,350,000
1831	17	1,426,966	1841	183½	5,100,000
1832	29	500,000	1842	277¾	6,613,654
1833	151	4,096,000	1843	509¾	11,090,000
1834	86½	2,838,638	1845	410	19,078,274
1835	287	11,750,000	1846	484	9,186,000
1836	316½	7,587,114	1847	205	2,410,000
1837	237	6,682,578			
1838	571¼	14,508,693	Total	5,740	$122,525,937
1839	240¼	12,736,000			

Many of these roads were State works, and constructed in the extravagant manner incident to public undertakings; and although a number were unsuccessful for a time, they have finally become profitable. The Michigan roads, which in the hands of the State were but a bill of expense, form now, in the hands of private capitalists, a profitable portion of the great northern chain which connects Boston via Ogdensburgh, Canada West, and Detroit, with Lake Michigan.

The Philadelphia and Columbia Railroad is 82 miles in length, and cost $4,204,969 96. From 1833 down to the close of 1844, its revenues had reached $3,638,690 41, and the expense $3,040,750 95, leaving $597,939 46 for eleven years' interest upon cost, or a tenth of 6 per cent; yet that work, in connection with a continuous line of roads, may, in opposition to the State canals, become a lucrative property. Its revenues, from its formation down to the 30th of November, 1848, have been annually as follows:—

REVENUES OF THE PHILADELPHIA AND COLUMBIA RAILROAD.

1833	$5,002 50	1839	$389,973 97	1845	$311,674 55
1834	40,240 32	1840	445,552 32	1846	333,608 42
1835	182,609 80	1841	411,536 96	1847	329,195 00
1836	260,657 83	1842	345,081 63	1848	330,620 00
1837	353,566 18	1843	369,496 08		
1838	390,636 32	1844	443,336 42	Total	4,943,788 38

Thus in sixteen years the whole revenues have been rather more than the prime cost of the whole work. The annual expenditure has been very heavy, however, embracing the outlay for State trucks.

The revenues of the Erie Railroad of New York, monthly for the past year, have been as follows, for 63 miles, as compared with the former year. At the close of the present fiscal year the road was opened to Port Jervis, 78 miles, and the road is now completed to Binghamton, 200 miles, having opened on the 27th. The revenues of the next year will be greatly enhanced by this extension. Those for the past two years have been as follows:—

NEW YORK AND ERIE RAILROAD REVENUE, 63 MILES.

	Freight.	Mails and passengers.	Total 1848.	Total 1847.	Increase.
December 1847	$11,497 40	$10,137 31	$21,624 87	$15,887 69	$5,737 18
January 1848	12,134 82	9,071 24	21,206 06	15,318 73	5,887 33
February "	13,116 79	7,631 80	20,748 59	17,938 16	2,810 43
March "	14,479 55	8,681 11	23,160 69	20,126 05	3,034 64
April "	14,843 15	10,955 73	25,798 88	19,127 39	6,671 49
May "	13,981 48	11,150 17	25,131 65	19,624 21	5,507 44
June "	14,212 81	11,452 06	25,664 87	21,346 87	4,318 00

NEW YORK AND ERIE RAILROAD REVENUE, 63 MILES—CONTINUED.

		Freight.	Mails and passengers.	Total 1848.	Total 1847.	Increase.
July	1848	14,020 55	13,152 17	27,272 72	23,791 84	3,380 88
August	"	14,354 32	13,300 97	27,655 29	24,055 60	3,628 69
September	"	14,063 74	12,079 30	26,143 04	23,924 84	2,218 20
October	"	16,365 42	12,624 56	28,989 98	24,343 97	4,746 01
November	"	18,167 13	10,852 66	29,019 79	23,038 01	5,981 81
Total.....		$171,237 16	$131,089 08	$302,326 43	$248,520 36	$53,941 90

It may be useful to compare the Harlem and Erie Railroads monthly for the two past years, as follows:—

	Harlem, 53 miles. Cost $2,874,892.		Erie, 63 miles. Cost $2,759,835.	
	1847.	1848.	1847.	1848.
December.....	$13,400	$20,789	$15,887 69	$21,624 87
January.....	13,688	21,331	15,318 73	21,206 06
February.....	12,597	19,012	17,938 16	20,748 59
March.....	14,917	20,172	20,126 05	23,160 69
April.....	16,563	22,436	19,127 39	25,798 88
May.....	19,105	28,479	19,624 21	25,131 65
June.....	23,016	29,598	21,348 87	25,664 87
July.....	28,637	32,414	23,791 84	27,172 72
August.....	30,050	33,284	24,056 60	27,655 29
September.....	25,986	31,441	23,924 84	26,143 04
Octobe.....	28,382	29,601	24,343 97	28,989 98
November.....	22,678	24,848	23,039 01	29,019 79
Total.....	$248,919	$313,845	$248,520 36	$302,326 24

These roads are nearly of a length, both communicating with the city of New York. It will be observed, however, that more than half of the Erie receipts are *freight*, the passenger travel from the interior of Orange county being small. On the other hand, the Harlem receipts are not more than 10 per cent from freight. Its chief revenues are from the city travel, in opposition to omnibusses below 27th street. Thus in 1835 the Harlem Railroad was 7¾ miles long, and the population of the city being 270,089, the receipts from passengers was $54,035; in 1840, the same length of road gave $102,000 revenue, the population of the city being 312,710. In 1845 the population was 371,102, and the Harlem revenues were $175,253, for 27 miles in operation. They are this year $313,845 for 53 miles, and a population not short of 450,000 souls. Thus in 1835, 5 persons contributed $1 to 8 miles of road; in 1840, 3 persons contributed $1 to 8 miles of road. Had the trade remained the same, the revenue of the road for 8 miles should this year have been $150,000 for 8 miles of road, leaving $150,000 for the income of 45 miles in Westchester. This result shows that the extension of the Harlem has not proportionably improved its business, while that of the Erie indicates an immense development of agricultural resources. The tolls of the two great lines of internal communication, the Erie Canal and the Pennsylvania canals, have for the past years been reported as follow:—

NEW YORK AND PENNSYLVANIA CANAL TOLLS.

	1843.	1844.	1845.	1846.	1847.	1848.
Erie canal.....	$2,082,145	$2,446,038	$2,646,117	$2,756,120	$3,635,380	$3,279,443
Penn. canals....	1,017,841	1,164,325	1,196,979	1,295,494	1,587,995	1,550,555
Total.....	$3,099,986	$3,610,363	$3,843,096	$4,051,614	$5,223,375	$4,829,998

Nothing can more forcibly represent the great prosperity of the country as a whole, than these large revenues, derived mostly from the transportation of the produce of the interior to the seaboard for sale abroad. The returns of both these works indicate a decline in revenues corresponding with the falling off in the export trade of the country through the lessened demands of Europe for food, consequent upon a good crop in 1847. The following table shows the quantity of some of the principal articles of produce left at tide-water from the commencement of navigation to the close, during the last seven years :—

PRODUCE ARRIVED AT TIDE-WATER VIA THE NEW YORK CANALS.

	1842.	1843.	1844.	1845.	1846.	1847.	1848.
Flour.....bbls.	1,577,555	2,073,708	2,222,204	2,517,250	3,063,441	3,952,972	3,121,655
Wheat.....bush.	928,347	827,346	1,262,249	1,620,033	2,950,636	4,143,830	3,081,458
Corn.....	366,111	186,016	17,861	35,803	1,610,149	6,053,845	2,887,937
Barley.....	522,993	543,996	818,872	1,137,917	1,427,953	1,523,020	1,551,328
Beef.....bbls.	21,437	47,465	50,000	67,699	45,600	71,266	63,288
Pork.....	79,235	63,777	63,646	45,154	80,093	76,179	88,301
Ashes.....	44,824	77,739	80,646	69,668	46,812	37,538	64,616
Butter.....lbs.	19,182,930	24,205,700	22,596,300	21,825,455	21,477,657	22,724,000	23,527,362
Lard.....				3,064,800	6,721,000	4,348,000	9,786,418
Cheese.....	19,004,613	24,336,260	26,674,500	27,542,861	35,560,118	40,844,000	42,947,329
Wool.....	3,355,148	6,216,400	7,672,300	9,504,039	8,856,376	12,044,000	8,729,407
Bacon.....	.....	.....	.....	1,631,700	4,000,500	4,902,000	8,221,850

The quantities of every article are far in excess of any year prior to 1847, and the articles of butter, lard, cheese and bacon, show the most extraordinary results. The weight of these four articles for the last year has been 84,482,949 lbs., having steadily increased from 38,187,543 lbs., which was the total in 1842. The largest proportion of this immense increase has been exported, swelling the sum of the export value of breadstuffs and provisions, as given in the above table, some $26,000,000. The corn trade has also become important, and will now, probably, even in years of good harvests, continue to increase in magnitude the more it becomes known as an article of food in Europe. The present fiscal year will present far greater results in the way of exports of breadstuffs. From the port of New York the following quantities have gone monthly abroad :—

	July.	August.	Sept.	Oct.	Nov.	Dec. 1 to 12.	Total.	Total '47.
Flour.....bbls.	27,518	44,998	106,739	155,784	233,681	33,561	502,391	739,267
Wheat.....bush.	18,824	19,173	155,103	159,953	180,378	22,654	547,085	1,191,604
Corn.....	289,080	465,697	1,060,953	516,500	604,326	149,136	3,065,692	1,408,352
Beef.....bbls.	1,180	2,001	1,538	1,229	9,380	4,947	20,275	14,908
Pork.....	4,604	7,356	6,109	3,186	5,993	1,492	28,740	27,179
Lard.....kegs	23,719	20,332	19,703	22,356	27,185	5,260	117,555	33,611

Last year, the largest proportion was shipped in July, under the accounts here of the high prices current in England in June. Those prices fell rapidly, and with them the exports fell off to a low figure. This year the reverse has been the case, and the disposition to ship has improved as the season advances.

The returns of the imports and exports of the United States, as indicated in the official returns of the Treasury department, indicate similar results, as follows :—

UNITED STATES IMPORTS AND EXPORTS AND CUSTOM DUTIES.

Years.	Breadstuffs and provisions.	Other domestic articles.	Foreign goods.	Total.	Imports.	Duties.
1843	$11,204,123	$66,589,660	$6,552,697	$84,346,480	$64,753,799	$7,046,844
1844	17,970,135	81,745,044	11,484,867	111,200,046	108,435,035	26,183,571
1845	16,743,421	82,556,355	15,346,830	114,646,606	117,254,564	27,528,112
1846	27,701,121	75,640,772	11,346,623	113,488,516	121,691,797	26,712,667
1847	68,701,921	81,935,543	8,011,158	158,684,622	146,545,638	23,747,864
1848	37,472,751	95,431,370	21,108,010	154,032,131	154,977,826	31,757,070

The export of breadstuffs in the last year, which has been one of good English

harvests, has been much less than in 1847, the year of "famine," but it greatly exceeds that of any prior year, and the whole shows a greatly increased and beneficial trade, particularly in corn and provisions. The export value of other domestic produce was not probably realized abroad, more particularly in relation to that which fell in price rapidly as the year advanced. Of the large amount under the head of foreign produce exported, a considerable portion was of the precious metals exported in the shape of foreign coin, through a pressure of extraordinary demand, growing out of political revolutions in Europe. This amount probably rivalled that imported in the previous year. The amount so exported was, however, nearly all supplied by immigration, and did not appear in the custom-house books.

The late European accounts are of a more encouraging aspect. Money continued abundant in the London market at 1½ a 2 per cent, and breadstuffs were heavy under the large arrivals from the United States and Europe. The manufacturing districts were more active, and the prospects more encouraging—so much so, that an advance of ¼d. per lb. had been effected in cotton, in face of the large crop and the disturbed condition of Europe. The greatest excitement prevails on the Continent in relation to the election of President in France, which was to have come off on the 10th December. The Prince Louis Bonaparte would, without doubt, be elected ; and his manifesto had given much satisfaction from its pacific tone and sound economic views, clearly recognizing the fact that the future welfare of France depended upon the free exercise of individual industry and removal of taxes, through the economy effected by the diminution of the army and government pensioners. Should order be restored, and industry resume its course, the prospect of the coming year is of great prosperity for the United States.

COMMERCIAL REGULATIONS.

IMPORTATION OF FOREIGN YARN INTO ENGLAND.

Several importations of yarn, composed of a mixture of raw silk and worsted yarn, have recently taken place from France, and application has been made for the delivery of the article, free of duty, the same being in a raw state, and to be manufactured in this country into shawls, on the grounds that it would assist the home manufacturers of shawls, and enable them to compete with the foreign manufacturers, which is to a great extent impracticable if the duty of goods manufactured, as required by the revenue officers, were levied on the raw material. The parties having been referred to the higher authorities in the matter, application was made to the Lords of the Treasury for the admission of a particular parcel of this mixture of silk and worsted yarn free of duty; setting forth the impetus which would be caused if the manufacturers of shawls in this country could have the benefit of the raw material from abroad free of duty, and their lordships granted permission for the delivery of that particular parcel free of duty, as requested. As the importation of this mixed yarn has continued to take place, and the Treasury orders having reference only to a parcel in particular, leaving subsequent importations of a similar character without the same amount of privilege, a further memorial has been made to their lordships for their orders to be given for the general and free admission of the yarn in future, without hindrance. It appears that, by the act 8th and 9th Vict., cap. 90, the following articles are admissible free of duty on importation into this country, namely, raw silk, thrown silk, not dyed and dyed, being organzine or crape, and yarn, camel or mohair, raw linen and raw worsted yarn, not dyed nor colored, and not being fit or proper for embroidering or other fancy purposes; and that this mixture is composed of silk and worsted thrown together, and in strictness liable, as goods manufactured, to the *ad valorem* duty of

10 per cent, but that the worsted yarn and raw silk, if imported separately, would each be legally admissible free of duty, and as the yarn is imported for the purpose of being manufactured into shawls in this country, and stated to be a matter of vast importance to the home manufacturers of those articles, the Lords of the Treasury have caused a communication to be made to the customs authorities, through Sir Charles Trevelyan, one of their lordship's secretaries, stating that, having had under consideration the memorial of the parties alluded to, he had been commanded by their lordships to authorize the commissioners of customs to admit the article in question, in this and other similar importations, free of duty. In communicating this order of the Lords of the Treasury to the principal officers of the customs revenue throughout the kingdom, for their information and government with respect to the future importations of yarn, they have received instructions to observe that the article referred to is composed of worsted and silk, thrown together for the purpose stated.

RATE OF DOCK DUES AT BRISTOL.

REDUCTION OF DOCK DUES AT BRISTOL, ENGLAND, COMMENCING NOVEMBER 1ST, 1848.

ON SHIPPING.

	Old rate per ton meas'nt.	New rate per ton meas'nt.
	s. *d.*	*s.* *d.*
From Africa, East and West Indies, the United States of America, and Mediterranean	3 0	1 0
From British Colonies in North America, Prussia, Russia, Sweden, and Spain	2 0	1 0
From Norway, Denmark, Germany, Holland, Flanders, France outside Gibraltar, Guernsey, and Jersey	1 0	0 6
From Ireland, Scotland, and Isle of Man	0 8	0 4
From English coasters	0 6	0 4

No dock dues on shipping *outwards*, and no charge for lying in port any length of time.

ON GOODS.

Dock dues on 530 articles abolished—only about 100 articles chargeable. Among those free of dock dues are cotton, wool, turpentine, flour, grain, bread, provisions of all kinds, &c., &c.

No dock dues, town dues, or any other port charge on goods exported.

No dues of any kind on imports from or exports to Ireland.

Foreign import wharfage reduced to a maximum rate of 6d. per ton—many articles much less.

Bristol is the nearest English port (having dock accommodations) to the Atlantic, which makes the *light dues* on shipping much less than at London or Liverpool. The pilotage also is low, and the British Channel is unrivalled for safety of navigation.

During the commercial depression of 1847, while houses of long standing and high repute were annihilated in other ports, not a single mercantile failure took place in Bristol, all stood their ground and paid their way without difficulty. The trade of the place is already increased, and with its freedom from vexatious charges, which counteracted its natural advantages, the increase will be rapid and continued.

Back freights of iron and coal are always to be had to the United States either in the port, or at Cardiff, or Newport, which are within a few hours sail.

PRIVATEERING IN THE UNITED STATES.

Dr. Wheaton takes credit to the United States for having, by treaty with Prussia, in 1785, agreed in no future war with that power to employ privateers. It appears, however, that the privateering system has been carried further by America than any other power, for, during the war with Great Britain, the legislature of New York passed an act which constituted every association of five or more persons desirous of embarking in the trade of privateering, should it comply with certain formalities, a body politic and corporate, and conferred on it the ordinary corporate powers.—*Polson's Principles of the Law of Nations.*

BRITISH REGULATIONS FOR STEAMERS.

It is required, by a recent statute, that on or before the last day of the present month the owners of all steam-vessels, whether they proceed by sea or not, transmit to the British Board of Trade two declarations of the sufficiency and good condition of the hull of

every steamer, and of the good condition of the machinery. By the 11th and 12th Victoria, cap. 81, it is provided that if the owners shall neglect to send the declarations, they shall forfeit and pay the sum of 10s. for every day's delay, unless such delay shall be accounted for to the satisfaction of the British Board of Trade.

JOURNAL OF BANKING, CURRENCY AND FINANCE.

CONDITION OF THE BANKS OF MASSACHUSETTS FROM 1837 TO 1848.

LIABILITIES.

Year.	No. Banks.	Capital.	Circulation.	Deposits.	Profits.	Total.
1837	129	$38,280,000	$7,233,905	$14,059,449	$1,514,535	$61,087,889
1838	120	34,630,000	5,519,210	9,621,217	1,897,333	51,667,760
1839	118	34,485,600	4,977,528	6,728,718	1,755,772	47,947,618
1840	115	33,750,000	6,221,274	8,636,923	2,067,095	50,675,292
1841	114	33,360,000	7,147,155	8,604,721	2,792,114	51,903,990
1842	111	32,631,060	6,048,223	7,456,504	2,331,475	48,467,161
1843	103	31,089,800	7,143,342	10,928,485	2,312,367	51,473,994
1844	103	30,020,000	9,526,070	13,031,106	1,989,132	54,566,308
1845	104	30,970,000	11,472,785	12,751,253	1,910,466	57,104,603
1846	105	31,160,000	11,454,086	10,360,648	2,504,136	55,478,870
1847	109	32,113,150	15,624,860	11,030,270	3,499,583	62,267,863
1848	112	32,985,000	11,473,827	8,564,985	3,737,435	56,761,427

CONDITION OF THE BANKS OF MASSACHUSETTS—CONTINUED.

RESOURCES.

Years.	Notes and drafts due.	Specie.	Real estate.	Total.	Ratio of cir. to specie.
1837.....	$58,414,182	$1,517,984	$1,155,723	$61,087,889	$4 77
1838.....	48,206,809	2,394,624	1,066,327	51,677,760	2 31
1839.....	44,967,750	1,838,273	1,141,595	47,947,618	2 71
1840.....	46,513,685	2,991,685	1,169,803	50,675,292	2 08
1841.....	47,553,961	3,111,838	1,238,191	51,903,990	2 30
1842.....	44,610,391	2,682,310	1,174,460	48,467,161	2 25
1843.....	42,993,292	7,298,816	1,181,886	51,473,994	0 98
1844.....	48,770,975	4,587,141	1,208,192	54,566,308	2 08
1845.....	52,648,730	3,357,904	1,097,969	57,104,603	3 42
1846.....	51,326,114	3,054,756	1,098,000	55,478,870	3 75
1847.....	57,260,939	3,943,974	1,062,950	57,267,863	3 96
1848.....	53,110,100	2,578,030	1,073,117	56,761,247	4 45

PUBLIC DEBT OF ILLINOIS.

EXTRACT FROM THE ADDRESS TO THE PEOPLE OF ILLINOIS BY THE CONVENTION OF 1848.

The principal part of the debt is $6,245,380; a two mill tax in 1848 will produce about $200,000. This tax will increase annually at the rate of about 7 per centum throughout the 25 years, reasoning from experience connected with western advancement. Taking these two propositions as the basis of our calculation, in 19 years this tax will yield $6,194,000, which leaves unpaid of the principal only $51,380. There is, however, already accrued $2,248,372 of interest, which will be increased to about $3,000,000 before this provision can be carried into operation. There will accrue during the 19 years $3,559,916, making the aggregate of interest due at that time $6,559,916, which, however, is subject to constant reduction from three-fifths of the mill and a half fund now raised, which in the 19 years amounts to $2,784,300, leaving interest then really due amounting to $3,775,316. To this add the unpaid portion of the principal, $51,380, and we have $3,826,996, which, without any great increase of interest, is yet to be discharged. To do this we now have the aggregate fund produced from the three-fifths of the mill and a half tax and from the two mill tax, which in the six following years will produce $4,358,700, which will liquidate the whole amount, being an excess of nearly $500,000. All this, too, without materially increasing our burdens, when viewed in connection with the proposed reduction of State expenses.

DEBT OF THE STATE OF NEW YORK.

Astor loan, at 5 per cent	$561,500 00
Bank fund "	348,107 00
Ithaca and Owego Railroad, 4½ per cent	287,700 00
" " " 5½ "	28,000 00
Canajoharie and Catskill Railroad, 5 per cent	200,000 00
New York and Erie Railroad, 4½ per cent	300,000 00
" " " 5½ "	1,600,000 00
" " " 6 "	1,100,000 00
Hudson and Berkshire Railroad, 5½ per cent	150,000 00
Indian annuities, 6 per cent	122,694 87
Temporary loans	1,441,838 95
General fund debt	$6,139,840 82

Erie & Champ'n C'ls, 7 p.c..	$136,378 52	Black River Canal, 5 p.c...	$1,127,706 23
Erie enlargement, 5 p. c ..	6,815,519 29	" " 6 " ...	436,293 77
" " 6 " ...	1,311,867 65	Genesee Valley C'l, 5 p. c.	2,797,379 82
" " 7 " ...	1,994,613 06	" " 6 "	287,243 56
Cayuga & Seneca C'l, 5 p. c.	87,000 00	" " 7 "	800,376 62
Chemung Canal, 5 p. cent.	437,292 23	Oneida Lake Canal, 5 p. c.	50,000 00
" " 6 "	72,160 11	Impr't of Oneida R'r, 5 p. c.	58,000 00
" " 7 "	139,148 24	" " 6 "	1,843 56
Crooked Lake Canal, 5 p. c.	120,000 00	" " 7 "	9,432 57
Chenango Canal, 5 p. cent.	27,030 00		
" " 6 "	28,362 00	Canal debt	$16,743,749 57
" " 7 "	6,102 34		

Delaware and Hudson Canal Company, 4½ per cent	$300,000 00
" " " 5 "	493,000 00
Auburn and Syracuse Railroad, 5 per cent	200,000 00
" Rochester Railroad, 5½ "	200,000 00
Long Island Railroad, 6 per cent	100,000 00
Schenectady and Troy Railroad, 6 per cent	100,000 00
Tonawanda Railroad, 5½ per cent	100,000 00
Tioga Coal, Iron Mining and Manufacturing Company, 5½ per cent.	70,000 00
Contingent debt	$1,563,000 00

RECAPITULATION.

General fund debt	$4,575,307 00	Interest	$244,966 85
Indian annuities and Temporary loans.	1,564,533 82	"	93,961 24
Canal debt	16,743,749 57	"	923,633 40
Contingent debt	1,563,000 00	"	81,500 00
Debt on 30th September, 1847	$24,446,590 39	"	$1,344,061 49
Redeemed on 1st January, 1848	841,107 00	"	43,055 35
Present debt, April, 1848	$23,605,483 39	"	$1,302,006 14

The interest on the contingent debt is provided for by the respective companies to whom the credit of the State was loaned. On the other debts the interest is raised by the Treasury.

TIME OF REDEMPTION.

1848	$1,379,480 00	1861	$3,782,974 23
1849	2,149,400 00	1862	1,800,000 00
1850	736,000 00	1864	587,700 00
1851	870,000 00	1865	348,000 00
1854	520,000 00	1867	100,000 00
1856	4,000,000 00	Uncertain,	2,130,223 82
1858	3,358,605 34		
1859	350,000 00	Total	$23,605,483 39
1860	1,493,100 00		

The receipts from the State canals for the year ending 30th Sept. were.	$3,473,486 60
The repairs and expenses	641,652 08
Leaving a surplus of	$2,831,834 52
Applied to expenses of government	$200,000 00
To pay interest and principal of canal debt	1,300,000 00
" " " general fund debt	350,000 00
Remainder for the completion of canals	981,834 52
Total	$2,831,834 52

A large sinking fund, and the daily increasing income from the State canals and other improvements, added to the many other resources of this flourishing State, provide for the most punctual payment of the interest on this debt, and for its gradual extinguishment.

NEW YORK CITY DEBT.

Public building stock, redeemable		6th May, 1856,	5	per cent	$515,000 00
Fire loan stock,	"	16th Jan., 1851,	5	"	500,000 00
Fire indemnity stock	"	10th May, 1861,	5	"	375,088 00
City stock of 1820 & 1829,	"	in 1850,	5	"	250,000 00
Croton water stock,	"	in 1890,	5	"	385,000 00
Temporary water loan,	"	before 1850,	5	"	701,423 00
Water loan stock,	"	1st Feb., 1852,	7	"	90,857 00
"	"	1st Aug., 1852,	7	"	799,350 00
"	"	1st Feb., 1857,	7	"	989,488 00
"	"	1st Jan., 1858,	5	"	3,000,000 00
"	"	1st Jan., 1860,	5	"	2,500,000 00
"	"	1st Nov., 1870,	5	"	3,000,000 00
"	"	1st Nov., 1880,	5	"	1,445,577 00
Total					$14,551,783 00
Less held by the commissioners of the sinking fund					2,541,432 24
Debt on the 1st January, 1848					$12,010,350 76
The debt was, on the 1st January, 1847					12,257,906 89
Decrease					$247,556 13

ASSOCIATED CAPITAL AND ACTION.

What is said by the New York Sunday Dispatch in the paragraph below, is unquestionably correct, as to the results of combination for certain purposes. The Dispatch says:—

A single man can erect a hovel which will barely shelter him. A number of men, combining their efforts, can build a comfortable dwelling; and we have only to extend the principle of association to produce vast palaces, suitable for every purpose of social life. Odd Fellows' Hall affords a magnificent place of meeting for thousands of Odd Fellows. We have but to carry the principle a little further, and the families, the wives and children of Odd Fellows could have for drawing-rooms, parlors and chambers, edifices as spacious and convenient, furnished with luxury and adorned with art. The splendid refectory might furnish meals for hundreds of our families, and our whole social life might thus be brought into conditions of beauty and harmony. We are surrounded by the finest examples of the benefits of associated capital, skill and labor. By these means, instead of each man making his own path through the forest, we have turnpike roads, paved streets and railroads. Instead of each man paddling about our rivers in his own canoe, we have steamers that carry with unequaled speed, comfort, and luxury, a thousand passengers. By means of association, we have vast hotels, splendid public buildings, and magnificent churches. There is, apparently, but one step more for association to take—it is the organization of industry upon the same principles, and the introduction of splendor and luxury into our every-day life, as well as into our amusements and occasional pursuits. There is more labor and wealth wasted every year, in the present order of

things, than would suffice to make us all tolerably rich. There is an infinite waste in trying to get along without association. It is just such waste as there would be if we should burn all the steamboats, and a hundred thousand people should paddle up and down the Hudson, each in his own canoe. To be sure, such a mode of navigation would be very independent, and secure men from coming in contact with disagreeable persons, and all that; but as we have tried the steamboat and got along pretty well, we may be excused for preferring it.

BRITISH BANKING RETURNS.

The *London Bankers' Magazine* for December, 1848, gives the following summary of the weekly returns of the note circulation of the banks of issue in England, Ireland, and Scotland:—

SUMMARY OF THE ENGLISH RETURNS.

Banks.	Fixed issues.	October 14.	October 21.	October 28.	November 4.
184 Private.....	£4,822,488	£3,938,548	£3,947,191	£3,918,126	£3,870,614
66 Joint-stock.	3,409,987	3,854,741	2,880,828	2,859,006	2,820,477
Total.....	£8,232,475	£6,793,289	£6,828,019	£6,777,132	£6,691,091

Average weekly circulation of these banks for the month ending November 4:—

Private banks.....	£3,918,619
Joint-stock banks.....	2,853,763
Average weekly circulation of private and joint-stock banks ending as above.	£6,772,382

On a comparison of the above with the returns for the month ending 7th October last, it shows—

An increase in the notes of private banks of.....	£237,025
" " joint-stock banks of.....	187,014
Total increase on the month.....	£424,039

And, as compared with the month ending the 6th November, 1847, it shows—

A decrease in the notes of private banks of.....	£380,729
" " joint-stock banks of.....	230,348
Total decrease, as compared with the same period of last year.....	£611,077

In the *Banking Almanac* for 1849 the fixed issues of the several banks at the present time is stated to be as follows:—

Fixed issue of private banks at October, 1848.....	£4,822,488
" joint-stock banks "	3,409,987
Amount of the fixed issues.....	£8,232,475

The following appears to be the comparative state of the circulation, with reference to the fixed issues:—

The private banks are below their fixed issue.....	£903,869
The joint-stock banks are below their fixed issue.....	556,224
Total below the fixed issue.....	£1,469,093

SUMMARY OF IRISH AND SCOTCH RETURNS TO NOVEMBER 4.

The returns of circulation of the Irish and Scotch banks for the four weeks ending 4th November last, when added together, give the following as the average weekly circulation of these banks during the past month:—

Average circulation of the Irish banks.....	£5,026,717
" " " Scotch banks.....	3,306,273
Total average circulation of these banks for the past month.....	£8,332,990

On comparing these amounts with the returns for the month ending 7th October last, they show—

Increase in the circulation of Irish banks	£520,296
" " Scotch banks	169,757
Total increase last month	£690,053

And, as compared with the month ending 6th November, 1847, they show—

Decrease in the circulation of Irish banks	£492,597
" " Scotch banks	300,445
Total decrease on the year	£793,042

The fixed issues of the Irish and Scotch banks at the present time are given in the *Banking Almanac* for 1849, as follows:—

8 Banks in Ireland allowed to issue	£6,354,494
18 " Scotland " "	3,087,209
26 Banks in all allowed to issue	£9,441,703

The following appears, therefore, to be the comparative state of the circulation:—

Irish banks are below their fixed issue	£1,327,777
Scotch banks are above their fixed issue	219,064
Total below the fixed issue	£1,108,713

The amounts of gold and silver held at the head offices of the several banks during the past month has been as follows:—

Gold and silver held by the Irish banks	£1,494,899
" " " Scotch banks	997,740
Total of gold and silver coin	£2,492,639

Being an increase of £74,559 on the part of the Scotch banks, and an increase of £2,747 on the part of the Irish banks on the several amounts held by them during the preceding month.

RHODE ISLAND BILLS OF CREDIT.

The earliest emission of bills of credit, to take the place of gold and silver in Rhode Island, was made in 1710. The colony had been at great expense in furnishing supplies for the war with France, in which the mother country had been involved ever since the accession of William and Mary to the throne. Finding the resources of the treasury inadequate to the exigency, the General Assembly, following the example already set by Massachusetts twenty years before, adopted the fatal though perhaps inevitable expedient of issuing bills of credit, and thus delaying the actual payment of debts which had been incurred. The first emission did not exceed the sum of five thousand pounds; but this mode of postponing to the future the necessities of the present having been once invented, was found to be too convenient to be readily abandoned. Other emissions followed in rapid succession, until, in 1749, after the lapse of nearly forty years, the bills which had been issued amounted to not less than three hundred and thirty-five thousand three hundred pounds, of which one hundred and thirty-five thousand pounds were still standing against the treasury, in one form or another; and these constituted the depreciated and almost valueless currency of the colony. Every occasion of public expenditure furnished an excuse for the issue of a new *bank;* and though merchants were everywhere suffering from the policy, and frequently petitioned against it, and most intelligent persons were satisfied of its ruinous tendency, yet so captivating to the people is always the idea of plentiful money, and so clamorous were now the multitude of those who were largely in debt, that numbers of the assembly constantly yielded to the popular will, and in some instances, it is said, actually legislated to meet their own private necessities. The currency which was thus created tended in no equivocal manner to impair the commercial contracts, and to prostrate the commercial honor of the whole community; while it perpetually offered to the reckless and the profligate an opportunity, too tempting to be resisted, to counterfeit the bills of the colony—a crime of frequent occurrence, though punished in Rhode Island

with cropping the ears and branding the forehead of the offender, together with the confiscation of his entire estate. Such is a brief outline of the subject upon which the two political parties in Rhode Island were accustomed to divide during the period of which we are now writing.—*Sparks' American Biography.*

ASSAY OF CALIFORNIA GOLD AT THE UNITED STATES MINT.

The readers of the "*Merchants' Magazine*" are referred to an article on the "California Gold Region" in the body of the present number, which furnishes a condensed view of all the facts brought to light by the recent discovery of the precious metal in that region. It will be seen below, by the official letter of R. M. PATTERSON, Esq., the Director of the United States Mint at Philadelphia, to the Secretary of the Treasury, that $36,492 worth of the California gold has been assayed, with the most satisfactory results. The purity is extraordinary, the gold dust yielding 98⅞ pure gold; the melted gold yielding within 6-1000, or $6 in the $1,000, of the mint standard of 900. This far exceeds the expectations of the most sanguine, and places the extraordinary purity of the gold beyond controversy.

MINT OF THE UNITED STATES,
Philadelphia, December 11, 1848.

SIR:—On the 8th instant we received, as I have already had the honor to inform you, the first deposit of gold from California. It was deposited by Mr. David Carter, who brought it from San Francisco by the isthmus route. It weighed 1,804.59 ounces troy; of which 1,423.80 was from the lower surface mines, and 380.79 from those at Feather River. On the 9th instant another deposit was sent by the Secretary of War, which weighed 228 ounces.

The gold was of two sorts in external character, though apparently not different as to quality. The first, from the "dry-diggings," was in grains which averaged from one to two pennyweights; the other variety, from the swamps or margins of the streams, being in small flat spangles, of which, on an average, it would take six or seven to weigh one grain. Of these by far the larger part of the deposits was composed.

The gold was melted in six parcels, and the loss by melting, due to the earthy and oxidable matter which disappears in this operation, averaged about 2½ per cent of the original weight. The loss thus reported is moderate, and shows that the gold had been carefully washed.

Assays of the melted gold were made with great care, and the results showed a variation in fineness from 892 to 897 thousandths; the average of the whole being 894. This is slightly below the standard fineness, which is 900.

The average value per ounce of the bullion, before melting, is $18 05½; that of the same in bars, after melting, is $18 50.

The whole value of the gold in the two deposits was $36,492, besides a few ounces reserved in the native state for the Secretary of War at his request.

Very respectfully, your faithful servant, R. M. PATTERSON, *Director.*

Hon. ROBERT J. WALKER, *Sec'y of the Treasury.*

NOTICE OF REDEMPTION OF TREASURY NOTES.

TREASURY DEPARTMENT, *December 2d*, 1848.

Notice is hereby given, under the section of the act of January 28th, 1847, of the readiness of this Department to redeem the Treasury Notes issued by authority of that act, whenever they shall respectively reach their maturity. Such Treasury Notes shall be entitled to carry interest until maturity, after which interest thereon will cease.

Holders of such Treasury Notes may, under the provisions of the 13th section of the act, at any time fund them in six per cent stock of the United States, transferable on the books of the Treasury, and reimbursable at any time after the last day of December, 1867, by presenting such notes at the Treasury to either of the assistant Treasurers of the United States, or the Collector of Baltimore.

Holders of such Treasury Notes as wish them redeemed in cash at their maturity, will transmit them to the First Auditor of the Treasury for settlement, indicating the assistant Treasurer, upon whom a draft for the amount due thereon will be most convenient.

R. J. WALKER, *Secretary of the Treasury.*

THE MODEL BANKER AND BANKER'S CLERK.

The Brothers Harper have re-produced from the English press an amusing, if not very instructive work, entitled the "*Model Men, Modelled by Horace Mayhew*," which embraces the model men in most of the walks and relations of every-day life. The portraits, we take it, are drawn from life, as exhibited in the dwellings, streets, and marts of London. As a specimen of the author's capacity at modelling, we take his Model Banker and Banker's Clerk, the most appropriate (if not the most accurate models) for the pages of the *Merchants' Magazine*:—

The Model Banker is educated at Eton, and makes love to lords. They borrow his money, and laugh at him, as "a toady." He enters the banking-house at twenty-one, and looks upon the clerks as servants—as breathing copying machines. He belongs to all sorts of clubs. He is a great authority upon wines, horses, and women. He keeps his yacht, and never stops in town after the Opera. He walks through the city as if it belonged to him. He is great in jewelry, and very particular about his riding-whips. He wears in winter white cords and buckskin gloves, and subscribes to the nearest "hounds." His wristbands show an inch and a half. He marries a baronet's daughter, and talks nothing but the Blue Book ever afterwards. He has a house in Belgravia, and a seat in the North. He has noisy luncheons in the "parlor." His dinners elicit a little paragraph of praise from the *Morning Post*. His name, too, is generally amongst the "fashionables whom we observed last night at her Majesty's Theatre." He has always a particular engagement at the West-end at two, at which hour his bay cob invariably calls for him. His printed charities are very extensive—one sum always for himself, another for the Co. He is very nervous during panics, and when there is a run upon the bank, it is always owing to "the pressure of the times." He pays his creditors half a crown in the pound, and lives on £3,000 a year, "settled on his wife." We never knew a Model Banker fall yet, that his fall was not agreeably softened by a snug little property "settled upon his wife." From this we infer that the Model Banker is a most rigid cultivator of the matrimonial virtues, and if he forgets occasionally what he owes to himself and to others, he remembers to a nicety what is due to his wife. It is only the system of Double Entry applied to Banking.

The Banker's Clerk is born to a high stool. He is taught vulgar fractions, patience, and morals, in a suburban school. At fourteen he shoulders the office-quill. He copies letters from morning till night, but has no salary. He is to be "remembered at Christmas." He is out in all weathers. At twenty he is impervious to rain, snow, and sunshine. At last he gets £40 per annum. Out of that revenue he pays £5 a year to the "Guarantee Fund." He walks five miles to business, and five miles home. He never stirs out without his umbrella. He never exceeds twenty minutes for his dinner. He drinks water; "beer gets into his head." He has three holidays a year—Christmas day and Good Friday being two of them—and then walks to the office and back again to pass away the time. He runs about all day with a big chain round his waist, and a gouty bill-book in his breast-pocket. He marries, and asks for an increase of salary. He is told "the house can do without him." He reviews every day a long army of ledgers, and has to "write up" the customer's books before he leaves. He reaches home at nine o'clock, and falls asleep over the yesterday's paper, borrowed from the public house. He reaches £80 a year. He fancies his fortune is made; but small boots and shoes, and large school bills, stop him on the high road to independence, and bring him nearer to Levi than Rothschild. He tries to get "evening employment," but his eyes fail him. He grows old, and learns that "the firm never pensions." One morning his stool is unoccupied, and a subscription is made amongst his old companions to pay the expenses of his funeral. So much for clerkship!

THE PAWNBROKER'S WINDOW.

There is more philosophy of life to be learned at a pawnbroker's window than in all the libraries in the world. The maxims and dogmas, which the wise men have chronicled, disturb the mind for a moment, as the breeze ruffles the surface of the deep, still stream, and passes away; but there is something in the melancholy grouping of a pawnbroker's window which, like a record of ruin, sinks into the heart. The household goods, the cherished relics, the sacred possessions affection bestowed, or eyes now closed in death had once looked upon as their own, are here, as it were, profaned; the associations of dear old times are here violated; the family hearth is here outraged; the ties of love, kindred,

rank, all that the heart clings to, are broken here. It is a sad picture; for, in spite of all the glittering show, its associations are sombre. There hangs the watch, the old chased repeater, that hung above the head of a dying parent when bestowing his trembling blessing on the poor outcast who parted with it for bread; the widow's wedding ring is there, the last and dearest of all her possessions; the trinket, the pledge of love of one now dead, the only relic of the heart's fondest memories; silver that graced the holiday feast; the gilt-framed miniature that used to hang over the quiet mantel-shelf; the flute, the favorite of a dead son, surrendered by a starving mother to procure food for her remaining offspring; the locket that held a father's hair; or, gloomier still, the dress, the very covering of the poor, waving like the flag of wretchedness and misery. It is a strange, sad sight to those who feel aright. There are more touching memorials to be seen at a pawnbroker's window than in all the monuments in Westminster Abbey.—*Newspaper par.*

RAILROAD, CANAL, AND STEAMBOAT STATISTICS.

THE VERMONT CENTRAL RAILROAD.

The Directors' report of this road was made July 1, 1848. It shows what had been accomplished at that time. The following is a brief abstract of the report:—

The Connecticut River Division.—This division extends from Windsor to the mouth of White River—15 miles. It is entirely graded, and the bridges are built ready for rails.

The White River Division.—This division extends from a point opposite West Lebanon, N. H., to Northfield—52¾ miles. It has been graded, and the rails laid, so that the road is in running order to Roxbury, within 10 miles of the depot at Northfield.

Winooski Division.—This division extends from Northfield to Burlington—50 miles. The amount expended up to August 1st, 1848, was $514,321 42. The estimated cost of putting the road in running order to Montpelier is about $150,000; and from Montpelier to Waterbury is $180,000.

The road from White River village to Bethel, 25 miles, was opened for use on the 26th of June, 1848. The gross receipts for passengers and freight from that date to the 20th inst., will appear from the following statement:—

WEEKLY RECEIPTS OF VERMONT CENTRAL RAILROAD, 1848.

	Passengers.	Freight.	Total.
June 26th to June 30th	$200 92	.....	$200 92
Week ending July 8, (excursion 4th)	615 93	$132 49	748 42
" " 15	447 78	267 32	715 10
" " 22	404 63	481 07	885 70
" " 29	541 87	461 66	1,003 53
" Aug. 5	651 79	456 17	1,007 96
" " 13	757 79	303 00	1,140 79
" " 19	867 78	308 00	1,174 78
" " 26	987 39	395 00	1,382 39
Total	$5,475 88	$2,883 17	$8,359 59

CHEAP RAILWAY FARES IN ENGLAND.

If governments grant monopolies, and in the establishment of railroad routes it seems to be a necessary evil, they should also establish regulations to protect the public from unreasonable demands. The British government, it will be seen by the following paragraph, have adopted an order which will commend itself to the friends of justice and humanity everywhere:—

By order of the Commissioners of Railways, upwards of 170 cheap or third class trains now run daily on the railways of the United Kingdom, extending over more than 4,000 miles, the object of the legislature being to secure to the poorer classes the means of travelling by railway at moderate fares, and in carriages protected from the weather. By the act it is incumbent upon every railway company to run one such train every day, at 1d. per mile, and a speed of at least 12 miles an hour. Children under three years of age

are to be taken without charge, and under 12 years, for half the charge for an adult. Any neglect of these regulations subjects the companies to penalties, and deprives them of the benefit of the remission of the passenger tax, which is allowed on all cheap trains.

STATISTICS OF BRITISH RAILROAD LEGISLATION.

The following tables, derived from official sources, will give a concise and pretty accurate history of the progress and extent of the railroad movement in the United Kingdom. From 1826 to 1847, inclusive, 889 acts authorizing railroads were passed, with a capital of £326,643,217. Amount nominally raised or called up to the end of 1847, £166,938,241; amount of calls to the end of September, 1848, £28,378,865=£195,317,106. Liabilities still resting on the public in respect of railway projects not completed, £131,326,111.

AMOUNT OF MONEY AUTHORIZED TO BE RAISED, AND TOTAL NUMBER OF ACTS PASSED FROM 1826 TO 1847.

Years.	England and Wales.	Scotland.	Ireland.	Total.	Total acts passed.
1826	£920,600	£167,053	£600,000	£1,687,653	11
1827	126,600	125,008	.....	251,608	6
1828	424,000	.....	.....	424,000	8
1829	769,250	134,875	.....	904,125	9
1830	867,500	66,150	.....	933,650	8
1831	1,458,875	71,000	270,000	1,799,875	9
1832	557,685	.....	10,000	567,685	8
1833	5,505,333	20,000	.....	5,525,333	10
1834	2,304,000	8,053	.....	2,312,053	10
1835	4,588,333	195,800	28,700	4,812,833	16
1836	20,989,998	485,000	1,400,000	22,874,998	31
1837	10,654,166	1,435,633	1,464,000	13,553,793	27
1838	792,000	1,304,198	.....	2,096,198	10
1839	6,181,896	273,901	.....	6,455,797	16
1840	2,384,332	106,700	.....	2,491,032	16
1841	3,024,353	386,333	.....	3,410,686	15
1842	4,538,042	776,600	.....	5,311,642	16
1843	3,410,284	430,666	20,400	3,861,350	21
1844	15,599,781	1,684,499	1,733,390	19,017,580	48
1845	42,493,112	8,564,929	10,299,332	61,357,373	120
1846	101,592,696	16,642,563	10,751,455	128,986,714	227
1847	27,540,783	8,429,758	2,036,692	38,007,233	196
Total	£256,730,619	£41,308,719	£28,613,897	£326,643,217	889

LENGTH OF RAILWAY AUTHORIZED TO BE CONSTRUCTED.

Years.	England and Wales.	Scotland.	Ireland.	Total.
1826–1835 .....miles	815	76	36	927
1836	875	36	68	979
1837	338	84	104	526
1838	3	46	....	49
1839	50	...	....	50
1840	2	9	....	11
1841	5	9	....	14
1842	43	...	....	43
1843	41	4	....	45
1844	642	68	122	832
1845	1,665	436	644	2,745
1846	3,348	851	710	4,909
1847	969	253	129	1,351
Total	8,796	1,872	1,813	12,481

BRITISH RAILROAD CALLS, CAPITAL, AND DIVIDENDS.

The "*Companion to the British Almanac*" for 1849 furnishes the following statistics and statements touching railway prices, calls, capital, dividends, &c.:—

There has now, for three years, been an almost uninterrupted declension in the market value of railway property. It was dreaded by many cautious persons in 1845 that the then existing recklessness would bring about disastrous results. The disturbed state of political and commercial matters has undoubtedly contributed to this end; but it is indisputable that the depreciation is mainly due to the excessive absorption of capital in one particular species of enterprise; the much dreaded calls have drained away money which is legitimately required in other quarters. It may be useful to take twelve of the older companies, and compare the prices of their shares in one particular week of four successive years—say the first week in August, which was about the height of the fever in 1845; we give also the prices for a later date. As three of the companies have each called up an additional instalment on their shares within this period, we will adjust the prices to "paid-up" shares, to render the comparison a fair one:—

	1845. August.	1846. August.	1847. August.	1848. August.	1848. Oct. 22.
London and North-Western	£252	£210	£170	£114	£100
Great-Western	246	165	125	92	77
South-Western	82	75	60	41	36
Midland	180	140	120	94	66
South-Eastern	47	40	33	24	21
Bristol and Exeter	130	110	100	67	60
Lancashire and Yorkshire	230	135	110	94	65
Sheffield and Manchester	135	110	90	60	40
Brighton	80	63	50	28	25
York and Berwick	55	42	36	30	21
York and North-Midland	112	97	80	63	42
Edinburgh and Glasgow	87	73	60	37	36

The average fall in the twelve companies has been 64 per cent in 3¼ years. Prices have since rallied a little. In some of the new companies, and also in respect to some of the new shares in the older companies, the depreciation is still more marked. Some of the shares are now (October, 1848,) worth less than nothing—they could not be given away; no one would accept them as a gift, unless accompanied by a bonus in money to induce the acceptance. This occurs where there are still further "calls" to be made on the shares; the liability to which rests with those in whose names the shares are registered. The calls made on the stock of the new companies, and on the various kinds of new shares in the old companies, have been excessively heavy in the last two years. Frequently the amount has reached a million sterling in a single week. In the first ten months (January to October, inclusive,) of 1847 the amount so called up was £31,955,355 for British railways, and £5,644,000 for British shares in foreign railways—making in the whole £37,599,355. In the first ten months of 1848 the calls amounted to £26,850,709 for British railways, and £3,102,071 for British shares in foreign railways—making in the whole £29,952,770. Bringing in the calls for the last two months of 1847, we find that in twenty-two months (January 1, 1847, to October 30, 1848,) there has been paid by British shareholders no less than £75,000,000 to the railway companies, or nearly £800,000 per week. Nearly the whole of this has been expended, besides loans on debenture. The capital invested in these undertakings has reached a most astounding amount. The following, in round numbers, represents the share capital and the borrowing powers of all the British railway companies, according to the acts of Parliament which sanction them:—

	Acts.			Acts.	
1801 to 1840	299	£69,000,000	1847	184	£35,000,000
1841 to 1844	113	18,000,000	1848	83	18,000,000
1845	120	59,000,000			
1846	272	121,000,000		1,071	£320,000,000

As nearly all railways have cost more than the Parliamentary estimates, the share capital and the borrowing powers will together more nearly represent the probable total outlay, than the share capital alone. There has been a feature in the railway system within the last twelve months which has been instrumental in depressing the market value of the shares, namely, the reduced rate of dividends paid by the leading companies. This

reduction has been brought about by four different causes:—1. The disturbed state of political and commercial affairs has considerably lessened the total amount of traffic in the country, both in passengers and merchandise. 2. By the opening of new and competing lines into particular districts, the portion of traffic which now falls to the share of the older companies is less than formerly. 3. Some of the old companies have leased or purchased particular lines on terms more lavish than the traffic has been found to warrant. 4. Some of the companies have issued new shares to pay off loans or debentures, which shares, by receiving dividends pro rata with the older shares, lessen the rate per cent receivable on each. From one or more of these causes combined, most of the old companies have been compelled to reduce the rate of dividend. The greatest of them all, the London and North-Western, has suffered a severe fall in this respect. In December, 1846, the dividend was at the rate of 10 per cent per annum; in June, 1847, 9 per cent; in December, 1847, 8 per cent; and in June, 1848, 7 per cent. The fall in the Great-Western has been from 8 to 7 per cent; in the South-Western, from 9 to 6; in the Midland, from 7 to 6; in the York and Berwick, from 9 to 8; in the York and North-Midland, from 10 to 8.

OSWEGO CANAL EXPORTS AND IMPORTS.

The imports of a few leading articles from the opening of navigation to December 1st, for three seasons, have been, says the "Oswego Commercial Times," as follows:—

	1846.	1847.	1848.
Flour.....bbls.	67,506	147,786	87,017
Wkeat.....bush.	2,305,020	3,140,537	3,597,308
Corn.....	319,119	914,430	361,405
Lumber.....feet	25,696,651	32,390,845	34,055,326

Since the close of the export season by the St. Lawrence, the Canadian flour has mostly come this way, which makes the receipts of flour at this port during the month of November about equal to the entire previous receipts of the season of navigation. A large portion of the flour received here during the season now drawing to a close has been entered as Canadian under the Warehousing Law. There is some flour and a number of cargoes of wheat to come in.

SALT.—The exports of salt from the opening of navigation to December 1st, for three seasons, have been as follows:—

	1846.	1847.	1848.
Barrels.....	285,238	341,324	399,683
Sacks.....	27,192	43,492	83,231

The exports for December will carry the total number of barrels shipped in the season of 1848 up to about 410,000, showing a large increase upon the exports of any previous season.

THE THREE GREAT RAILROADS OF ENGLAND.

We learn from the English papers that it is proposed to amalgamate the London and North-Western, Great-Western, and South-Western Railroads, an arrangement which will, if effected, create the most powerful combination ever known in Great Britain, and bring to one undertaking an amount of capital larger than any of her great national undertakings. The total amount of the capital of the amalgamated company will be £42,371,230, divided as under:—London and North-Western capital, raised by shares, £14,044,573; by loans, £9,186,672; total, £23,231,245. The shares in this company are 10,184 original shares, of £100 each, which are paid up; 55,000 London and Birmingham £25 shares, upon which £22 have been paid; 168,380 new quarter (£25) shares, upon which £7 only have been paid; 66,879 fifths, or £20 shares, on which £18 have still to be paid; 12,090 London and Manchester £40 shares, £25 paid and £15 due; 30,000 Manchester and Birmingham £10 shares, marked A, upon which £9 are paid; 60,000 ditto, marked B, £9 paid; 70,000 marked C, £1 paid. Consequently, the company have power to make calls to the amount of £5,251,012.

The capital of the Great-Western is £11,457,277; £6,478,221 being raised by shares, and £4,979,056 by loan. The share capital is divided as under:—25,000 shares of £100 each, £90 paid up; 28,000 £50 shares, all paid; 93,000 £25 shares, upon which £4 are still due; 37,500 £20 shares, paid up; and 69,700 new £17 shares, on which £13 have been paid. This company has still power to make calls to the amount of £761,400.

The South-Western Company has raised from shares £6,075,387, and by loans

£1,609,350, or a total of £7,684,737. The South-Western shares may be classed as under:—25,840 £50 paid up shares; 60,000 new £50 shares, upon which £42 10s. have been paid; 46,500 £40 shares, upon which £34 have been paid; 9,266 £50 consolidated tenths, paid up; 12,000 £40 consolidated tenths, paid up; 120,560 £16 13s. 4d. thirds, upon which £13 6s. 8d. have been paid; 147,766 new 7 per cent scrip, upon which £1 13s. 4d. only have been called up. This company has, therefore, power to make calls to the amount of £2,815,798 6s. 8d.

The amalgamated companies will, by their present powers, be entitled to call up, within the time allowed by the act for doing so, the sum of £8,819,201 6s. 8d. The entire weekly receipt of the three companies, should they not exceed their present average, will be £70,000 per week, or £3,640,000 per annum. The number of miles of railway over which the companies will have control will be nearly 2,000, upwards of 1,000 of which they will have in their absolute possession. The great company will, by means of their own and other lines, in which they are beneficially interested, have the entire traffic from Plymouth to Perth.

COMMERCIAL STATISTICS.

COMPARISON OF THE BUSINESS OF THE UPPER LAKE PORTS ABOVE BUFFALO.

No benevolent mind can fail to take pleasure in contemplating the rapid increase in numbers, comforts, and intelligence of the American Union. No nation, among all the great communities of men that are pushing forward to a higher physical and moral condition, is advancing with such rapid strides as these States. Dividing these into non-slaveholding and slaveholding, the intelligent man will feel no difficulty in deciding that the former are decidedly more flourishing than the latter. If, again, we divide the free States into old and new, it will be equally apparent that the new are pushing ahead much faster than the old. Of the new free States, that portion lying on the great lakes west of Buffalo has been improving faster, for some dozen years past, than any other large section. The causes of this superiority are permanent, so that no one need expect a change for very many years to come.

This favored region, scarcely known to commerce fifteen years ago, has suddenly become one of the leading granaries of the world. As yet, it is almost purely agricultural. But so great are its natural resources, and such the intelligent industry of its inhabitants, that it will, ere long, become a favorite home of commerce and manufactures. The variety and extent of its commerce is every year attracting the admiring attention of those who witness it. Its commercial points every year increase the circle of their commercial power. Although at present chiefly engaged in the exchange of the products of a new country for manufactures and the products of other climates, there is more variety in their commercial transactions, and more to characterize the business of each of their leading marts, than is generally supposed.

It is proposed, in this article, to exhibit these characteristics, as shown by the statement accompanying the report of the Executive Committee of the Chicago Convention. These statements, as near official as they could be made, exhibit the business of the year 1847.

We have examined and compared the business of the ten principal lake marts above Buffalo, and now give the results in tabular form:—

VALUE OF EXPORTS IN 1847.

1. Cleveland	$9,033,155	6. Huron	$2,293,010
2. Detroit	3,883,318	7. Monroe	1,139,476
3. Toledo	3,848,248	8. St. Joseph	833,917
4. Sandusky	3,438,530	9. Milwaukie	750,000
5. Chicago	2,296,299	10. Michigan City	not given.

All the foregoing are set down according to the facts furnished by the report of the Chicago Committee, except Milwaukie, for which we have made an estimate from the list of articles exported, as reported by that Committee.

Most of the articles passing through the port of Huron are shipped at Milan.

VALUE OF IMPORTS IN 1847.

1. Sandusky	$7,147,261	6. Milwaukie*	$1,500,000
2. Cleveland	4,505,096	7. Monroe	817,012
3. Toledo	4,033,985	8. Huron	not given.
4. Detroit	4,020,559	9. St. Joseph	517,056
5. Chicago	2,641,852	10. Michigan City	not given.

WHEAT EXPORTED IN 1847.

	Bushels.		Bushels.
1. Cleveland	2,788,543	6. Milwaukie	598,011
2. Chicago	1,974,304	7. Michigan City	520,647
3. Sandusky	1,818,754	8. Monroe	222,596
4. Huron	1,585,866	9. Detroit	202,055
5. Toledo	1,154,205	10. St. Joseph	150,617

BARRELS OF FLOUR EXPORTED IN 1847.

1. Cleveland	734,745	6. Sandusky	133,066
2. Detroit	614,707	7. Milwaukie	34,840
3. Toledo	164,219	8. Chicago	32,598
4. Monroe	156,829	9. Michigan City	not given.
5. St. Joseph	135,843	10. Huron	"

BUSHELS CORN, RYE AND OATS EXPORTED 1847.

1. Toledo	1,494,662
2. Cleveland	1,484,765
3. Sandusky	312,265
4. Huron	111,144
5. Michigan	96,487
6. Chicago	67,315
7. Detroit	14,088
8. St. Joseph	5,948
9. Monroe	2,973
10. Milwaukie	none.

BARRELS OF PORK AND BEEF EXPORTED 1847.

1. Chicago	48,920
2. Cleveland	32,793
3. Toledo	21,811
4. Sandusky	10,760
5. Michigan City	3,033
6. Huron	2,644
7. Monroe	2,197
8. St. Joseph	2,088
9. Detroit	1,911
10. Milwaukie	742

POUNDS OF BACON AND HAMS.

1. Toledo	3,341,132
2. Cleveland	840,900
3. Chicago	47,298
4. Sandusky	36,950
5. Detroit	23,916

The other ports none.

POUNDS OF LARD EXPORTED IN 1847.

1. Toledo	4,244,801
2. Cleveland	484,160
3. Sandusky	293,750
4. Chicago	139,069
5. Detroit	29,118
6. Monroe	13,031
7. Huron	2,755

The other ports none.

POUNDS OF TALLOW EXPORTED.

1. Sandusky	601,250
2. Chicago	208,435
3. Cleveland	140,000
4. Toledo	95,317
5. Huron	20,602
6. Monroe	2,630

The other ports none.

POUNDS OF BUTTER EXPORTED IN 1847.

1. Sandusky	946,400
2. Cleveland	917,090
3. Toledo	374,889
4. Chicago	47,336
5. Monroe	27,768
6. St. Joseph	6,600
7. Huron	2,704

The other ports none.

* Estimated.

POUNDS OF WOOL EXPORTED IN 1847.

1. Detroit	lbs.	760,616
2. Sandusky		634,106
3. Cleveland		575,933
4. Chicago		411,088
5. Huron		402,212
6. Toledo		157,869
7. Monroe		153,400
8. Milwaukie		43,215
9. Michigan City	sacks	175
10. St. Joseph	lbs.	15,400

POUNDS OF TOBACCO EXPORTED IN 1847.

1. Sandusky	700,000
2. Toledo	593,778
3. Chicago	28,243

The other ports none.

POUNDS OF HEMP EXPORTED IN 1847.

1. Toledo	602,642
2. Chicago	6,521

The other ports none.

POUNDS OF SUGAR AND MOLASSES.

1. Toledo..... 1,250,000 | The other ports none.

By the foregoing tables it will be seen that in value of exports Cleveland is far ahead of any other port, and that in wheat and flour exported, she occupies the first place. In the value of imports and the quantity of tallow, butter, and tobacco exported, Sandusky leads.

In amount of corn, rye and oats, bacon, lard, hemp, sugar, and molasses, Toledo is number one.

Detroit leads in amount of wool, to which we might add lumber. Chicago exports more beef and pork than any of her sisters.

In variety of articles received in considerable quantities for export, Toledo is first, Cleveland second, and Detroit third.

Hereafter, the Upper Lakes will be supplied with sugar, molasses, and raw cotton almost exclusively through Toledo and Chicago. The present season has witnessed a great change in the movement of these important articles, as the returns of the business of Toledo and Chicago will show.

In flour Detroit was excelled in 1847 by Cleveland, but this will probably never happen again. Detroit is now, and will long continue to be, the leading primary flour market of the Upper Lakes. Chicago promises soon to be the leading exporter of wheat, as she is now of beef.

In corn and pork, and all the articles made from the hog, such as bacon, lard, steirine, lard oil, &c., Toledo will be the leading market and exporting town for all time to come. Her receipts of wheat and flour will increase on those of Cleveland; and, together, promise in a few years to equal those of the foremost of her sisters. In sugar and raw cotton her exports will probably, for many years to come, more than equal those of the other nine ports.

The coal business of Cleveland is destined to be large, as will also be the business in pine lumber of Chicago, Toledo, and Detroit. The population of the ten marts is nearly as follows:—

1. Chicago	20,000	7. Toledo	3,500
2. Detroit	18,000	8. Milan (Huron Port)	3,000
3. Milwaukie	15,000	9. Michigan City	1,500
4. Cleveland	14,000	10. St. Joseph	1,200
5. Monroe	4,500		
6. Sandusky	3,600	Total	84,300

These cities and villages, in the aggregate, will double their population as often as once in five years. Some will exceed, and others will fall short of that period at duplication.

There can be no doubt that Sandusky, Toledo, Milan, and Michigan City will number twice their present population in about three years; while Milwaukie, Monroe, and possibly Detroit, may require a longer term than five years to double their numbers.

Much will depend on the pecuniary condition of the nation; but we deem it safe to calculate on an average duplication of our chief lake towns, taken together, in every period of five years,—taking a series of not less than twenty, nor more than thirty years.

ROCHESTER FLOUR TRADE.

The Rochester Democrat furnishes the statistical facts connected with the flour trade of Rochester, during the season of 1848, compared with former years:—

QUANTITY OF FLOUR SHIPPED EAST FROM ROCHESTER ON THE ERIE CANAL FOR FOUR SEASONS.

	1845.	1846.	1847.	1848.
April	41,925	26,071	.....	.....
May	43,519	57,404	127,059	93,279
June	34,069	42,506	74,938	67,585
July	41,159	37,869	78,390	54,958
August	52,218	51,437	61,965	67,753
September	73,751	90,656	74,473	92,396
October	129,199	104,839	111,030	98,949
November	102,478	129,450	103,713	108,865
December	.....	.....	.....	6,541
Total barrels	518,318	540,232	631,574	599,326

The peculiar state of the markets in 1846, induced many to retain their stocks of wheat until the next season, when they were thrown upon the markets, causing the unusual increase in 1847. The wheat for the supply of the mills is derived from three sources—the canals, the Tonawanda Railroad, and teams from the surrounding country. We present a statement of the quantity left at this point by the two canals:—

1848.	Erie.	G. V.	Total.	Do. 1847.
May	96,599	17,287	113,886	119,837
June	170,044	32,286	202,130	100,820
July	66,475	20,725	87,200	480,615
August	83,521	82,719	166,140	212,467
September	113,432	106,562	219,994	208,547
October	274,112	101,784	375,896	290,439
November	162,109	94,228	256,337	365,391
December	13,909	6,641	20,550	.....
Bushels	980,201	462,132	1,443,133	1,778,116

The receipts by the Tonawanda Railroad, which cannot be ascertained till the annual report is made up, December 31st, has generally averaged about 200,000 bushels, making the aggregate of wheat by canal and railroad, over 1,600,000 bushels. Lake Ontario has sometimes supplied a small quantity—never more than 20,000 bushels. The supplies by the two canals for a series of years are as follows:—

	1844.	1845.	1846.	1847.	1848.
Bushels	884,441	1,169,231	1,203,546	1,778,116	1,443,132

We have nearly one hundred run of stone in Rochester, about 90 of which are employed on flour. To obtain a correct idea of the flour movements at this point, we must add to the amount shipped east by the canal the quantity consumed annually by 30,000 or more inhabitants, and the quantity transported by the railroad during the interval of canal navigation. The latter varies according to circumstances, sometimes not exceeding 10,000 barrels, and sometimes double or treble that number.

The State derives a revenue of 180,000 per annum from the Rochester flour trade. This shows the value of the Genesee River. If we take into the account the 235,000 barrels of flour transported this year by the Genesee Valley Canal, most of which was manufactured on the same stream, and add to that the revenue derived from the various other articles manufactured by the Genesee water power at various points, we shall have something like a correct notion of the value of this river. Since 1826 it has poured into the State coffers more than sufficient to pay half the original cost of the Erie Canal; and yet, strange to say, it has ever encountered the determined hostility of the State authorities, who persist in diverting its waters at Mount Morris, to feed 36 miles of the Genesee Canal; while at Rochester another draft is made to supply 74 miles of the Erie Canal. The Canal Board has reported in favor of deepening the outlets of the little lakes south of us, to make good the deficiency in the Genesee, caused by the extensive diversion in favor of the canals; but the legislature has neglected to make the appropriation. We hope this winter the Canal Board will put an end to the exceedingly unwise policy of crippling the usefulness of by far the most profitable stream of water in the State.

SHIP-BUILDING IN THE UNITED STATES.

A correspondent of the Boston Mercantile Journal, residing at Salem, (Massachusetts,) furnishes the following statement of the number of each class of vessels built in the United States in the last thirty-three and a half years:—

Years.	Ships and barques.	Brigs.	Schooners.	Sloops and canal boats.	Steamers.	Total vessels.	Tons.
1815	136	224	680	274	...	1,314	154,624
1816	76	121	781	424	...	4,402	131,668
1817	34	86	529	391	...	1,073	86,393
1818	53	85	428	332	...	898	82,421
1819	53	82	473	242	...	850	79,818
1820	21	60	301	152	...	534	47,784
1821	43	89	248	127	...	507	55,856
1822	64	131	260	168	...	623	75,437
1823	55	127	260	165	15	622	75,008
1824	56	156	377	166	26	781	90,039
	591	1,161	4,367	2,444	41	8,604	879,858
1825	56	197	538	168	35	994	114,997
1826	71	187	482	227	45	1,012	126,438
1827	58	133	464	241	38	934	104,343
1828	73	108	474	196	33	884	98,376
1829	44	68	485	145	43	785	77,099
1830	25	56	403	116	37	637	58,094
1831	72	95	416	94	34	711	85,963
1832	132	143	568	122	100	1,065	144,539
1833	144	169	625	185	65	1,188	161,626
1834	98	94	497	150	68	937	118,330
	773	1,250	4,952	1,674	498	9,147	1,089,805
1835, 9 months	25	50	302	100	30	507	46,239
1836	93	55	444	164	124	890	113,627
1837	67	72	507	168	135	949	122,987
1838	66	78	510	163	90	808	113,135
1839	83	89	439	122	125	853	120,988
1840	97	109	378	224	64	880	118,309
1841	114	101	312	173	78	778	128,084
1842	116	91	273	279	137	896	118,894
1843	58	34	148	157	79	462	63,618
1844, 9 months	73	47	204	404	163	891	103,537
	792	734	1,507	1,944	1,025	7,905	1,045,418
1845	124	87	322	342	163	1,038	146,018
1846	100	164	576	355	225	1,420	188,204
1847	141	168	689	392	198	1,588	243,783
1848	254	174	701	547	175	1,851	316,076
	619	593	2,288	1,638	761	5,897	894,081

Average per year for 4 years, 223,520 tons.

RECAPITULATION.—Ships and barques, 2,775; brigs, 3,741; schooners, 15,314; sloops and canal boats, 7,650; steamers, 2,138; total, 31,616; total tons, 3,909,149.

Average in 29½ years about 105,000 tons per year.

In 1848, 110 more ships and barques were built than in any other year.

From 1801 to 1807, the tonnage built in the United States amounted to 774,922 tons, being an average per year of 110,703 tons.

PRODUCTION OF AMERICAN WINE IN THE WEST.

We copy the following statement in relation to a vineyard near Cincinnati, planted with roots in 1834 by the late Mr. Resor, and reported by his son to the Horticultural Society:

ENTIRE COST OF THE VINEYARD, (EXCEPT THE LAND,) WITH THE CULTIVATION AND MAKING OF WINE FOR NINE YEARS.

2,300 small vines	$138 00
2,300 pales	46 00
1,000 pales replaced	20 00
Trenching ground and planting	80 00
Manuring last fall	30 00
Two months' work each year, 9 years	225 00
Extra work in making wine, 9 years	150 00
Interest on investments before crop	15 00
Total cost, 9 years	$704 00

The quantity of wine made in nine years was four thousand and three hundred gallons, which Mr. Resor very moderately estimates at seventy-five cents per gallon from the press, although it is well known that the American wines at Cincinnati sell readily at one dollar and fifty cents per gallon when one year old. These nine crops of wine, at Mr. Resor's low price, amount to three thousand two hundred and twenty-nine dollars and fifty cents. Deduct from this amount the cost of the vineyard and cultivation, and we find a profit of two thousand five hundred and twenty-five dollars and fifty cents for the nine years, or two hundred and eighty dollars and sixty-one cents per year.

COST OF FARMING VINEYARDS IN THE UNITED STATES.

Ploughing and sub-soil ploughing.....per acre	$5 00
100 bushels of lime, at 15 cents	15 00
403 vines, two years old, at 15 cents	60 45
500 chesnut or cedar posts, 8½ feet long, and the size of large fence rails, 8 cents	40 00
800 pounds of iron wire, No. 11, for trellis, at $6 60 per 100 pounds	52 80
36 pounds of twelvepenny rails, at 5 cents	1 80
Planting out the vines	7 00
Digging holes and setting posts	10 00
Making trellis	7 95
Total	$200 00

This cost will vary in different locations, according to the price of lumber, lime, and vines; but we feel confident that anywhere within one hundred miles of Philadelphia a vineyard can be put out for two hundred dollars.

COMMERCE OF CHILICOTHE, OHIO.

COMPARATIVE STATEMENT OF THE EXPORTS AND IMPORTS OF THE PRINCIPAL ARTICLES SHIPPED FROM AND RECEIVED AT THE PORT OF CHILICOTHE FOR THE YEARS 1847 AND 1848, DERIVED FROM THE SCIOTO GAZETTE.

SHIPPED.	1847.	1848.
Flour.....bbls.	49,891	26,042
Pork	31,821	18,192
Corn.....bush.	196,781	73,789
Wheat	34,403	107,124
Bac'n & P'rk in b'lk.lb.	2,226,475	3,721,531
Coffee	32,242	18,480
Iron	293,596	310,643
" cast	42,761	129,634
Lard	2,411,048	1,069,735
Merchandise	165,202	204,933
Sugar	60,815	45,136
Sundries	851,439	711,922

RECEIVED.	1847.	1848.
M. Coal.....bush.	131,151	223,153
Coffee.....lbs.	414,974	446,798
Crockery	83,072	187,824
Pig iron	834,466	1,047,623
Iron	239,826	333,008
Merchandise	1,661,569	1,716,527
Nails	222,706	211,251
Sugar	531,925	781,307
Tobacco, manufact'd.	117,214	131,451
Sundries	677,638	478,556
Lumber.....feet	240,390	166,750
Wood.....cords	1,102	1,597

STATISTICS OF THE PERIODICAL PRESS IN NEW YORK.

The "Independent," the first number of which made its appearance on the 7th of December, 1848, furnishes the following tabular statement of the number and circulation of newspapers and magazines published in the city of New York. The Rev. Leonard Bacon, of New Haven, the Rev. Joseph P. Thompson, of New York, and the Rev. R. S. Storrs, of Brooklyn, are the ostensible editors of the "Independent." The working editor is the Rev. Joshua Leavitt, the original editor of the New York Evangelist, and distinguished as an able advocate of cheap postage and other philanthropic reforms. No religious or secular journal in the country concentrates a greater amount of industry and talent; and the independent tone of the editors give assurance that the principles of progress will be represented in a fearless and able manner. "We have been at much pains to ascertain the exact issue of the newspaper and periodical press of New York in every form," says the Independent, "and we give the result of our inquiries in the following tabular view:—

No. of papers.	Aggregate regular issue.	Aggregate weekly issue.	Aggregate yearly issue.
13 Daily papers	125,200	754,200	39,218,400
9 Semi-weekly	27,450	64,900	3,374,800
9 Weekly, Orthodox	72,950		3,845,400
7 " liberal, R. Catholic, &c.	20,500		1,066,000
6 " Sunday	42,000		2,184,000
44 " miscellaneous	242,100		12,589,200
		377,550	
16 Monthly, religious	289,100		3,469,200
4 " miscellaneous	76,250		915,000
10 " magazines, religious	54,250		651,360
24 " " miscellaneous	133,359		1,600,284
4 Quarterly magazines, religious	5,800		23,200
9 " " literary	27,755		111,020
1 Semi-annually	100,000		200,000
		1,196,650	
158 papers issue yearly			69,247,864

Number of reams of paper consumed, 147,095. The weight of all this paper is about 5,600,000 lbs., and its cost alone is above $600,000.

WHEAT AND FLOUR SHIPPED AT BUFFALO AND OSWEGO,

IN EACH YEAR FROM 1835 TO 1847.

The following table will show the tons of wheat and flour shipped at Buffalo and Oswego from the year 1835 to 1847, and at Black Rock from 1839 to 1847, inclusive, together with the total tons of wheat and flour which arrived at the Hudson River from 1835 to the close of 1847:—

Years.	Buffalo. *Tons.*	Black Rock. *Tons.*	Oswego. *Tons.*	Total. *Tons.*	This State. *Tons.*	Total arrived at tide-water. *Tons.*
1835	15,935	. . . . .	14,888	30,823	97,729	828,522
1836	24,154	. . . . .	13,591	37,745	87,237	124,982
1837	27,206	. . . . .	7,429	34,635	81,856	116,491
1838	57,977	. . . . .	10,010	67,987	65,093	133,080
1839	60,082	7,697	15,108	82,887	41,796	124,683
1840	95,573	12,825	15,075	123,473	121,389	244,862
1841	106,271	24,843	16,677	147,791	53,569	201,360
1842	107,522	13,035	14,338	134,895	63,336	198,231
1843	146,126	12,882	25,858	184,866	63,914	248,780
1844	145,510	15,669	42,293	203,472	74,331	277,803
1845	118,644	17,066	44,560	180,240	140,223	320,463
1846	247,860	16,564	63,905	328,329	91,039	419,366
1847	380,053	18,466	87,329	485,848	65,357	551,205

BRITISH AND IRISH PRODUCE AND MANUFACTURES.

The following is a table of the total value of British and Irish produce and manufactures exported from the United Kingdom to various countries in the year 1847:—

United States of America	£10,974,161	Egypt; ports on Mediteranean	£538,308
Mexico	100,688	Tunis	697
Central America	86,983	Algeria	13,881
New Granada	145,606	Morocco	16,231
Venezuela	182,279	Western coast of Africa	528,420
Hanseatic Towns	6,006,366	Colonial territory of the Cape of Good Hope	688,208
Heliogoland	250	Eastern coast of Africa	13,751
British territories in E. Indies.	5,470,105	African ports on the Red Sea.	505
Islands in the Indian seas—		Cape de Verd Islands	4,145
Java	357,870	Ascension and St. Helena	31,378
Philippine Islands	104,486	Mauritius	223,563
Lomboc	307	Aden	11,488
British North American Cols..	3,233,014	Persia	929
Holland	3,017,423	British W. I. and Brit. Guiana	2,102,577
Brazil	2,568,804	Honduras British settlements...	170,947
Oriental Republic of Uruguay.	334,083	Foreign West India Islands—	
Buenos Ayres or Argent. Repub.	156,421	Cuba	896,554
Chili	866,325	Porto Rico	16,822
Bolivia	22,375	Guadaloupe	164
Peru	600,814	Martinique	196
Falkland Islands	2,088	Curacoa	1,089
Russian settlements on N. W. coast of America	8,193	St. Croix	14,797
France	2,554,283	St. Thomas	386,599
Portugal proper	889,916	Dutch Guiana	1,466
" Azores	42,980	Hayti	192,089
" Madeira	33,853	Russia—Northern ports	1,700,733
Spain, Continental and Balearic Islands	770,729	" ports within the B. Sea	143,810
Canary Islands	30,689	Sweden	179,367
Gibraltar	466,845	Norway	169,149
Italy, Sardinian territories	355,366	Denmark	253,701
" Duchy of Tuscany	637,748	Prussia	553,968
" Papal territories	181,894	Mecklenburgh Schwerin	105,164
" Naples and Sicily	636,690	Hanover	147,357
" Austrian territories	537,009	Oldenburgh and Kniphausen	26,080
Malta and Gozo	195,836	British settlements in Austria..	1,644,170
Ionian Islands	143,426	South Sea Islands	25,368
Kingdom of Greece	233,913	China and Hong Kong	1,503,969
Turkish dominions	2,363,442	Belgium	1,059,456
Wallachia and Moldavia	213,547	Channel Islands	542,191
Syria and Palestine	415,292	Total	£58,842,377

It will be seen by this table that out of fifty-eight millions of exports from the United Kingdom last year, twenty-three millions were to the New World.

AMOUNT OF BULLION IN RUSSIA.

Notwithstanding it is well known that Russia produces more gold than any other portion of the globe, the amount of wealth kept in the royal coffers almost exceeds belief. The Emperor Nicholas has always—by the aid of his almost exhaustless store, because being continually augmented from the mines—been enabled to assist nations, bankers, and merchants in the pressing hour of need. He has lately ordered the sum of 6,000,000 rubles (about £1,000,000 sterling) to be transferred from the vaults of the citadel to the treasury; the funds of which, from many large urgent circumstances, has become reduced from 30,000,000 to 1,140,000 rubles; after this deduction, there remained in the vaults the almost incredible sum of 109,588,595 rubles, being a larger amount of specie and bullion than is possessed by any other state. A decree has been issued by the Emperor to the effect that neither gold nor silver shall be exported to the continental states during their present unsettled position; but this, of course, does not extend to England. On the

other hand, we learn, from an accredited source, that there is plenty of paper always ready for issue; but as to the above wealth, no one in Russia has any belief in its existence. At the annual inspection several mercantile men are always present, but, it is said, they are only shown one or two bags open, and do not know what the others contain.

NAUTICAL INTELLIGENCE.

NEW CHANNEL IN THE WESER.

PARTICULARS OF A NEW CHANNEL BETWEEN THE RIVERS WESER AND TAHDE, FOR VESSELS OF A MODERATE DRAUGHT OF WATER, ARRIVING WITH A SOUTH-WEST OR DEPARTING WITH A NORTH-EAST WIND.

THIS channel is laid down with three red and one white buoy; on each of the three red buoys (Bojetonner) is an iron rod with a wicker basket, differing in color and shape from those in the old channel of the Weser and Tahde. The white buoy is a customary one, but likewise with an iron rod and wicker basket; at a later period this will be replaced with a Bojetonne.

Vessels on arriving have to keep the red buoys to the right, and the white one to the left.

The first red buoy (No. 1) bears S. E. ¼ E. from the Key buoy, in eight fathoms at low water; from thence the bearings are—

The Steeple at Wangeroog W. ¾ S., and the Light-house is to be run for to the N. of the Steeple.
The Minser Church.....S. S. W. ¾ W.
The Light-vessel (No. 1).....S. E. by E. ½ E. at ebb tide.
The red buoy (No. 11).....S. E.

The second red buoy (No. 11) is in seven fathoms at low water near the Tahde Plate, which rises steeply; the bearings from thence are—

The white buoy (No. 10).....N. E.
The red buoy (No. 111).....S. E. ¾ S.
The steeple at Wangeroog.....W. ¼ S.
The Minser Church.....S. W. ¾ S.
The Light-vessel (No. 1).....S. E. by E. ½ E. at ebb tide.
The red buoy (No. 1).....N. W.

The third red buoy (No. 111) lies in seven fathoms at low water; the bearings from thence are—

The eighth black or G buoy.....S. E. by E.
The Steeple at Wangeroog.....W. ½ N.
The Minser Church.....S. W. ¼ W.
The Light-vessel (No. 1).....E. ½ N. at ebb tide.

The white buoy (No. 0) lies in 4½ fathoms at low water; the bearings from thence are—

The Steeple at Wangeroog.....W. ½ S.
The Minser Church.....S. W. ¾ S.
The red buoy (No. 111).....S. S. E. ¼ E.
The red buoy (No. 11).....S. W.
The Light-vessel (No. 1).....S. E. ¾ E. at ebb tide.

The steering through this channel from the Key buoy to the first red buoy is S. E. ¼ E., and from thence S. E. till between the seventh black or F buoy, and the eighth black or G buoy, from thence in the old channel of the Weser, steering for the Mellum rather nearer to the F than to the G buoy, where there are scarcely three fathoms at low water.

The flood tide runs southerly into the river Tahde, and the ebb tide northerly. In navigating this new channel a pilot is to be recommended.

The bearings are by compass.

FLOATING LIGHT IN THE PASS OF WIELINGEN.

The following is believed to be a correct translation of a letter from C. D. Hoffschmidt, the Belgian Secretary of Foreign Affairs, dated Brussels, October 24th, 1848, addressed to Augustus Moxhet, Esq., the Consul General of Belgium in the United States.

On and after the 5th of November, 1848, a Floating Light will be stationed in the Pass of Wielingen, near the bank called Paarde Markt, bearing by compass, without allowance for variation :—

The tower of the town of Ecluse, South.
The tower Flessingue, East 8° 26′ South.
The Light of West Capelle, N. E. 5° 37′ E.
The tower of Lisseweghe, S. W. ¼ W.

The lantern will be elevated 33 feet above the level of the sea, and will present a red Light, visible in clear weather at the distance of eight or nine miles of 60 to a degree.

The vessel painted red will bear at her mast-head an elongated ball of the same color.

From the same date the Light of Heyst, situated in lat. 51° 20′ 22″ N. and lon. 0° 53′ 50″ E. from Paris, will present a white Light.

MAURY'S WIND AND CURRENT CHART.

[FROM THE JOURNAL OF COMMERCE.]

Practical navigation is deriving the greatest benefits from the developments made by Lieut. Maury in relation to the course and velocity of currents, and the direction and strength of winds. The important results already attained encourage the hope that, at no distant day, the duration of voyages in sailing ships may be calculated with a precision almost as great as in vessels propelled by steam; and that the occurrence of storms, and the direction of winds, on any given route, may be anticipated—thus enabling the sailor so to lay his course as to avoid alike the tempest and the calm, and guided by the light of science to reach his destined port in safety and with speed. In the practical application of recent meteorological discoveries, and of the truths of geometrical science, to the purposes of navigation, Lieut. Maury has essentially subserved the interests not alone of commerce, but of humanity, and deserves to be ranked among the benefactors of his kind. The ingenious method devised by him to secure a record of facts falling within the observation of mariners, by the Abstract Log, has proved more than adequate to the purposes which it was designed to accomplish, and has supplied a vast amount of varied information, which has suggested an extension of the plan of the work since the numbers comprising the North Atlantic Ocean were issued.

Lieut. M. intends to construct charts of the three great oceans after the plan of the Rio sheet, and to accompany the whole with what is called a Pilot Chart, a specimen of which for August and September is before us. The pilot chart is constructed thus:—Lieut. M. has many tracks more than the chart will hold even in colors; but to give the practical navigator the benefit of the experience of all of them, he has divided the ocean out into sections of 5° square. That is, each section contains 5° of latitude and 5° of longitude. For the sake of illustration, take the section between 25° and 30° W. from the Equator, and 5° N. He has the tracks of several thousand vessels across this section. Suppose that 500 of them are in the month of August. The direction of the wind, as each of these 500 found it, is entered in its appropriate column on his MS. chart, and when the whole is gone through with, the result is entered on a compass drawn in this section, so as to show at a glance the number of calms, the number of winds from the N., from N. N. E., N. E., and so on for every two points around the compass. The same is done for every month, and for every section of 5° square over the whole ocean.

Now, suppose that a vessel with this pilot chart wants to make a south course through this section in August, (or any month, but suppose for August.) The captain consults his pilot chart to see what his chances for head winds and calms are, and what his chances for fair winds. Out of the 500 entries, he finds that there are 20 calms, that the winds are 250 times from S. E., 20 from S. S. E., 10 from S., 6 from S. S. W., 4 from S. W., and 2 from W. S. W., and of course 188 from all other points. His chances, then, of a fair wind from a south course would be only 190 out of 500—odds against him nearly as 5 to 2.

He now looks to see how the chances would be for a S. S. W. course. The 250 S. E. winds are fair winds for this course, and the chances of a fair wind for this course would be 458 out of 500—odds greatly in his favor, nearly 12 to 1. He would then, in ap-

proaching this section, aim to make it where a S. S. W. course would be a good course; and so of any other section, and any other month.

Thus, with the pilot chart, each navigator before sailing could lay off the route which would give him the most chances for fair winds. This pilot chart, of course, cannot be finished until the whole is completed, or until its author gets tracks enough through any section to enable him to arrive at the fair average of winds from each point during any month.

ACCURATE NAVIGATION.

The shoal on which the ship *Flavio*, reported in the Courier and Enquirer of the 5th, as having struck upon, is laid down in our chart of the Bahamas, published in 1845, in precisely the same latitude and longitude as he gives in his account. There are a great number of shoal spots in that immediate vicinity, and it is, in my judgment, best not to be found in that neighborhood.

Please give notice that the Light-house erected on Tucker's Beach was lit on the 1st of December; it is a fixed Light, the tower is white, 45 feet high, and is about 220 yards in a southerly direction from the old boarding house, which is burnt down.

The Light is about 18 miles in a S. W. by W. direction from Barnegat Light. Vessels making it should not steer to the N. of N. E. until they make Barnegat Light.

This notice is deemed necessary as the land at Barnegat runs nearly in a N. by E. direction, and to one not acquainted, both Lights being of the same character, the Tucker's Beach Light would be apt to make him haul to the northward too soon.

Yours truly, G. W. Blunt.

JOURNAL OF MINING AND MANUFACTURES.

"THE FIRST AMERICAN MANUFACTORY."

An article with this title appeared in the December number of the Merchants' Magazine, embracing some interesting, although not entirely accurate statements, relating to the introduction of the cotton manufacture into this country. We refer particularly to the remark of the writer that "the Byfield Factory was the first regular establishment of the kind in America." Now, as it is our aim to record and perpetuate correct information on all topics within the range of our Journal, we are gratified to have it in our power to correct the statement made (inadvertently, no doubt,) by the writer of that article. The paper below comes from a source entitled to the highest credit—from a gentleman whose veracity and means of information are of such a character as to leave upon our mind not the shadow of a doubt as to the perfect accuracy of his statements.

To Freeman Hunt, Esq., *Editor of the Merchants' Magazine, etc.*

Dear Sir:—In the Merchants' Magazine for December, 1848, we notice an interesting account of the establishment of the Byfield Factory in Newbury, Mass., under the title of "The First American Manufactory."

The beginnings of a branch of industry now of such great and growing importance, and so deeply affecting the commercial and social interests of the country, can hardly fail to be regarded with interest. In this respect, the facts connected with the establishment of the Byfield Factory must be considered a valuable addition to the history of American manufactures.

It seems, however, to be demanded by the "truth of history" to state that the claim of laying the first foundations of the American cotton manufacture incontestably belongs to Samuel Slater, who came from England in the year 1789, and introduced and established the whole series of machines patented and used by Arkwright for spinning cotton, by making them chiefly with his own hands, in Pawtucket, Rhode Island, in the year 1790.

Some attempts had been made previously to spin cotton by water-power, and some small machines for this purpose, of rude construction, were shown Mr. Slater on his arrival at Pawtucket, on which cotton had been spun from rolls prepared by hand in families; the improved modes of preparing the cotton for spinning on carding cylinders and roving machines, on the Arkwright plan, being entirely unknown and unattempted. These ma-

chines Mr. Slater, on seeing them, pronounced quite worthless, as they undoubtedly were. The establishment of a small spinning-mill previous to 1793 is noticed in the account of the Byfield Factory, with the remark that the latter was, however, "the first regular factory."

This remark was probably made without due knowledge of the character of the first operations at Pawtucket, which, there is reason to believe, were at the highest point of perfection, both as to the performance of the machinery and the systematic details of management, to which the cotton manufacture had then reached in England, from one of the best factories, in which country they had been derived, of which Mr. Slater had been the principal manager up to the time of his departure, and to the perfection of which he was known to have largely contributed, by his skilful and systematic management.

Accordingly, the machines constructed by him and put in operation in Pawtucket in 1790, continued to be used without interruption, and without change of the original system, for nearly forty years, up to 1829, at which time the carding and spinning machines formed a part of an establishment of two thousand spindles, still existing in that village, called the "Old Mill." These machines were removed in the following year, the sale of Mr. Slater's interest taking place about that time.

It may be worth while to remark in this connection, that the impression generally prevalent, that the art of cotton spinning, as introduced into this country, was imperfect compared to that practised in England at the time, is erroneous, the fact being as stated above. The art of cotton spinning, with the best system of management then known, was introduced into this country by SLATER, in 1790, in all the perfection to which it had arrived in England at that time. * * *

LAKE SUPERIOR MINES.

The "*American Mining Journal*" furnishes the latest, and probably the most authentic accounts from these mines. The Cliff mine, it seems, has never presented a better appearance than at the time of writing. A few days previous, twelve tons of copper were raised, the purest that had ever been taken from the mine. The Lac la Belle shows some improvement, but no particulars were given. The North American presents very encouraging prospects. The vein which is now worked, is represented as being twenty inches in width, and most of the lode yields good stamp work. Several small masses of copper have of late been obtained, averaging about 500 lbs. in weight. An engine and stamps had just been received, and would soon go into operation. The Copper Falls was also looking much better. Several small masses of copper had recently been raised from the lower level of one of the shafts, and the end of the drift was very promising. The product of the mine for the month of October was 4,458 lbs. of copper, estimated at 70 per cent; and 15,500 lbs., estimated at 15 per cent.

GOLD MINES IN VIRGINIA.

We have had the pleasure of conversing with a worthy gentleman from Louisa, says the Richmond Enquirer, in relation to some recent and extensive discoveries of immense deposites of gold in that country. A late discovery on the land of Mr. Boxley, conducted by Messrs. Rawlins and Fisher, is said to surpass the mines of South America. The place is called "Ally Cooper's," about two miles south-west of the north branch of the Pamunkey River. Mr. Rawlins, the lucky finder, washed in a small pan in a few hours (not exceeding seven) between three and four hundred pennyweights, (94 cents to the dwt.) Mr. F. has also discovered a very rich mine at Tinder's, with the prospect of an extensive deposite or vein. The mine of Mr. T. B. Harris, wrought by Mr. G. W. Fisher, continues to yield richly, and a few hands are collecting from $100 to $175 per day. A few days since we saw a large bar of gold, weighing about 500 dwts., from the White Walnut Mine, said to be exceedingly rich. We trust that with the vastly improved process of extracting the gold, the good county of Louisa may derive large benefits from the precious minerals diffused through the hitherto poor lands.

IRON FACTORIES IN KENTUCKY AND OHIO.

One of the most important neighborhoods for the production of iron on the Ohio River, is at a place called Ranging Rock. Within a circle of twenty miles there are 30 furnaces, 20 in Ohio and 10 in Kentucky. The produce of all combined amounts, when in full work, to 60,000 tons per annum.

METALLURGICAL TREATMENT OF GOLD ORES.

TESTING—EXTRACTION—SILICEOUS ORES—WASHING SAND—RICH ORES—PYRITOUS ORES—PARTING—WET PARTING—QUARTATION, HOW PERFORMED.

The information embodied in the following paper, derived from Booth's "*Encyclopedia of Chemistry*," now published in parts by Carey & Hart, of Philadelphia, will not be deemed inapplicable to the times, when, as at present, our countrymen are in the successful search of the "golden sands" of California:—

Testing. The simplest method of testing auriferous sand is to wash over carefully and repeatedly with water, agitating the vessel, so that the gold particles may subside, and decanting the water, so as to carry off the fine sediment; then to pulverize the residue finely and wash again, repeating this operation until all the gangue is washed away and only gold remains. Vein gold, not containing pyrites, may be similarly treated, beginning with pulverization. If the ore abound in pyrites, the best method is to pulverize, roast thoroughly, wash over, pulverize and wash again, until the gangue is nearly all washed away. The former method gives a tolerably close analysis, but it is more accurate in both cases to wash the greater part of the gangue away, dissolve the residue in aqua regia by the aid of heat, evaporate to a small bulk to get rid of nitric acid by adding muriatic during evaporation, filter, add a clear solution of copperas to the clear solution, and after standing 24 hours, decant the greater part of the liquor with care from the precipitated gold, treat the residue by heat with muriatic acid, filter, wash, burn the filter, and weigh the pure gold. Not less than one or two pounds of poor ore should be employed, unless with a very sensitive balance; and if the gold do not precipitate at first, indicated by a momentary darkening of the solution, it will do so by standing. Very rich ores may be smelted directly with borax, or litharge, and in the latter case, a little charcoal will reduce a portion of the lead, which then takes up gold and silver and must be cupelled.

Extraction. A. *Siliceous ores.* 1. *Washing sand.* Auriferous sand is sometimes washed by hand, (in Africa, Hungary, &c.,) over an inclined plane with transverse parallel grooves, in the lowest of which the gold particles will be found mixed with sand; this should be pulverized and washed again to get pure gold. 2. *Stamping ores.* Sand and gravel are sometimes washed by machinery, whereby the pebble and gravel are removed by sifting, and the fine sand washed as above, by the machinery. But the sand and vein ore are more frequently stamped fine with water, and the fine sand and mud stirred with mercury to amalgamate the gold. The sand is washed off, the liquid amalgam pressed in bags of fine canvas or buckskin, and the solid amalgam remaining distilled, mercury passing over, and gold being left in a spongy state. Much mercury is lost if it be introduced into the stamping mill, and hence the employment of several mills, Chilian, Mexican, Tyrolesian bowls, &c., to amalgamate the gold contained in the sand after leaving the stampers. A considerable quantity of gold is lost by any one of these arrangements, and a better plan is to amalgamate in revolving barrels. About 6 dwt. gold to the bushel pays the cost of extraction in the United States.

B. *Rich ores.* These may be first powdered and washed, and the residue smelted with borax, litharge, or other fluxes, or they may be picked by hand, powdered, and directly smelted.

C. *Pyritous ores.* 1. These are sometimes pulverized finely, and washed over to a small very rich residue. The pyrites deposited from the water is washed again, once or twice, then exposed for months in heaps to the air, again ground and washed over. This process is very imperfect. 2. The pyrites is first roasted, then ground, and amalgamated; or it is smelted to concentrate it, with or without previous roasting, the resulting *stone* ground and amalgamated. 3. The pyrites is smelted, with or without previous roasting, and the ground stone then fused with lead, which is eliquated and cupelled. If copper pyrites predominate, amalgamation is better than imbibition with lead and eliquation.

Parting. The gold obtained by any of these processes usually contains silver, which must be parted or separated, either in the dry or wet way. A. *Dry parting.* 1. With *sulphur.* The impure gold is fused and granulated in cold water, mixed with $\frac{1}{2}$ to $\frac{1}{4}$ of its weight of sulphur, kept heated for two hours or more without fusion, to form sulphuret of silver by cementation, then highly heated to fusion for one hour, to perfect the production of sulphuret and the separation of silver richer in gold; a little litharge is then added gradually, and the crucible slowly cooled, during which the greater part, 5-6 to 6-7, of the gold with silver collects at the bottom, (king,) and is separated by a hammer from the upper sulphuret of silver and lead, (called plachmal,) containing 1-6 to 1-7 of the gold; the plachmal is several times fused with litharge until all the gold is extracted. The kings

are fused with sulphur, &c., and when rich enough, subjected to quartation; the plachmal is fused with iron, forming sulphuret of iron and silver, which is refined.

2. With *crude antimony.* The alloy is fused in a glazed crucible with twice as much crude (sulphuret of) antimony, to which, when the content of silver is more than $\frac{1}{3}$, a suitable quantity of sulphur is added. The sulphur unites with the silver, copper, &c., and the antimony with the gold, the latter alloy sinking to the bottom. If the gold contain much silver, this operation is repeated, with less antimony, after previous calcination. By calcination in a muffel, the antimony is driven off as oxide; the alloy may be smelted with saltpetre, which is apt to occasion more loss of gold. The gold after calcination is fused with $\frac{1}{2}$ borax, $\frac{1}{4}$ saltpetre, and $\frac{1}{4}$ glass powder.

3. An obsolete method of parting consisted in stratifying the rolled or granulated alloy in a cement box with regal cement, composed of 4 pts. brickdust, 1 pt. common salt, and 1 pt. calcined copperas, and giving a slowly increasing heat for 18 to 24 hours. The sulphuric acid set from the vitriol disengaged from the salt muriatic acid, which formed chloride of silver and left a finer gold. The last was then cemented with saltpetre and common salt, whereby the remainder of the silver was extracted.

B. *Wet parting.* Parting by acids is superior to dry parting. 1. *Sulphuric acid.* This process, chiefly adopted in France, consists in heating the granulated alloy with oil of vitriol in cast-iron vessels, (or in less strong acid in platinum,) whereby sulphate of silver, copper, &c., is formed and dissolved, and gold left, which is again treated with sulphuric acid, washed, dried, and fused with saltpetre in black lead pots. This process is well adapted to large operations.

2. *Quartation* is performed by nitric acid, which, when free from muriatic or nitrous acid, dissolves silver and not gold, provided the alloy contains 3 pts. to 1 pt. gold. If it contain less silver, a portion must be added; if copper be present, the alloy must be cupelled. See ASSAY for the details of the operation. This process is only adapted for silver containing gold in nearly due proportion.

3. By *aqua regia.* Gold containing silver is treated with aqua regia made by mixing 1 pt. nitric acid of 32° B. (spec. grav. 1.28) and 4 pts. muriatic acid of 22° B. (= 1.178.) The granulated or laminated alloy is put into a flask, three or four times its weight of aqua regia poured over it, and digested until vapors cease to rise. The clear solution is poured off, the residue treated with 1 to 2 pts. aqua regia, this poured into the first, and the residue, chloride of silver, washed in a flask and then on a filter. A solution of copperas is then added to the gold solution, whereby metallic gold is precipitated, which is digested with dilute muriatic acid, washed, and fused with borax and saltpetre.

COST OF MANUFACTURING COTTON GOODS.*

The work, the title of which will be found at the foot of this page, embraces a collection of the most useful calculations for the Mechanic and Manufacturer; and it seems to us that its publication is particularly well timed, as efforts are being made to establish various branches of manufactures in the southern and western States, which will, we have no doubt, prove successful, and highly advantageous to the interests of the people in the region of the "sunny South and the fertile West."

Mr. Leonard's calculations on motive power are condensed and arranged in as comprehensive a mode as possible, so that the mechanic can obtain the solution of any problem, simply by referring to the tables. The information relating to water and steam power, and their application to various branches of manufacture, appears to be quite complete. The table which contains the calculated power of belts is, we are informed by the author, the first of the kind which has been published. That portion of the work relating to cotton manufacturing is particularly full, exhibiting the cost of machinery, and of building factories; and the tables, in showing the cost per yard of manufacturing different styles of goods from different prices of cotton, are predicated upon the yearly results of a large number of factories. It required no small amount of labor to perfect the work; its design, however, proposes a plan of arranging calculations which cannot fail to be of great practical utility to the mechanic and manufacturer.

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* The Mechanical Principia; containing all the various calculations on Water and Steam Power, and on the different kinds of Machinery used in Manufacturing; with Tables showing the cost of Manufacturing different Styles of Goods. By CHARLES ELLREDGE LEONARD. 12mo., pp. 197. New York: Leavitt, Trow, & Co.

ANALYSIS OF CALIFORNIA GOLD AND FORMATION OF THE MINES.

The following letter, from Professor Horsford, of Harvard University, was originally published in the Mercantile Journal of Boston. It will be read with interest, not only for the statement of the analysis of a specimen of the California gold recently received in that city, but also for the plausible theory therein advanced in relation to the formation of the gold fields:—

Cambridge, December 14th, 1848.

My Dear Sir:—The California gold, from Feather River, received by Mr. Eaton, has been analyzed, and contains gold, silver, iron, and a trace of copper.

It has been carefully examined for platinum, tellurium, and any other bodies that might have been present, but without success.

In constitution it corresponds with fifty other specimens, whose analysis are on record. The iron and copper are present in invariably small quantities, while the proportion of silver ranges from 1 per cent to more than 70.

The very small quantity employed in the analysis, (about 250 millegrammes,) and the four separate determinations, rendered a slight loss inevitable. The gold might safely be stated a little higher:—

Gold	88.09	Sand	0.40
Silver	10.00	Loss	1.11
Iron	0.40		
Copper	trace.	Total	100.00

You will remember that the specimen sent for analysis was in scales. The average weight of them may be of interest to you:—

62 scales weighed 205.5 millegrammes.
6 " of least size, weighed 5.5 millegrammes.
6 " of greatest size, weighed 51.5 millegrammes.
1 " of least size, weighed 0.9 millegrammes.
1 " of greatest size, weighed 8.6 millegrammes.
1 " of average size, weighed 3.3 millegrammes.

The occurrence in this form, while the gold in the rock from which the scales have been derived, is, without doubt, in California as in Mexico and Virginia, in granules, of more or less approximation to a spherical form, presents an inquiry of much interest, viz: How have the granules become flattened?

From what I have seen of glacial action in the Alps, and of its effects in this vicinity, and in various other sections of northern United States, I am strongly persuaded that the flattening of the granules has been caused by the transit of glaciers, with their masses of imbedded boulders and gravel, over the rock containing the gold. It accomplished at one stroke the reduction of the rock to gravel and sand, and of the granules to plates. This will explain how, in the alluvial plain, here and there richer veins of the metal occur. The paths of ancient moraines, or rivers parallel to the direction of the glaciers, would contain more; the intervening spaces now filled up with lighter materials, spread about by subsequent simple aqueous agency, would contain less of gold.

This consideration may furnish a suggestion as to the direction from a point found to be rich in metal, in which labor will probably be rewarded. If the deposits have been made by glacial agency operating at right angles to the direction of the coast, excavation in a direction north and south must cross their course; excavation in a direction from or towards the mountain range would be either upon or parallel to their course, and would cross only the terminal morains. I am, very truly, yours, Eben. N. Horsford.

DISCOVERY OF GOLD IN CANADA.

Professor B. Silliman, Jr., has published a brief account of his examination of masses of gold found in the valley of the Chaudiere, Canada. The lumps are worn smooth, as is usual in alluvial gold, but fragments of quartzose gangue could still be detected in some of them. They were firmly imbedded in what appeared to be slate, but which is probably a concrete of detritus cemented by oxide of iron. Chromic iron, titaniferous iron, serpentine, spinel rutile, and talcose rocks, remind us very strongly of the mineralogical characters of the Russian gold region; and their occurrence with the gold in Canada certainly affords favorable grounds for the hope that this may become a rich auriferous region. As yet, no excavations have been made on any scale of magnitude sufficient to warrant an opinion of the actual wealth of the deposit. A few tons of gravel have, however, been washed in a rude way with the Berks rocker, which have yielded about $4 of gold to the ton of gravel.

PORTSMOUTH STEAM COTTON FACTORY.

A correspondent of the "Chronotype," who recently visited this establishment, furnishes the following statement, as the result of his investigation:—

The capital stock of this company, per charter, is $1,000,000. Amount actually taken, $530,000. This establishment was erected for the manufacture of the finer cotton fabrics. The middle section of the mill, 200 feet long by 70 feet wide, and six stories high, is now built, and contains over 21,000 spindles, all hand mules, and 500 looms; manufacturing lawns, organdines, plaid muslins, chambreys and ginghams, from yarns varying from No. 70 to 110. The product of the looms is some 23 yards each per day. Should the results of this section of the establishment prove satisfactory, (of which there appears to be no doubt,) two wings, 150 by 70 feet, and five stories high, will be erected, which will swell the concern to 50,000 spindles, 1,000 looms, and involve a capital of $1,000,000. The whole appropriated to the production of fine cotton fabrics.

The number of girls employed in the mill at present is about 380. They are very healthy looking, much more so than in any other establishment of the kind I ever visited. Some of them are very beautiful to look at, intelligent to converse with, and dress like republican queens, which all of them are. The neatness which seems to characterize their persons, their modest demeanor, their close attention to business in the mill, and lady-like appearance when out—at lecture, in the ball-room, concert, or private circle—is the cause of universal remark, and what none with eyes can avoid observing and admiring.

In point of steam power this company have made an important discovery, which economists will be glad to learn. They commenced operations about two years and a half ago. They had employed one of Hill & Andrews' powerful horizontal engines of 24 inch cylinder and 4 feet stroke. They used the same until last August, when the company became dissatisfied with it, and substituted one of Tufts' largest size stationary engines, of the same size cylinder and stroke. The former consumed over eight tons of coal per day. Notwithstanding this extravagant consumption the machinery worked slowly; the operatives complained, particularly those who worked by the piece, about slow and unsteady speed. Tufts' engine has been in operation since August, and given general satisfaction. There have been no complaints whatever. The machinery works smooth, steadier, and quicker. But the most important fact with reference to these two engines is the cost of running. Where Hill & Andrews' engine requires over 8 tons of coal per day, Tufts' consumes less than 4 tons, and sufficient heat is also obtained to warm the whole building. This astonishing difference seems hardly credible, but figures wont lie, when made by disinterested parties. This fact, with reference to coal, was furnished me by the fireman of both engines, whose business is to economize for the company, but not to give preference to engine builders. The difference is attributed in part to a change in the mode of heating up. Slow combustion has proved more economical than quick, unsteady fires. But the main difference lies in the construction of valves. I was forcibly struck with the uncommon neatness and great beauty of this ponderous and wonderful construction. It is the largest horizontal engine ever manufactured by Tufts, except the one used in Forbes' propeller, which plies Boston harbor as a tow-boat.

Great neatness and regularity characterize every apartment of this monster establishment. More time is allowed the operatives for meals than at any other establishment with which I have yet become acquainted. The operatives are highly spoken of by the town's people, which I am sorry to say is not always the case in other manufacturing places.

MAMMOTH SCYTHE MANUFACTORY IN MAINE.

At North Wayne, in Maine, is situated the scythe manufacturing establishment of Reuben B. Dunn, Esq., the largest of the kind in the world. The establishment consists, besides warehouses, furnishing shops, &c., of three principal buildings for manufacturing, two of which are one hundred and forty-four feet each in length. In these, and in departments connected with the establishment, are employed about one hundred men, many of whom have families settled at the place. A flourishing village has grown up within a few years, and is rapidly increasing. Twelve thousand dozen scythes are annually manufactured, to produce which are required 450,000 lbs. of iron, 75,000 lbs. of steel, 1,200 tons of hard coal, 10,000 bushels of charcoal, 100 tons of grindstones, and half a ton of borax. The last article is used in the process of welding. The establishment is to be enlarged so as to turn out 17,000 dozen scythes annually.

FACILITIES FOR MANUFACTURES IN THE WEST.

To Freeman Hunt, Esq., *Editor of the Merchants' Magazine, etc.*

Will you permit me, through the pages of your valuable Magazine, to call the attention of those who take an interest in the subject of American manufactures to a pamphlet published by Hamilton Smith, Esq., of Louisville, Kentucky, relative to cotton manufactures, &c., on the Ohio? Mr. Smith is one of the most prominent and enterprising citizens of Louisville, and a first rate practical business man. The pamphlet alluded to comprises about seventy pages, and is well written. Its special object is to point out the superior advantages for manufacturing purposes connected with the place called Cannelton, about one hundred miles below Louisville, in the State of Indiana, and on the western bank of the Ohio River. The author has spread before his readers much valuable information on the subjects of coal, steam-power, water-power, cotton manufactures, &c.; and considering that he has not been practically connected with the manufacturing business, has evinced a far more correct and extensive acquaintance with its details than could have been expected. But Mr. Smith has a strong and comprehensive mind, and a sound judgment; and, under the guidance of these, his spirit of industry, perseverance, and research, has accomplished that which few others, under similar circumstances, would have attempted. The gentleman would confer a great favor on the friends of American manufactures by the publication of a second edition of his work; and in which he could correct and revise the few practical errors of the first, by means of data from authentic sources not open to him when the first was written. It would confer a favor especially on those who desire to see the cotton manufacturing business successfully and permanently established in our western country.

Mr. S. is a member of a corporate body recently organized, under an act of the Legislature of Indiana, for the purpose of prosecuting the manufacture of cotton goods at Cannelton, the place alluded to above. This company has a capital stock of $250,000—all taken up. A contract has been closed for a mill of 10,000 spindles, to be commenced immediately, and to be put in operation during the coming year. Of all the localities in the United States for this business, there is probably no one equal to this, all things taken into the account. There is on the ground every desirable material for building, such as stone, timber, &c., in almost any quantity, as well as inexhaustible supplies of fire-stone and fire-clay. The situation is directly on the west bank of the Ohio, where the depth of the stream is from twelve to sixteen feet at low water, and is extremely handsome, picturesque, and salubrious. Provisions are abundant and cheap. It is in close proximity to the cotton-growing regions, and will command, as a market for its manufactures, the great valley of the Mississippi. But one of its most important advantages is an inexhaustible bed of coal, adequate to the generation of steam to drive millions of cotton spindles for centuries to come. And this coal, after careful analysis by Professor Silliman, Dr. Jackson, and other eminent chemists, is pronounced equal to the best cannel coal of Great Britain. This coal can be had on the spot for *four* cents per bushel, while an inferior article commands, in the New England market, *seventeen* cents. Thus, the fuel to generate steam-power at Cannelton will cost less, by *seventy-five* per cent, than on the Atlantic seaboard in New England. As about thirty bushels of coal make a ton, the cost per ton at Cannelton is *one dollar and twenty cents.* The transportation from Boston to Lowell is *one dollar and twenty-five cents, in addition to five dollars* per ton paid for the article in the Boston market.

One other advantage of much importance the manufacturer at Cannelton will possess over the manufacturer at the east, will very much enhance the profits of the former. A mill with ten thousand spindles will consume eight hundred and fifty tons of cotton per annum, and turn off five millions of yards of sheeting, No. 14—two yards to the pound. To transport this cloth from Lowell to Louisville costs one half of a cent per yard. That cost will be saved, of course. The transportation, commissions, insurance, wharfage, &c., on the cotton from New Orleans to Lowell will also amount to one half of a cent on a yard of cloth. These two items amount to one cent per yard, which, on the annual product, five millions of yards, will make an aggregate of *fifty thousand dollars* per annum—no less than one per cent on the entire capital of two hundred and fifty thousand dollars. Such a saving as this, the manufacturer need not be informed, is well worth looking after in such times as these.

There may be other localities in our country, not taken up, equal to this; but if there be any one now occupied, I have yet to learn the fact. Permit me to say, then, the reader is invited to peruse the pamphlet of Mr. Smith when he shall have issued a second edition, as I hope he will do, as I believe the first is exhausted, or to peruse the first if he can ob-

tain it. Having done so, and being desirous to invest his capital in the manufacturing business, he will, I venture to predict without hesitation, seek a participation in the stock of some one of the companies that will, ere long, spring up at Cannelton. The place, ere long, will become the Lowell of the West—probably the Manchester of America.

The title of the pamphlet alluded to is, "*The Relative cost of Steam and Water-Power; the Illinois Coal Fields; and the Advantages offered by the West, particularly on the Lower Ohio, for Manufacturing.*" C. T. J.

MANUFACTURES IN THE SOUTHERN STATES.

We take pleasure in recording the evidence which is constantly afforded of late, in various parts of the country, that public opinion is thoroughly awakening to the value of manufactures in the South. The experiment which has been successfully made at Tuscaloosa and other portions of Alabama, in employing girls as operatives, fully bears out the views of the editor of the Augusta Chronicle and Sentinel, contained in the following extract:—

"With common prudence and perseverance, the regions of the country where cotton and human food are cheapest will be the most successful in fabricating all the heavier goods made of this great southern staple. Its manufacture in this State, we are assured by men familiar with the cost of growing cotton and making it into cloth, is more profitable than its culture at ordinary prices. We have watched the operations of the factory recently started in this city with lively interest. Appreciating the difficulties of a branch of business, at which so many new and raw hands would have to learn the trade, we feared that a supply of good white operatives could not be had to work in the mill. Much, too, has been said about the unwillingness of poor families to engage in this kind of employment. Experience, however, has happily falsified these sinister predictions. There are more applicants for work than the company can employ; and the success of Georgia girls in learning to spin, weave, &c., is most creditable to their tact, intelligence, and industry. There is one who earns regularly $5 per week. She is the daughter of a widow woman, who, with the light labor of a little son some ten years old, added to that of herself, is in the receipt of some $34 a month from this cotton factory. It must be borne in mind that neither of the three members of this small family is compelled to work a day longer in this establishment than is agreeable. We ask, is it no advantage to this community that its most needy families—and no one is above the possibility of want—be furnished with the means and situation to earn, without discredit or severe toil, each $400 a year? That it is a great blessing to such families, no one will deny."

THE ROYAL SCHOOL OF MINES AT MADRID.

This splendid and most useful institution for the training of those who are about devoting themselves to mining operations, has received a grant from the government, for the purpose of extending its size, and also to establish a school of practical engineering, civil as well as mining—so that the pupils attending the lectures, or boarders in the college, may have an opportunity of becoming well acquainted with the different branches of these sciences. The School of Mines at Madrid has stood for many years pre-eminent among the institutions of Europe for the study of mining, as it is to Spain that Mexico, and, indeed, the whole of South America, from the time of the discovery of that vast and rich mineral continent of the New World by Christopher Columbus down to the throwing off the yoke of the mother country, is indebted for the extensive explorations and working of the mines, which have rendered so renowned in modern times, and in which, at present, so large a British capital is invested by the companies who continue the former works of the old Spaniards and primitive aborigines. The Spanish crown having lost the whole of her rich possessions, with the exceptions of the Island of Cuba, the Philippine Islands, &c., is now determined to turn to the utmost advantage its own local mineral resources—and to accomplish which, it not only gives great encouragement to adventurers, native and foreign, to embark in mining pursuits, but is also extending the opportunities for studying the science. The collection of minerals at Madrid is considered one of the finest in the world, and they are assorted with the utmost care by experienced mineralogists and travellers, who have collected specimens of every description of ores and minerals particular to each country which they have visited. The School of Mines of Paris, Vienna, Berlin, and even St. Petersburgh, are making great additions; but that of Madrid

will not be inferior to any, as the engineering department will contain a select model-room of the various improvements which have been made in England in every description of machinery, but particularly those most applicable to mining operations, so that the pupils will have a full opportunity to study this branch of science.

CHARLESTON COTTON MANUFACTURING COMPANY.

This establishment has sprung up with most astonishing rapidity. It is not yet a year since the first ground was broken for the erection of the buildings—now the mill is almost in entire operation. The building, including wings, is 196 feet long, 50 feet wide, and 3 stories high. It is located in the most charming spot in the vicinity of the city; far enough from its noise and dust to be pleasant, and near enough to draw its supply of operatives. None but whites are employed in or about the mill, and the rate of wages will compare favorably with the northern factories. The capacity of the factory is 3,165 spindles and 100 looms. The cloth is of the best quality of goods from No. 14 yarns, weighing 4-4, 2,60 100 yards to the pound, 7-8, 3. 12 100. The machinery and engine are all of the most superb description, and the whole is now running in an admirable manner. Gen. C. J. James, the contractor for this machinery, certainly deserves the highest credit for his skill and faithfulness, and the confidence and encouragement of our Southern friends, who intend to start steam or water mills. The legislature of South Carolina have granted the privilege to this company to extend their capital to $500,000, and it is probable they will soon commence other works in connection with their present operations. The officers are, James Chapman, President; James H. Taylor, Henry Cobia, Joseph Prevort, James T. Welsman, Directors; John W. Caldwell, Secretary and Treasurer; J. H. Taylor, Selling Agent.

PROCESS OF COVERING METALS WITH BRASS OR BRONZE.

M. M. Brunel, Bisson & Gaugain, propose the employment, in a solution of water, of 500 parts of carbonate of potash, 20 parts of chloride of copper, 40 parts of sulphate of zinc, and 250 parts of the nitrate of ammonia, instead of the cyanids before used. To obtain bronze a salt of tin is to be substituted for that of the sulphate of zinc. By these solutions, wrought or cast iron, steel, lead, zinc, tin, and the alloys of these metals may with facility be coated with brass or bronze after being scoured in a suitable manner, according to the nature of the metal. The process must be proceeded with at an ordinary temperature. Connect the article to be coated with the negative pole of a Bursen battery, so that the positive decomposing pole be either a plate of brass or bronze. Metals thus treated will assume a beautiful appearance, equal in beauty to the finest bronze. Another very important advantage offered is their preservation from oxydation in the interior of habitations.

RICE CULTURE IN FRANCE.

This cultivation has been recently introduced on the Delta of the Rhone. It began in 1844 and '45 with one or two acres under the care of a single gardener. In 1847 there were 1,250 acres of land cultivated, employing 600 laborers, and producing 10,000 metric quintals of rice. In 1848 there have been 2,500 acres cultivated, employing 1,500 laborers, and bidding fair to produce 20,000 metric quintals. The irrigation was at first effected by a single pump moved by a horse. It is now effected by steam engines of 120 horse power. The Delta of the Rhone consists of about 450,000 acres, which is now nearly waste, being grazed over by a few cattle and wild horses. At least 250,000, by the cultivation of rice might be reclaimed, and be made to yield subsistence for 1,250,000 persons. A plan has been submitted to the National Assembly, whereby 87,500 acres may be secured from the Mediterranean and made available for this cultivation, by the employment of 5,000 men, at an expense of some 600,000 francs.

THE USES OF GOLD.

Gold possesses intrinsic value independent of its rarity. Its color, high specific gravity, ductility and malleability, fusibility, and resistance to chemical action, especially to atmospheric agents, render it very valuable, and the best medium of exchange. Pure gold is too soft for use as coin or plate, and hence the advantage of alloying it with copper, while

its specific gravity offers a means of testing its quality. Although a rare metal, its exceeding malleability allows its extensive employment for gilding surfaces at little cost, while its unalterability prevents such surface from readily tarnishing. For many objects of ornament and utility, electrotype gilding has superseded leaf and fire gilding.

MERCANTILE MISCELLANIES.

THE CLOTHING TRADE.

This branch of the manufactures of our country has of late years increased more rapidly and extensively than the great increase of our commerce and population would seem even to justify. It requires, however, but a glance at the causes to show that this fact is in keeping with the spirit of the age—at least in this country. The clothing trade throughout the Union has in a great measure swallowed up two other branches, namely, that of the cloth retailer and the merchant tailor, blending, as it were, the two branches. It used to be one job to seek for the cloth, and another to repair to the tailor, causing not unfrequently great loss of time and much vexation. We now see everywhere, not only the economist, but the man of fashion, saving his time and his money by procuring the very articles he requires all ready made to his hand. The growing importance of the clothing trade, and the fact that New York is the great centre of it, are sufficient to elicit from us more than a mere passing notice. We are credibly informed that New York supplies clothing for over two-thirds of the Union, the aggregate of the value of which is far greater than any other branch of manufacture in the city. The number of hands employed, or families supported in the manufacture of clothing in New York, we have no reliable data to show; but we will merely take a glance at one of the largest and most enterprising clothing establishments in our city, namely, the house of *D. & J. Devlin*, in John-street, as proof in part of the truth of our position.

The Messrs. Devlin do both a large wholesale, and a very extensive and fashionable retail, trade. Their establishment, at the corner of John and Nassau-streets, occupies two houses; one entire floor is devoted to the city and retail business; another to the cloth and custom department; another to the wholesale department; another, containing several well lighted rooms, to the cutting department; and the large basement is stored with their immense stock of heavy woollens and trimmings. The economy of such an establishment requires great attention to detail, and the admirable management of the enterprising proprietors is a model in its way. Their cutters are classified into four departments: one department exclusively for coats; a second for pants; a third for vests; and a fourth for trimmings; with a foreman, whose duty it is to supply the cutters with work, to employ hands, and to give out and receive the garments from them. The hands are also classed (according to their skill, capacity, and promptness) into grades—they earn from $3 up to $15 per week; and some piece-masters who have many hands under them, draw from $25 to $150 per week. The number of hands employed in working for this establishment, including those employed by the piece-masters, rarely falls short of 2,000, many of these supporting large families. They are scarcely ever out of work, for the wholesale and retail trade so dovetail into each other, that before the country trade is over, the city trade commences, and *vice versa*. Their corps of salesmen, clerks, &c., are well appointed and complete. This will give some idea of the importance of this manufacture in New York, and when we add to it the fact that the Messrs. Devlin, like many other establishments in the city, supply the retail merchants in the most widely separated States, North, South, and West, with stocks of clothing, especially suited to their various localities, and this to an unlimited extent, we hazard little in saying that the clothing trade is fast increasing in importance, not only to the manufacturing interests, but to the commerce of our country.

IMPORTANCE OF LOOKING AHEAD IN TRADE.

The editor of the *Dry Goods Reporter* reads editorially, in a late number of that journal, a very good lecture on the importance of caution and calculation in trade. Some of the deceptions practised upon themselves by young and inexperienced merchants, as to the result of their ventures, are illustrated in the following pertinent anecdotes:—

A young friend of ours called on us the other day in high glee; he was about concluding arrangements with two others to embark in the jobbing trade, and was quite sanguine of brilliant success. As we did not express full faith in his anticipations, he rather chided us for our doubts, whereupon we questioned him a little as to his prospects. At our suggestion he took pen and paper and put down first of all his proposed expenses. We could see that he had not done this before, as he seemed quite startled to find that even at the moderate estimates he had made, the total expenses for rent, clerk hire, and living of the several partners, amounted to the snug sum of $8,200. "Now for the amount of business," said we. "Oh, as to that," he replied, "we *hope* to sell $300,000 per annum." "But what amount of trade do all of you *at present* influence?" we asked; "make now a careful estimate of the business you can rely upon with some degree of certainty." He did so, and to his surprise it did not quite reach $125,000. "Now what profit can you average upon this?" After some debate, this was set down at *seven and a half per cent.* This gave the sum of $9,375. "Now what shall we call the losses?" These were settled at 2½ per cent of sales, amounting to $3,125, leaving the nett income at $6,250, or $1,950 *less* than enough to pay his estimated expenses. He left us, proposing to show the estimate to his colleagues. He did so, and after figuring awhile without arriving at any more satisfactory result, they finally abandoned the undertaking. We have no hesitation in saying that if all who are about to embark in trade, would thus boldly look at the figures, instead of closing their eyes, and *hoping* for the best, we should hear of fewer disasters among business men, and there would be less complaint that "trade is overdone."

A friend of ours, in a season gone by, mentioned that he had ordered of the foreign agent a large lot of Belgian cloths; but upon being questioned he could not tell whether there was a scarcity in the market of that description of goods, or estimate within 20 per cent what it would cost to pay the duty and deliver them here; and of course was totally ignorant as to the relative difference between what they would cost him and their market value. He had ordered them for the name of the thing, without date or calculation of any kind: other people made money on cloths, and why should not he? The cloths would *of course* be wanted, and he should have to pay no more duty than any other man who might import them. We tried in vain to show him that a great deal of nice discrimination, and a thorough investigation of all facts that might bear upon the market value of such goods, or create a demand for them, were necessary to a successful venture. He had determined to be an importer, and we left him to the teachings of that most expensive tutor—experience. And dearly did the lesson cost him, for he realized a *loss* of about 20 per cent on his entire importation. He will "*look ahead*" before he gives another order of this sort, which he now very justly compares to *a leap in the dark.*

CAPACITY AND RESOURCES OF THE WEST.

The capacity of the West, from the Alleghanies to the Rocky Mountains, from the frozen lakes of the North to the tepid waters of the Gulf of Mexico! Every soil, every climate, every variety of surface. Of all the great products of the world, coffee is the only one which does not, or may not grow there. Take the people of Britain, Ireland, France, Holland, Germany, Italy, and Spain, and place the whole in the valley beyond the Appalachians, and it would continue to ask for "more." Ohio alone, without sinking a pit below the level of her valleys, could supply coal equal to the amount dug from the mines of England and Wales for twenty-five hundred years, and Ohio is but a pigmy, in the way of bitumen, compared with western Pennsylvania and Virginia. Iron abounds from Tennessee to Lake Erie, and forms the very mountains of Missouri and Arkansas. Salt wells up from secret store-houses in every northwestern State. Lead enough to shoot the human race extinct, is raised from the great metallic dykes of Illinois and Wisconsin. Copper and silver beckon all trusting capitalists to the shores of Lake Superior. And mark the water courses, the chain of lakes, the immense plains graded for railroads by Nature's own hand, the reservoirs of water waiting for canals to use them. Already the farmer far in the interior woods of Ohio or Indiana, may ship his produce at his own door to reach Boston, New York, Philadelphia, Baltimore, or New Orleans, and every mile of its transit shall be by canal, steamboat, and rail car.

MORGAN'S BOOK ESTABLISHMENT.

The following sketch of MORGAN'S, the great periodical depot of New Orleans, well known to all travellers and the "trade," is from a late number of the *Literary World*, a passage from a series of papers in that journal published under the title of the "Manhattaner in New Orleans:"—

Literature (of a kind) and drinking rooms touch noses in cosy friendship in New Orleans. The same building that screens post-office mysteries from the vulgar gaze, protects an extensive depot for periodicals, and by its side a bar. Within this building every day much-abused Cave Johnson's clerks, and over-praised bar-boys, and the good-natured, smiling Morgan, vie with each other in their assiduity to customers. Few who visit New Orleans fail of knowing "Morgan;" a man who long since took the infection of good humor, and makes it contagious everywhere he goes. Turn into the Exchange building from Royal-street; in the passage way you pass the dirty man whose idiosyncracy seems to lie in the manufacture and sale of buckskin purses and suspenders, upon whose wares press the crowd that patronize newspaper literature through the postman's little hole, behind which heaps of pennies darken the atmosphere; and the negro girl, with her flowers and cakes, and who is always knitting, (what it is you can't unravel;) and the cigar man—all of whom blockade the entrance to the post-office and bar (on which latter you turn your back to drop a letter or to call your box number), and make the passage in and out, a thing to be talked over for a day afterwards; and through a pushing crowd, (if 'tis steamer day, and every day is steamer day just now;) and holding your nose against the seductive savor of mint and lemons; and shutting your eyes to forlorn marine views and portraits hanging all about, (you'd think for sale, only there is no lunatic asylum in the vicinity;) after which you dodge through a smoky door, and there you are at "Morgan's." Straight before you on a table all the papers of the age—English, Irish, French, and Spanish; City, and New York; the Mammoth Weeklies, too; "Punch" nudging the "Nation;" "Yankee Doodle" grinning over the "Western Continent;" the "Sun" shining benignantly on the "Literary World," and the "Baptist Advocate" looking black-typed sermons for "Sunday Times." By their side a wooden box, into which merrily drop the silver coin, as the crowds go by. Further on, the modern novels, not to be counted, but for measurement by the yard. Around a little railed in corner, the magazines. Hard by them the yellow-covered literature of the day—translations from the French, no way improved in morals by their transition from sparkling Parisian to slow-coach English. In sundry corners, cobweb-penned and shadow-darkened, stand in military array editions of annuals and school-books. Leaning over the various counters a listless crowd. A nervous lady is dipping into Godey, and her hat-ribbons instinctively fly out as she unrolls the fashion plate. A medical student almost makes your heart to bleed, so brow-knittingly he pores over the "Lancet." An English cotton-broker is chuckling over the toryism of Blackwood; his Irish neighbor scratching his head enthusiastically over the "Dublin Nation." Divers Hoosiers, deeply absorbed in the pages of some such tale as "The Eagle of Popocatapetl, or the Cave of Blue Ruin," with covers quite "sicklied o'er with the pale cast of thought." Penniless loungers reading by the hour, and criticising half audibly as they go, as independent as if good-natured Morgan, whose arm trembles with the wrappings and tyings up it suffers minute by minute, had their reading's worth all snugly nestled in his money box, and they with an honorable receipt upon their day's conscience.

A YANKEE'S METHOD OF SELLING GOODS.

The following anecdote has been going the rounds of the newspaper press without credit. As it is too good to be lost, we venture to give it a more permanent record in the pages of the Merchants' Magazine:—

One Mr. P—— G——, a gentleman of quality, well known to many citizens of New Hampshire as a successful merchant of C., owed much of his good fortune to his knowledge of human nature, of which he always endeavored to take advantage. Once he, with another person, opened a "branch store" in a town in the north part of the State, which was mostly filled with the unsaleable goods from their principal store in C. These goods were as "good as new" among the rustics, and sold quite as well, if we except a large lot of that *unique* article of "gentleman's wear" denominated hog-skin caps. By the way, we remember of wearing *one of 'em* ourself, and the reader of course is also aware what a hog-skin cap is, or was.

G. generally kept himself at his home in C., but often visiting his country store, staying

sometimes a week or more, and attending the country church; and, as a matter of course, was looked at with astonishment by the go-to-meeting young men of the town. Indeed, he was honored by their imitation in all his acts, dress, &c. What Mr. G. wore to church of a Sunday, gentleman as he was, was the prevailing fashion there until he introduced a new style at his next visit.

G. asked his partner about the business prospects and other matters in which he was interested, and received the reply that things went pretty quick at good prices.

"Keep those old caps yet. I didn't make a great bargain in buying them," said G. espying a large box filled with the caps. "Can't you get rid of them at any price?"

"Haven't sold one yet; people don't like them, and I have had a great notion of throwing them out of the back window, and getting rid of the trouble of them. They won't go here I think."

G. looked at them a moment, and exclaimed, "I have it! You have kept them out of sight, I see! Next Monday you get them out and brush them up, and I'll send you a score of customers before the week is out."

The next Sunday G. appeared in church with one of these identical hog-skin caps tipped gracefully on one side of his head, and a splendid gold watch chain dangling from his vest pocket. He was, as usual, the observed of all observers; and it is needless to say that a fortnight after, when in his own store in C., he received an order for two dozen more of his "imperial" caps.

SYSTEM OF NEATNESS IN THE SALESROOM.

We have been very much surprised in calling on merchants of our acquaintance, says the merchant editor of the *Dry Goods Reporter*, to witness the slovenly appearance of their salesroom. Heaps of goods were lying here and there in heterogeneous masses—cobwebs, coatings of dust, and odds and end of all sorts occupying the window-seats, while groups of lazy clerks were *leaning* or *sitting* upon the most convenient piles of goods. This latter habit is never allowed in any country except this. It is owing, doubtless, to the fact that the duties of a salesman or shopkeeper are seldom properly learned before the boy must be a man and set up in business for himself. A well-taught warehouse-man or clerk will *never leave elbow prints* upon a pile of calicoes, or *sit* upon goods exposed for sale. If a boy cannot be broken of this habit, he should be discharged at once. It is as intolerable as it is frequent, and every merchant ought to take the matter in hand and correct it by some means. It is an old adage that "goods well bought are half sold." Be this as it may, it certainly gives another turn to the wheel to have them handsomely arranged, and looking *fresh* and new. In defiance of this self-evident truth, we have seen some merchants tolerate such treatment of their stock by clerks and visiters, that a purchase two or three days old looked as if it had "kept shop" since the flood. The store or show-room should, in the first place, be thoroughly *cleansed*, then it should be *kept so*, by all proper care and neatness. Goods should be arranged with good taste and an eye to the general effect. Every one *employed* in the store should be made to stand on the support nature gave him, or if he be weak or lame to sit on a stool or in a chair. If visiters annoy by sitting, leaning, or lounging upon the goods, placards should be put up forbidding it; and a person who has so little good taste, or so much carelessness as to offend in this way, should not take umbrage if he be reminded of his fault. And finally, clerks should be *educated* in this as well as many other respects before they are considered competent to *graduate*. Learning the private mark upon the goods, and being able to call all the customers by their right names, do not constitute the trade of a salesman any more than the cultivation of a mustache. Long years of *laborious practice* under *good instruction* will alone accomplish it, and it were well if this were more generally understood.

CHANGE IN BUSINESS.

Generally speaking, who are the men who have made the most money, and stand the highest in the community? Are they those who have stuck to one kind of business—no matter what—without branching off in one direction and another? How often do we find men bred to one kind of business, which they have diligently followed for years, entering other pursuits, and changing their whole course, and thus losing all they had before made. Ministers turn merchants, block-makers become ministers—mechanics, tradesmen, &c., and very few are benefitted by the change.

We would advise all to stick to the business most appropriate to their talents; for in no other way can they succeed. There is more honor and virtue and true glory on the shoemaker's bench than in the pulpit, where the former business is more appropriate to the

talents of the individual. There is too great a disposition to change among the Yankees. There is no business which, if continued in diligently, would not yield a good living. Poverty generally is the result of change and miscalculation. Even if one kind of business should be just as profitable as another, who would not rather be the first rate shoemaker in the place, or the first joiner, than a fourth rate namby pamby preacher?—*Port. Tribune.*

A MAN WHO HAS FAILED.

Let a man fail in business, what a wonderful effect it has on his former friends and creditors! Men who have taken him by the arm, laughed and chatted with him by the hour, shrug up the shoulder and pass on with a chilling "how do ye do." Every trifle of a bill is hunted up and presented, that would not have seen daylight for months to come, but for the misfortune of the debtor. If it is paid, well and good—if not, the scowl of a sheriff, perhaps, meets him at the first corner. A man who never failed, knows but little of human nature. In prosperity, he sails along, gently wafted by favoring gales, receiving smiles and kind words from everybody. He prides himself on his good name and spotless character, and makes his boasts that he has not an enemy in the world. Alas! the change. He looks at the world in a different light, when the reverses come upon him. He reads suspicion on every brow. He hardly knows how to move; or whether to do this thing or the other, for there are spies about him, and a writ is ready for his back. To understand what kind of stuff the world of mind is made of, a person must be unfortunate and stop payment once in his lifetime. If he have friends, then they are made manifest. A failure is a moral sieve; it brings out the wheat and shows the chaff. A man thus learns that not words and pretended good will constitute real friendship.—*D. C. Colesworthy.*

LONDON AND OTHER SHOPS.

When Charles Lamb was asked his opinion of the Vale of Keswick and the Hills of Ambleside, he frankly acknowledged that there was more pleasure for him in the London shop windows, when lighted up and full in the frosty evenings before Christmas. This answer, though odd and unexpected, is not surprising. Where, in the wide world, is there such an exposition of artistic wealth and magnificence as is seen daily in the London shop windows? No doubt some of the shops of Paris and New York rival anything of the kind in the British metropolis; but, taken as a whole, the stock and the array of the London shops are unmatchable. All Orientals and Africans, on visiting Europe for the first time, are most struck with the splendor of the shops. There was nothing unreasonable in the request of an African king's son, whose tribe had been serviceable to the French settlements on the Senegal, in return for which the young prince was taken under the protection of Louis XIV., and sent to receive an education in Paris. After having seen and been astonished at the French capital, Louis inquired of him what would be the most desirable present for his father, promising that whatever he selected should be sent; when the youth exclaimed, with a look of the most imploring earnestness, "Mighty monarch, let me send a shop!"—*Chambers.*

A CURIOUS CUSTOM-HOUSE CASE.

A merchant in London recently entered 700 foreign watches, apparently gold, for payment of duty, valuing them at £770, and at that rate offering to pass them for duty. The custom-house officers, conceiving them in their wisdom to be much undervalued, took the watches to account, and paid the merchant importer the £770, with the 10 per cent legally exigible and additional in such case. On Thursday, (November, 1848,) the watches were, in the usual way, put up to auction at the Commercial-rooms, Mincing-lane, when for the first time it was discovered that the watches were of brass, tinselled over with gold, and not worth £70. It remains to be seen whether the loss in this, as in other cases, will be charged to the Treasury, the profits, when such there are, being always taken to account of the customs fund.

STATISTICS OF FOREIGN RAILROADS.

At the end of the year 1847, 1,395 miles of rail had been opened in France, 3,891 in Germany, 546 in Belgium, 342 in Italy, about 250 in Hungary, 213 in Poland, 183 in Holland, 138 in Denmark, 51 in all Russia, and 18 in Switzerland.

THE BOOK TRADE.

1.—*The Romance of Yatching: Voyage the First.* By JOSEPH C. HART, Author of "Miriam Coffin," etc. New York: Harper & Brothers.

The object of this volume harmonizes so well with the design of the Merchants' Magazine, that we should be tempted to dip into its pages at some length, were we not quite sure that a large portion of our readers will enjoy the luxury of reading the entire work. To sail a ship scientifically, to contribute to the pleasure and comfort of passengers at sea, to do justice to the American commanders, and to elevate them, and to render to the merchant service its due meed of meritorious regard, appears to have been the leading object with the author. Yet Mr. Hart, evidently master of the subject he treats of, has not confined himself entirely to matters of a technical nature. He has gone into Spain and brought away much historical and other information, which it is pleasant to hear related from his vigorous pen. The author of the "Romance of Yachting" may well suppose, as he does in his preface, that his work will be found in the hands of most people travelling by sea; for the great amount of information which he furnishes, in regard to the phenomena of the ocean, is quite familiarly illustrated, and will be sought after with avidity by passengers and yachters generally.

2.—*The Moral, Social, and Professional Duties of Attorneys and Solicitors.* By SAMUEL WARREN, Esq., F. R. S., of the Lower Temple, Barrister at Law. 18mo., pp. 306. New York: Harper & Brothers.

The high reputation, literary and legal, which the author of this volume has so justly acquired, will secure for this last production of his pen a very general popularity among the members of the bar in England and America. It consists of a course of lectures on the moral, social, and professional duties of attorneys and solicitors, delivered in the Hall of the Incorporated Law Society of the United Kingdom. The lectures are well calculated to maintain the station and character of the profession, and especially to stimulate and benefit its younger members, by aiding and directing their study of the law, and promoting honorable practice. A leading object of the author is, to show both attorneys and solicitors, and their clients, what are their reciprocal rights and duties; that both parties are bound to be honorable, liberal, reasonable, and conscientious in their professional intercourse and dealings with each other; and, in a word, that the true interests of the public and the profession are identical.

3.—*History of King Charles the First of England.* By JACOB ABBOTT. With Engravings. New York: Harper & Brothers.

Another of Abbott's admirable series of histories. No one better understands the intellectual wants of the class for whom he writes than Jacob Abbott. His style, without being puerile, is simple and elegant. Although this work is designed for the young, there are few more advanced in years or in intellectual culture who will not find the present history an agreeable, if not profitable companion for "leisure hours."

4.—*Our Cousins in Ohio.* By MARY HOWITT. From the Diary of an American Mother. New York: Collins & Brother.

There are children who prefer truth to fiction, especially when the former is arrayed in the pleasing garb of the latter. Now this book, says the compiler, "is entirely true," and we have no doubt will interest the child and satisfy the parent. It is the twelve months' chronicle of the domestic life of a beloved sister of Mary Howitt, who emigrated to Ohio some years since, but who has recently been removed to another, if not better world. This is the record of her last year on earth. It is an interesting and instructive diary of scenes and events, rural and domestic, rendered pleasant and happy by all those social virtues and affections that lend to a country life all its charms.

5.—*The Old Stone House; or the Patriot's Fireside.* By JOSEPH ALDEN, D. D. New York: M. W. Dodd.

The design of this little work is to inspire the young reader with the spirit of patriotism, by disclosing to him, in a clear and attractive form, some of the elementary principles of the science of government, and the origin and formation of the Constitution of the United States. The pleasing narrative is here rendered subservient to the cause of patriotism, intelligence, and virtue.

6.—*Illustrated Poems.* By Mrs. L. H. Sigourney. With Designs by Felix O. C. Darley. Engraved by American artists. 8vo., pp. 400. Philadelphia: Carey & Hart.

This volume most deservedly takes a very high position among the many illustrated books of the season, and in fact we have never seen the efforts of designers, engravers, printers, paper-makers, and binders united with such triumphant success. Mr. Darley, in his delicate and appropriate designs, has fairly out done all his former productions, and placed his reputation for this style of illustration upon a firm and enduring footing. In the engraving of these designs, the services of the most celebrated engravers of our land have been engaged, and the mere mention of the names of Cheney, Cushman, Humphreys, Dougal, Armstrong, Smillie, and Hinshelwood, will be sufficient. Where all the plates have been executed in a manner so exquisite, it would be a difficult matter to decide which were the most beautiful, and we have no desire to particularize between a succession of such gems. Persons of different tastes will prefer different illustrations in the book, and there is at the same time a sweet harmony running through the whole. The printer and paper-maker have taken care that their departments shall not suffer by, and be unworthy of, association with such fine specimens of art, and we here have the very luxury of letter-press. It would be unnecessary for us at this late day to attempt to add one tittle to the already high reputation of the authoress, who stands perhaps more prominently before the public, with an enviable reputation, than any other poetess of our country. We admire the neatness with which Mrs. Sigourney has dedicated her volume to the poet Rogers, which is this:—"To Samuel Rogers, the most venerable poet of Europe, and the friend of America, whose strain read in the solitude of early years, and whose kind words to the stranger in his own home, are alike held among the "Pleasures of Memory," this volume is respectfully inscribed."

7.—*The Female Poets of America.* By Rufus W. Griswold. 8vo., pp. 400. Philadelphia: Carey & Hart.

Mr. Griswold has made greater and more important contributions towards preserving a record of the literature of America than any other man in the country, and we are happy to know that the public have shown a just appreciation of his efforts, in the very liberal patronage extended towards those books, "The Poets and Poetry of America," and "The Prose Writers of America." In the present volume he has given selections from more than ninety of the poetesses of America, the writings and even the names of some of whom had almost been lost in the lapse of time, and in the dusty shelves of old libraries. Accompanying these selections are ably and vigorously written biographical and critical notices of these authoresses and their poetry. This collection will be found a rare addition to our literature, and we have seen none so full, both as regards the specimens and the information contained in the remarks of the editor. The work has in every respect been edited in an able and independent manner, although there are those who will be dissatisfied that they have not themselves been included, but this must of necessity be the case. Such a task could not be performed in a proper manner without giving offence to some. In point of mechanical execution this volume is exceedingly neat and beautiful. It is illustrated by engravings in the first rate style of the art; the paper upon which the work is printed is of fine white texture, while the type is clear, and the binding handsome.

8.—*The Female Poets of Great Britain, Chronologically Arranged; with Copious Selections and Critical Remarks.* By Frederick Rowton. With additions by an American editor. One volume, 8vo., pp. 500. Philadelphia: Carey & Hart.

Mr. Rowton has here presented us with admirably selected specimens of nearly one hundred of the most celebrated female poets of Great Britain, from the time of Lady Juliana Berners, (1460,) the first of whom there is any record, to the Mitfords, the Howitts, the Cooks, the Barretts, and others of the present day. His biographical and critical sketches furnish at the same time, in one unbroken chain, a very good historical view of those different woman who have contributed to the poetical literature of England during four centuries of her existence. In addition to the able manner in which the duty of the editor has been performed, the work, as a specimen of book making, is truly beautiful. Such paper, typography, binding, and illustrations as to leave nothing for the most fastidious taste to desire. The volume is gotten up in a style differing but slightly from Messrs. Carey & Hart's series of illustrated poets, among which are included Longfellow, Bryant, Willis, and more recently Mrs. Sigourney. The illustrations in the present work are ten in number, including a portrait of Miss Landon, and one from pictures by Maclise, Sully, Huntington, Leutze, Malbone, and Howse, possessing great beauty both as regards designs and engravings. In conclusion, this volume unites both the useful and ornamental; and there are few books, if any, that would serve for a more neat or appropriate Christmas present for a lady.

9.—*Chambers' Miscellany of Useful and Entertaining Knowledge.* Edited by WILLIAM CHAMBERS, Joint Editor of "Chambers' Edinburgh Journal." In ten duodecimo volumes. Boston: Gould, Kendall, & Lincoln.

The handsome American reprint of this work, in parts, has been brought to a close, and we now have before us the complete series, in ten beautifully bound volumes. It should be stated in this place, that the Boston edition is a perfect *fac simile* of that published in Edinburgh. The original design of the Miscellany was, (we quote from the editor,) "to supply the increasing demand for useful, instructive, and entertaining reading, and to bring all the aids of literature to bear on the cultivation of the feelings and understanding of the people—to impress correct views on important moral and social questions—suppress every species of strife and savagery—cheer the lagging and desponding by the relation of tales drawn from the imagination of popular writers—revive the fancy by descriptions of interesting foreign scenes—give zest to every day occupations by ballad and lyrical poetry—in short, to furnish an unobtrusive friend and guide, a lively fireside companion, as far as that object can be attained through the instrumentality of books." We do not hesitate to say, after a careful examination of every volume, that the pledge indicated in the design has been fully redeemed. The liberal, enlightened, and philanthropic views of the editor will be a sufficient guaranty, to those who know anything of the literary labors of Robert Chambers, that the work is free from narrow, sectarian, or partisan dogmas and sentiments; and that it contains nothing that any pure, right-minded person can on the whole find it in his heart to condemn. As a collection of well-written biographies, tales, poems and essays on important practical, every day affairs, it is the best for popular reading that we have ever met with. The seriously grave and the innocently gay—the young and the old, will here find in the dishing, a plentiful, well-spread board, that will satisfy their varied tastes, without palling the appetite for wholesome nutriment. If the head of a family of sons and daughters, without any other book than the Bible in possession, should ask our advice as to the best appropriation of a small sum for books, (say six dollars, the price of this collection,) we should say at once, invest it in the ten volumes of Chambers' Miscellany.

10.—*The American Female Poets: with Biographical and Critical Notices.* By CAROLINE MAY. 8vo., pp. 532. Philadelphia: Lindsay & Blakiston.

11.—*The British Female Poets: with Biographical and Critical Notices.* By GEORGE W. BETHUNE. 8vo., pp. 490. Philadelphia: Lindsay & Blakiston.

These volumes are among the most beautiful specimens of the highly cultivated state of the arts in our own country, as regards the texture of the paper, the distinctness of the typography, and the richness of the binding, that we have recently seen. The first named volume, prepared by Miss May, contains brief biographical sketches of seventy-three of the female poets of America, with copious selections from their writings, either such as the compiler or the writers deemed the best or most successful displays of poetic inspiration and power. The earliest poetess introduced is Ann Bradstreet, wife of Simon Bradstreet, governor of Massachusetts colony, born in 1612. The selections are made with taste and discrimination, and furnish very fair specimens of the genius of our countrywomen. The volume is embellished with a beautiful mezzotint of Frances S. Osgood, and another, the "Poet's Home."

"The British Female Poets" of the Rev. Dr. Bethune, a gentleman of fine taste, embraces comprehensive biographical notices of sixty female poets, commencing with Juliana Berners, who flourished in the 14th century, and closing with Elizabeth B. Barrett. In the selection of the pieces, the first object of the compiler has been to give fair examples of each writer's peculiar characteristics; and, where the rule could be followed without too great loss, put aside those which are more frequently met with, for pieces of equal merit, less familiar to the reader. Two more beautiful gift books for this, and all seasons could scarcely be selected; and we are pleased to learn that the enterprise and liberality of the publishers is duly appreciated by the patrons of polite literature.

12.—*Horæ Paulinæ; or, the Truth of the Scripture History of St. Paul Evinced.* By WILLIAM PALEY, D. D., Archdeacon of Carlisle. 12mo., pp. 260. New York: Robert Carter & Brothers.

This is the first edition of a work, considered by some as Paley's ablest production, that has been re-produced in this country distinct from his entire works. Let no one suppose, from its Latin title, that it is too scholarly to be understood by the unlettered reader; on the contrary, the unlearned Christian may read it with edification; for, like everything from the clear head of its author, it is as lucid, and as easy of being comprehended, as any of the sublimely simple precepts of Christianity.

13.—*Poems.* By JOHN G. WHITTIER. Illustrated by H. BILLINGS. 8vo., pp. 384. Boston: Benjamin B. Mussey & Co.

Whittier is in our judgment, *par excellence*, the Poet of Freedom, and his muse is consecrated to Liberty in its purest and largest sense. In his own strong and truthful "Proem," (the only preface to this volume,)

> "* * * here at least an earnest sense
> Of human right and weal is shown;
> A hate of tyranny intense,
> And hearty in its vehemence,
> As if my brother's pain and sorrow were my own."

In noticing this collection of his poems, Bryant, whose taste and judgment no one will presume to question, says:—"The works of Whittier, though he is of the denomination of Friends, have something martial in their music; they often stir the blood like the sound of a trumpet. They summon men, however, not to contests of force, but to combats of opinion. The vehemence and energy of his language in poems which have this object, has made them exceedingly and deservedly popular with a large class of readers. The poet has his gentler moods also, in which he puts forth scarcely less power." There are *now* true hearts and pure minds who will appreciate the liberty stirring strains of Whittier's inspired verse; but another age, looking back upon the oppressions of our own time, will render to him the worship that justly belongs to his prophecy of good, in that better age, the fruition of which will cheer their onward progress in the paths of "liberty, light, and love divine." Although Whittier could well afford to dispense with the pencil and the graver of the artist, we heartily welcome his imperishable works "in the fair page, and the clear and brilliant type which his publisher has given him, interspersed with, here and there, an effort of the artist to make the imagery, which the poet presents to the mind, visible to the eye." The best publications of the Boston press surpass, in material beauty, those of any other section of the United States; and we have no hesitation in saying that the present volume is without a rival, either there or elsewhere. As a New Year's gift-book, we should select it in preference to either of the many beautiful annuals produced this season.

14.—*The Eolian.* By DAVID BATES. 12mo., pp. 210. Philadelphia: Lindsay & Blakiston.

Mr. Bates, whose name appears on the title-page of this volume, although not among "Griswold's Poets of America," has written enough certainly to claim a niche in that Temple of Fame; and we will say more, many of his pieces possess merit, and if not equal to the best in the collection, will compare favorably with several that we could name, and that, too, without meaning to disparage any of the parties. Mr. Bates has certainly "caught some strains that came, Eolian-like, with those impulsive breathings in the heart," and sung them in smooth verse and appropriate words. His design, as he tells in his "Proem," is to touch the heart, "and make it throb

> "With warmer feelings towards the human race,
> Or kindle in the mind one holier thought,
> Or fix one purpose stronger in the sight,
> Or soothe one sorrow, lull one fear of pain," &c.

A better object it would be difficult to propose, and we have no doubt but that he will have accomplished in some good degree his laudable aspirations.

15.—*The Young People's Journal of Science, Literature, and Art.* Professor NATHAN BRITAIN, A. M., and Mrs. FRANCIS H. GREEN, Editors. New York: S. B. Britain.

"It is the design of this new periodical to cover a broad and general want of the age, by combining the gems of Science with the flowers of Literature and the curiosities of Art in such an attractive form as will tend to develop and perfect not only the Reason but the Taste, by investing truth with all her native charms, to which Fancy is but the subsidiary aid and ornament." The design thus stated by the editors has in our judgment, in the two or three numbers already issued, been carried out with remarkable fidelity. Its pages are filled from month to month with the productions of as choice a group of writers as were ever combined in the great work of educating the human mind, or enlarging its capacities for the reception of "the Good, the Beautiful, and the True" in Nature and Art. Although designated the "Young People's Journal," it contains matter that will gratify and instruct the more matured mind of man. It is published monthly in the magazine form, at a price ($1 per annum) that places it within the reach of almost every family in the country.

16.—*Essays and Reviews.* By EDWIN P. WHIPPLE. 2 vols. 12mo., pp. 730. New York: D. Appleton & Co.

These two volumes afford a striking example of what an earnest mind can accomplish amidst the labor and toil of a business life. The honors of Old Harvard, recently conferred on this "self-made man," the author of these papers, were never more worthily bestowed. The collection consists chiefly of essays, reviews, and criticisms, selected from Mr. Whipple's contributions to the North American Review, and other leading periodicals. It embraces a wide range of subjects, including poetry, history, biography, and general literature; subjects which the writer seems to have studied with care, as he has certainly discussed with more than ordinary ability. His criticisms display nice discrimination, a cultivated taste, and matured judgment. His style is free from the blemishes of a servile imitation of "model writers;" neither copied from, or confined to, the rules of Addison, Burke, or Blair. Words are used, not for a mere display of rhetoric, but to convey in appropriate language the manly thoughts and matured views of the writer. Without any eccentricities, the style of Mr. Whipple possesses an individuality, that most sensible well educated men will appreciate; and we consider it no faint praise to say that it is his own, as much so as that of any writer we are acquainted with.

17.—*Acton on the Circle of Life. A Collection of Thoughts and Observations, designed to delineate Life, Man, and the World.* Pp. 384. New York: D. Appleton & Co.

This collection of thoughts and maxims, we are told by the author, and every page illustrates the statement, is the result of reading and meditation, as well as of many observations made upon mankind and society, in various parts of the world. The author, it would seem, had travelled in Europe, Asia, and Africa, and resided in New Orleans and New York; and in all the different countries and cities has observed much and thought more, furnishing us in the present volume with the result of his investigations. Instead, however, of descriptions and details, he gives us his view of the philosophy of things. The volume is replete with valuable suggestions, many of which will "chime in with the experience of others." It is, in brief, a sort of Cyclopedia of thoughts, observations, and maxims, covering a wide range of subjects, all more or less connected with life, man, and society, designed to "add something to the common stock of life and worldly knowledge."

18.—*Cyclopedia of Moral and Religious Anecdotes: a Collection of several thousand Facts, Incidents, Narratives, Examples, and Testimonies, embracing the best of the kind in most former Collections, and some hundreds in addition, original and selected. The whole arranged and classified on a new plan, with copious Topical and Scriptural Indexes.* By Rev. K. ARVINE, A. M., Pastor of the Providence Church. New York: Leavitt, Trow, & Co.

This is probably the most extensive collection of moral and religious anecdotes that has ever been made, or at least embodied in a single volume. It covers about nine hundred large octavo pages, including some five hundred anecdotes, &c. The arrangement alphabetically, by subjects, renders it very convenient for ready reference. An anecdote, pertinently used, is often more effective in producing a desired influence, than a labored discourse, however able or eloquent. Indeed, the moralist and Christian minister frequently find the illustrations they draw from such a source the most effective weapon in combatting error or producing conviction in the minds of their hearers. The work is highly commended by that portion of the clergy of different sects denominated "Evangelical" and "Orthodox;" and even those who are popularly considered "liberal" or "heterodox" will find much in it to approve and commend. The discriminating mind will be able to sift the wheat from the chaff, and derive amusement and instruction from the labor and research of the worthy editor.

19.—*Life of Charlotte Elizabeth, as contained in her Personal Recollections, with Explanatory Notes; and a Memoir, embracing the period from the close of Personal Recollections to her Death.* By L. H. TONNA. Pp. 359. New York: M. W. Dodd.

The "personal recollections" of Charlotte Elizabeth are perhaps the most interesting of her voluminous writings; as, in her own energetic style, she gives us "the outpourings of her personal experience during a long period of time, both mental and physical." In addition to the autobiography, which is brought down to 1840, six years prior to her death, we have, from the pen of her husband, a concise sketch of leading occurrences, and the literary labors that engrossed her time and strength to the latest period of her life, which terminated on the 12th of July, 1846. She was a most cordial hater of the Roman Catholic Church, but her benevolent heart deeply sympathized with the wrongs and woes of its poor Irish communicants; and her stirring appeals in behalf of the Irish peasant, as well as English operative, to the British government, have not been entirely unheeded.

20.—*Fairy Tales and Legends of many Nations. Selected, newly told, and translated.* By C. B. BURKHARDT. Illustrated by W. WALCUTT and J. H. CAFFERTY. 18mo., pp. 277. New York: Baker & Scribner.

Mrs. Emma C. Embury relates an anecdote of a little girl, whose first question, when presented with a book, would be, "Is it true?" If not, she would ask, "Is it a fairy tale?" And if it was neither the one nor the other, all her fondness for reading could not induce her to accept it. The reason she assigned for this apparent inconsistency was significant of the truthfulness which is her prevailing trait. "I don't like books that *pretend* to be true—give me either histories or fairy tales." This volume would suit that little girl, as it contains as fine a collection of fairy tales as we have ever seen in print, selected from many nations and all ages by Mr. Burkhardt, with a taste and discrimination creditable to that gentleman's scholarly attainments and practical good sense. Indeed, we have read several of them, and have no hesitation in saying that they will be read with interest by old as well as young; and we will add, "the language and moral of which are in all cases unexceptionable."

21.—*The French Revolutions from* 1789 *to* 1848. By T. W. REDHEAD. Vol. I. 12mo., pp. 320. Boston: Gould, Kendall, & Lincoln.

The design of this history is to present, in one complete and homogeneous narrative, the strange vicissitudes that mark the momentous era from 1789 to 1848, an interval of sixty years, pregnant with yet unseen consequences; and from the traced concatenation of causes and effects throughout its entire course, exhibits an accurate perception of the Revolution, or, more properly, series of revolutions. Consulting all the original sources of information, which lie scattered in voluminous collections, the author affirms that he has endeavored to render "it impartial, demonstrative, and exact." The first volume commences with the social and political condition of France from 1774 to 1789, and carries the history down to the close of 1793; a second will, we presume, complete the history from that period to 1848, including the revolutions of 1830 and 1848. It is a reprint of "Chambers' People's Edition," a fact that will recommend the work to all who are acquainted with the liberal and enlightened views of the Scottish publishers.

22.—*The Boy's Spring, Summer, Autumn, and Winter Book.* By THOMAS MILLER, Author of the "Beauties of the Country," "Rural Sketches," etc. New York: Harper & Brothers.

This beautiful volume includes in its scope the innocent and healthful sports that naturally interest boys during the four seasons of the year; it also describes the appearances of nature in all its diversified changes, happily blending useful knowledge and agreeable instruction with country rambles, boyish games, and rural tales. Though written purposely for boys, and those who have to do with them, men of all ages will be delighted to make themselves boys again for a time for the sake of reading it. The pictorial illustrations, one hundred and thirteen in number, are at once appropriate and beautiful.

23.—*Treasury of Knowledge. In Three Parts. I. Elementary Lessons on Common Things. II. Practical Lessons on Common Objects. III. Introduction to the Sciences.* By W. & R. CHAMBERS. *Enlarged and Improved.* By D. M. REESE, M. D., LL. D. New York: A. S. Barnes & Co.

The "Educational Course" of the Messrs. Chambers, of Edinburgh, has, we learn, been adopted in preference to any other series extant for republication in the United States, because of its merited popularity in the schools of Great Britain, where its practical utility has been proved by the test of experience. The present volume, which may be considered the first of Chambers' Educational Course, inasmuch as it seems to give the outlines of all knowledge, is designed for an early reading book, to be placed in the hands of children as soon after they learn to read as practicable. We have often thought that works of this class were preferable, as reading books, to a mere collection of didactic essays and poems, which do little more than instruct the young beginner in the art of reading "the English language with propriety," to the neglect of storing the mind with useful knowledge.

24.—*Elements of Natural Philosophy. Chambers' Educational Course, enlarged and improved.* By D. M. REESE, M. D., LL. D. New York: A. S. Barnes & Co.

This work is divided into three parts, viz: 1. Laws of Matter and Motion; 2. Mechanics; 3. Hydrostatics, Hydraulics, and Pneumatics. The clear and concise method adopted by the author or compiler of this work, renders it all that it purports to be—the first book of Natural Philosophy. The improvements and additions made to it by the American editor impart a value to it that teachers in the United States will know how to appreciate.

25.—*Boston Notions; being an Authentic and Concise Account of "That Village," from* 1630 *to* 1847. By NATHANIEL DEARBORN, author of the "American First Book for Letters," &c. Boston: Printed by Nathaniel Dearborn.

Mr. Dearborn is an old and highly respectable resident of "that village." Thirty-four years ago he issued proposals for publishing a similar work, under the title of a "Picture of Boston," but was overpersuaded, and for sufficient reasons the undertaking was given up. The plan it would seem, however, was never abandoned, and the changes that have taken place since that time have only added to Mr. Dearborn's stores of information, and enable him at this time to collect a large mass of interesting items concerning the earliest days of the settlement of that peninsula, which have been continued to the present time. These items and facts, including historical sketches of the rise and progress of Boston, its men and things, include a mass of information that it would be difficult to obtain in any other form. The work contains a number of engravings appropriately illustrating the text, and altogether reflects great credit on the skill and industry of the worthy compiler.

26.—*Errors of Physicians and others in the Practice of the Water Cure as a Remedial Agent in the Prevention and Cure of Diseases. With Instructions for its Proper Application.* By J. H. RAUSSE, Practitioner of the Water Cure in Mechlenburgh, Germany. Translated by Dr. C. H. MEEKER, Member of the Scientific Hydropathic Society of Germany. 12mo., pp. 91. New York: Fowlers & Wells.

Our faith in the efficacy of the "Water Cure" as a system to prevent, if not to cure all or nearly all the diseases to which "flesh, blood, and nerves" are heir, grows stronger every day. This conviction rests upon our own, as well as upon the experience of our friends. We therefore rejoice in every new effort to diffuse more light on the subject, especially when, as in the present case, that light comes from a source as reliable as long and successful practice, experience, and intelligence can make it. The present treatise is chiefly intended to free the Water Cure from the misconceptions and misunderstandings under which it labors, and from which any radically new system must in its incipiency labor; namely, that of falling into the hands of persons who are unacquainted with its principles, or unskillful in the practice of them, thus in many cases becoming productive of no benefit, and in rare instances of positive injury. No unprejudiced person can read this little manual without becoming strongly impressed with the soundness of the principles evolved, with a degree of force and clearness rarely to be found in medical works.

27.—*The American Phrenological Journal and Miscellany.* Vol. X. O. S. FOWLER, Editor. 8vo., pp. 392. New York: Fowlers & Wells.

The December number completed the tenth annual volume of this interesting work. Its history may be regarded as indicative of the progress of the science in our own country. At its start in 1838, and for one or two years, the patronage extended to the enterprize was anything but encouraging to the Brothers Fowler, who may be regarded as the apostles, if not the pioneers, of the "Phrenological Church in America." But, within the last eight or nine years, its circulation has widened, and every new year added to the momentum of its increase, so that its readers may with truth be numbered by tens of thousands. The light it has diffused over our land, and the influence it has exerted on society through many channels, is beyond human computation. Its teachings have made wiser and better many of the purest and most gifted of the human race in America. Heaven speed its noble mission, and long live its philanthropic teachers; who are doing a work second in importance only to that accomplished by the Author and Finisher of the Christian Faith.

28.—*War with the Saints. Count Raymond of Toulouse, and the Crusade against the Albigenses, under Pope Innocent III.* By CHARLOTTE ELIZABETH. 18mo., pp. 305. New York: M. W. Dodd.

The present volume, the last, we are told, that proceeded from the pen of Charlotte Elizabeth, was written under circumstances of the most painful character during the last eighteen months of her life. She depicts, in glowing colors, the persecutions of the Albigenses, and every page displays the same vigorous style that characterized all her previous writings.

29.—*Natural Philosophy, for the Use of Schools and Academies; illustrated by numerous Examples and appropriate Diagrams.* By HAMILTON L. SMITH. New York: J. C. Riker.

This volume, we are informed, is in many respects dissimilar to the text-books of a like class which have preceded it. We have not space or time to point out the differences; but we may recommend an examination of the work by teachers and school committees, as one likely to suggest valuable improvements in teaching Natural Philosophy.

30.—*Sermons on Christian Communion, designed to promote the growth of the Religious Affections, by Living Ministers.* Edited by T. R. SULLIVAN. 12mo., pp. 391. Boston: Wm. Crosby & H. P. Nichols.

This work contains thirty-one sermons, from as many living divines of the Unitarian Church in the United States, confined for the most part to Massachusetts and the New England States, where that form of Christianity seems to have had its origin, so far as this country is concerned. The clergy of this denomination, generally graduates of Harvard University, form a body of as intellectual and highly educated men as are to be found in any sect of Christendom; and in no denomination, perhaps, are to be found so many chaste, scholarly, and beautiful writers. As evidence of this, we need only refer to the Channings, the Wares, to Greenwood, to Kirkland, to Palfrey, to Dewey, to Pierpont, and to Parker, and, indeed, to the authors of the sermons embraced in the present collection. The design of this publication is, to heighten the interest in the communion, although not confined to the special claims of that institution. Indeed, "its plan, like its name, includes sermons addressed to the religious sensibilities;" and, "in conformity with this, the real though not formal arrangement of the contents makes a series of practical discourses of the persuasive kind, relating to repentance, or the duty of beginning the Christian course to edification, or the encouragements to progressive Christian improvement, and to the Eucharistic service, as affording exercise for all the grateful and devout affections of the heart in every stage of its subjection to Christian discipline;" and finally, "to dispose men to more Christian methods of living."

31.—*Baptism, with reference to its Import and Modes.* By EDWARD BEECHER, D. D. 12mo., pp. 342. New York: John Wiley.

The editor of a commercial journal can scarcely be expected to decide on the merits of a theological work; but we can say, from a very cursory glance at a page here and there, that it bears the impress of the learned scholar, and the able and ingenious controversialist. The author's reasons for engaging in the discussion of the subject of baptism are, that it is a point in which all Christians are not yet agreed, and therefore all truth is not seen; that "God has not of design hidden the truth, or revealed it doubtfully on a point which has proved to be of such magnitude by its practical results." He believes that when all truth is seen on this subject, which may be seen, all true Christians will so far agree that no obstacle to their perfect union in feeling and action will remain. The work we should think rather designed for theological students than for practical every-day Christians.

32.—*The Works of Washington Irving.* New Edition, revised. Vol. II. *Bracebridge Hall.* New York: George P. Putnam.

Uniform with the "Sketch Book" and "Knickerbocker's New York," already published, we now have "Bracebridge Hall, or the Humorists, a Medley by Geoffry Crayon, Gent.," the author's revised edition of a work which those who have read before would scarcely suppose needed revising. We are gratified to learn that the enterprise of Mr. Putnam is eminently successful; and we cannot too heartily commend the beautiful style in which he has produced this new and revised edition of our most popular American author.

33.—*Cousin Bertha's Stories.* By MRS. M. N. MCDONALD, author of "Fanny Herbert."

34.—*Always Happy! or Anecdotes of Felix and his Sister Serena.* Written for her Children. By a MOTHER.

Both of these books were written by mothers for their children; the first named by an American lady, and the last by an English woman. They are interesting and instructive; and that their influence must be good, may be inferred from the relationship that exists between the true mother and her much-loved offspring.

35.—*Hogarth: his Life and Works.* 4to. New York: J. S. Redfield.

Besides a well written memoir of the inimitable Hogarth, the great moral artist, the work is profusely illustrated with copies of his most celebrated paintings, embracing, among others, the Rake's Progress, the Idle Apprentice, Gin Lane, Beer Street, the Election, the Politician, the Cockpit, the Laughing Audience, etc., etc. They have the appearance of being very clever copies of the originals, which hold a rank among their class altogether unrivalled. The letter-press fully illustrates each painting of the artist.

36.—*Mary Barton, a Tale of Manchester Life.* Harpers' Library of Select Novels.

This story is designed to reconcile the differences that exist between the manufacturers of Manchester and those whose fortunes their operatives have helped to build up.