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MISSOURI IRON REGION.

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THE vast interior river system, whose outlet is the Mississippi, and which reaches with navigable streams, thousands of coal seams, and millions of acres of charcoal land, has near its central point—in Iron and St. Francois counties, Missouri, and the district westward—a mineral region, producing, like the Lake Superior mines, a rich, hard and pure ore, suited for extended carriage, easy to excavate, and practically inexhaustible in quantity.

This is the great iron deposit of Missouri; and its existence fixes in the early future centers of industry at localities where, going out from it, pure stone coal shall be most readily accessible. Possessing chemical qualities very similar to the lake ore, and not, therefore, especially demanded for mining, and costing about the same price at the mines, the question of cost of transportation will fix the district in which each variety of ore will ultimately predominate. The two ores already meet at Pittsburg, but here Lake Superior will in time be almost, if not quite exclusively, used. At Cincinnati they again meet, and will probably continue to compete, with the advantage growing on the side of the southern ore, which will supply the region westward of this point, in the Ohio valley and throughout the valley of the Mississippi River and many of its tributaries. But one means of egress is now in existence for the products of the iron region of Missouri. The Iron Mountain Railroad, which is surveyed from St. Louis to Memphis, 279 miles, skirts the shores of the Mississippi River for 20 miles; at 80 miles reaches Iron Mountain, and at 86 Pilot Knob, to which point it was built in 1858. The remaining 193 miles to Memphis exist only on paper. The highest grades of the finished portion of the road are 53 feet per mile in favor of and 59 feet per mile against the trade. It will be seen that the river navigation is reached in 60 miles from the mines, and at a point called Illinois Station will be the probable future shipping and smelting locality, since here coal and ore can meet at the lowest aggregate cost, and cheap water carriage may commence. The approaching visitor recognizes the iron district by the groups of hills resembling the mountains of Mar-

quette County, northern Michigan, and of the Sterling District of Southern New York in a remarkable degree. These hills are the eastern end of the ridge, which, extending toward the Rocky Mountains, forms the crest of the water shed between the tributaries of the Missouri and those of the Mississippi. Among them, similar in appearance to those surrounding it, is the Iron Mountain, an oval hill about 230 feet high, and having a base of 500 acres. Six miles southward is Pilot Knob, only distinguished from the surrounding mountains by a few huge masses of porphyry that form the summit. A mile westward of this is Shepherd's Mountain, an oval forest-covered ridge. These three mountains contain all the specular ore of the immediate district, as far as at present known, but there are rumors of other deposits in the neighborhood, and if the rules established in other mineral districts apply here, and the experience of Lake Superior may be taken as a guide, many rich mines are still awaiting the intelligent explorer, while toward the west there are several localities where large quantities of specular ore are known to exist.

In view of the growing interest which is being felt among many classes of business men in this especial central mineral deposit, by manufacturers of iron, who are glad to compare their own districts with those at a distance, and who recognize in Missouri a State which must soon compete largely with them in the expanding markets of the West; by railroad men of the Mississippi valley, who are looking with anxiety for a source of supply which shall give them a first-class iron from mills and furnaces near at home; by capitalists who seek a district destined by nature to an unlimited and rapid growth; by intelligent mechanics and manufacturers who desire to invest their labor and their skill in localities where circumstances favor large returns, and in view of the vast possible development of the region the following somewhat detailed description will be acceptable.

Iron Mountain is an oval hill, owned by the American Iron Mountain Company. It has been usual to assume that it consists entirely of iron ore, "a solid cone of oxide of iron" or "a conical hill consisting of iron boulders," and many elaborate calculations have shown that with a base of 500 acres, and a height of 288 feet it contained (according to the engineers of first survey of the Iron Mountain Road) 105,000,000 tons of metallic iron, or 212,000,000 tons of ore, while, according to Dr. Litton's geological survey of the State (1855), p. 77, the total weight of ore above the surface is 230,187,375 tons.

Since the investigations were made, upon which the above estimates were founded, a number of cuts have been driven upon the sides of the supposed solid ore hill, and no doubt can now exist that the ore occupies, in an almost solid body, all the north side of the hill for a distance of 3,000 or 4,000 feet, and for a thickness of several hundred feet, while the south side is composed of a porphyritic rock which dips northward beneath the ore. The ore is hence a vast lenticular mass, pitching northward, extending to an unknown depth beneath the surface, and, on one side, and probably on both, bounded by a porphyritic rock, in which crystals of feldspar are distinctly visible. The excavations made for ores for shipping and smelting are as yet but scratches upon the surface. One opening is at the east end, one at the west, and a third is upon the summit, where the iron ore crops out in huge boulders, but the work of cutting a roadway entirely through the mountain has been commenced,

and is being carried forward with vigor. This excavation, when finished, will reveal the anatomy of the mountain, and determine the limits of its bed. This and the other cuts show enough to render the locality one of absorbing interest to the chemist and geologist.

Beside the bed of rich solid ore on the north (known as "bluff ore") is a singular bed of equally rich ore consisting of pebbles, producing what is known as "surface ore," that covers the entire mountain as with a coat of mail. This bed, without admixture of other solid material, extends to a depth of from a few inches on the north side to fifteen feet or more on the south side of the mountain, and is cemented with and underheld by a reddish clay. The ore fragments are as solidly packed as though beaten down for railroad ballast. They are from the size of a pea to 100 pounds or more in weight, but the greatest number weigh from two to five pounds. How was this coating of mail formed and laid thus evenly above the substratum of clay? The impression forces itself upon the mind that the iron pebbles have been worn and polished by attrition under water, this action must have been local, since the pebble beds only extend a short distance from the base of the mountain and the ore mass, and not the result of a current, which would have strewn the material it modified for a long distance in the direction of its course. It must have been violent, since only the hard masses of ore are there, looking like pebbles left by the breakers on the ocean shore; all softer material has been diffused in the form of suspended mud. The action must have taken place in some chemical (and probably heated) solution, because in many of the pebbles are found hexagonal holes several inches deep, marked with peculiar striae, and ending with pyramidal faces, proving the existence therein at one time of solid quartz crystals, which had been dissolved out by some powerful menstruum that was without effect upon the surrounding oxide of iron. I know of nothing beside subaqueous volcanic action that can explain all these phenomena.

Pilot Knob, the other large iron deposit of this neighborhood, and the property of the Pilot Knob Iron Company, has also been described as a solid mountain of iron, nearly 500 feet high, and 500 acres base, capable of producing so many thousand tons per perpendicular foot. This is, however, shown to be a misapprehension; the mountain consists of beds of limestone, a porphyritic rock and iron ore, all probably metamorphic in their origin, like the Lake Superior beds. The bed of ore, cropping out about 100 feet below the rugged porphyritic summit, cuts the mountain like a huge plate dipping southward toward the Arcadian Valley. Some distance below it are beds of a drusy limestone. The openings made here are upon this outcrop, and two inclined planes 1,700 feet long reached down to the valley, the railroad and the furnaces. Shepherd's Mountain, also belonging to the Pilot Knob Iron Company a mile south-west of Pilot Knob, is an oval ridge lifted about 600 feet above the valley, through which, between porphyritic walls run several apparently nearly perpendicular veins of specular ore, two of which have been worked; one is 18, the other 8 feet in thickness. The tram road to these deposits has been destroyed by the rebel soldiers, whose bones are now whitening in the bush, and no ore has been taken out for several years.

A singular error prevails regarding this ore. It is generally believed to be magnetic. A careful search for magnetic ore failed to detect a single

fragment. Every opening and waste pile was searched, and not a piece would give the dark red streak belonging to the mixture of protoxide and peroxide which form the grand masses in New-Jersey and our Lake Champlain. Everywhere the red streak, the fibrous and plumose structure, the low hardness, indicated the specular ore or the peroxide. At length the manager of the mine unearthed from a store hidden years ago, for the benefit of curious visitors, a fragment which has the qualities of the loadstone, but it is only magnetic through a small per centage of magnetic ore mingled with a larger quantity of the specular.

In many respects the operation of mining in Missouri and in Marquette County, Michigan, resemble each other. What are known as mines in both regions are properly quarries; the only excavations yet made are open to the day; no pumping apparatus is required, no winding machinery used. Parties of workmen, in most instances Irishmen, attack the exposed ends of the seams or ore masses, with  $1\frac{1}{4}$  inch steel drills, and with sledges; the hard ore is blasted out and hammered into fragments weighing from one to twenty pounds. These are thrown into carts and hauled to furnaces for smelting, or dumped into the cars on the railroad and transported to St. Louis or Carondelet for shipment. Holes averaging five to seven feet deep are made for blasting. One set of drillers can bore in some places five feet per day, but rarely so much; \$1.50 per day is now paid for common labor in the mines; \$1.70 for good drillers. Before the war wages were \$1 and \$1.20 per day for the same work. The average amount taken out per man is four tons; the net cost on cars has been as low as 35 cents per ton, and is now 50 cents.

The "surface ore" of Iron Mountain requires only the labor of picking it from its bed and throwing it into the cars. The shipments of iron ore from this region have as yet been moderate. They amount to the end of 1864 to about fifty-five thousand tons from all points. The records of the Iron Mountain Road show that

In 1861.....	8,886 tons were shipped.
In 1862.....	5,782 " " "
In 1863.....	2,890 " " "
In 1866.....	7,070 " " "

In addition to this must be reckoned the amount used in the six furnaces and one bloomery (and for a time two bloomaries) of the neighborhood, which will give the whole quantity mined to date.

To reach Pittsburgh will cost at present about \$11 per ton of ore; \$1.90 of this is freight to St. Louis, and \$8 thence to Pittsburgh by steamboat. The first cost and various charges will make up the remainder. It has been delivered in Pittsburgh at a little less than three-fifths of this sum, but the uncertainties of river navigation make it impossible to depend upon this distant market.

The Iron Mountain and Pilot Knob ores are peroxides or sesquioxides of iron. They belong to what is known as the specular group, and are mineralogically the same as most of the Lake Superior ores, the celebrated ores of Elba, and many of those of Siegew in Germany. They are almost chemically pure iron and oxygen, but have as admixture a small quantity of silica, which is greatest in the ores of Pilot Knob. The texture of those from the last named deposit is exceedingly fine grained, almost steely

in fracture and appearance, while those from Iron and Shepherd Mountains are coarser grained, more open and easily smelted.

They are what the metallurgist distinguishes as *red shot* ores, producing an iron that works with difficulty at a cherry red, is not very well adapted for forging, but produces a tough bar capable of bending double when cold without cracking, having a high tensile strength, and giving a silky fibrous fracture. It is very difficult to break so as to show a crystalline texture, and those who have worked both Lake Superior and Missouri ores have found that the latter required the largest admixture of *cold shot* material to produce a *neutral* metal. The iron casts well, chills evenly and properly for car wheel manufacture, is well adapted for making steel, and is used for that purpose largely in Pittsburgh, while the hard surface pebbles of the Iron Mountain smelted with cold blast and charcoal, produce a pig which is in demand as far east as New York for making those small castings which are afterward converted into malleable iron. The product of the ores range from 54 to 56 per cent of metallic iron in the furnaces at the mines; higher yields are said to be obtained elsewhere.

There are at Pilot Knob two, and at iron mountain three blast furnaces. A sixth furnace works Iron Mountain ores at Irondale, twelve miles northward from the mines. A seventh has just been built at Carondolet, six miles southward from St. Louis, to try smelting Pilot Knob ore with the mineral coal of the vicinity. One bloomery at Farmington completes the list of works in Missouri, smelting the ores of this district. As the metallurgic customs of the Lake Superior region are transplanted from New England, so those of Missouri have come West on their own parallel from Pennsylvania and Ohio. The charcoal is made in pits as in Pennsylvania. A Blair County manager superintends the Pilot Knob works, and the foreign capital here invested is chiefly from the Middle States. The ore in small fragments, as brought from the mountain, is thrown in a stratum twelve inches thick upon a heavy layer of logs; upon this is thrown eight inches of fine charcoal; then twelve inches of ore, then charcoal, and so on, until a heap fifty feet long and eight feet in height, or more, is formed. This, set on fire, burns for two weeks; when cooled the pieces are found cracked and porous, and are now ready for smelting. Unroasted ore is sometimes used, but the product of the furnace is decreased about one-seventh, and the charcoal required in the furnace is increased one-fifth by the change. Charcoal is made on the land of the company, which cuts from twenty to twenty-five cords of wood per acre, chiefly oak; it weighs eighteen pounds per bushel, and forty bushels make a cord. The present contract price for cutting wood is eighty cents per cord, equal to two cents per bushel for the coal, and four cents per bushel is paid for charring. Add to this an average hauling charge of 50 cents per mile per load of 150 bushels, and the present cost at furnace is 9 cents per bushel. The furnace charge at the Pilot Knob furnace, to which these data especially apply, is 20 bushels charcoal, 18 lbs. to the bushel; 600 lbs. of roasted ore; 150 lbs. of limestone flux. About 120 such charges are smelted per day, and 15 to 17 tons of iron made. The flux is found near the furnace, and is furnished at 50 cents per ton of iron. The net cost of producing iron is \$21 per ton. The Pilot Knob furnaces are 11 and 13 feet wide in the bosh and 45 feet high. Air at 600 degrees is driven into the furnaces at a pressure of  $3\frac{1}{2}$  lbs. per square

inch, through two tuyeres, each three inches in diameter. The capacity of one is 4,000, of the other 5,000 tons per annum, ranking probably first in point of capacity among all the charcoal furnaces in the United States.

Labor is abundant, both black and white. Furnace keepers receive \$2 per day; guttermen and fillers \$1.75 per day. Boarding can be had at \$13 per month. Corn is worth \$4.25, and wheat \$2 per bushel. Flour \$10 per barrel, bacon 22 cents per pound, and beef from 7 to 10 cents per pound. Lard is abundant and cheap. Twenty-five dollars per acre will buy rich, cleared, and well improved farms, with good buildings, in the Arcadian Valley, and good fertile soil may be had at one-fourth that sum, at points contiguous to the mineral deposits.

No one—remembering that our national ratio of increase of population, which will give the Union 100,000,000 inhabitants in 1900, and no one conversant with the growth of the railroad system of the Eastern and Middle States, and with the vast agricultural and mineral resources of the Mississippi and Missouri Valleys—can doubt, that within a few years, all the fertile plains of Kansas, Nebraska, Iowa, Missouri, and the adjoining States, will be intersected by railroads, requiring material for track and machinery, and for continual renewal and repair at the hands of the iron master. Much of the iron now used in making roads in this region comes from abroad. In addition to its first cost and the import duty, several profits are added in charges for carrying it almost half across the continent.

Yet these are hardly sufficient to induce home capitalists, and skilled iron men, to enter into a contest with British manufacturers, for they know that the government has no settled policy to favor their efforts. They know that, on the contrary, existing statutes discriminate in favor of the foreign article and against the domestic by taxing the home manufacturer, directly and indirectly, through the excise laws, more per ton than they tax the foreign manufacturer through the tariff laws. They know that the best established manufacturers of the East will have to close their furnaces the moment gold goes to par, and hence it is not to be wondered that there is not a rail mill west of the Mississippi. The protection afforded by the necessity of paying freight in both directions has caused the erection of re-rolling mills throughout the Middle Western States. In 1864, Illinois ranked fourth in the Union as a rail-making State from this cause solely. These re-rolling mills have already been forced to reduce their rates to the lowest point by *competition with each other*, as is proven by the following circumstance:—The workmen at one of the large Western mills recently struck for higher wages. The mill-owners found by calculation that they would have to close or suffer continued loss. The railroad companies for whom the mills were employed came forward voluntarily and offered such advance on their contract price of iron as would enable the iron men to keep their furnaces in operation. What is true regarding re-rolling mills, which *circumstances* have *protected*, would be true of all branches of iron manufacture were they justly and *legally* protected. The consumer would ultimately obtain fabrics at lower rates than they could be brought from abroad. Our money would remain among our own people, increasing their wealth, and increasing, in a greater ratio, their capacity to bear taxation; Republican Merthys Tydvels, St. Seraisings, Birmingham, Sheffields, and Essens would spring up on the borders of our vast Western coal fields. The prairie farmer, who sells his corn for one-eighth the price paid for it

by the *foreign* consumer would sell it at once to *his neighbor*, and put the additional 700 per cent into his pocket. New uses for capital would everywhere arise, and new demands for labor; variety of employment in the community would increase the range and activity of thought, and add new zest to social intercourse; American energy, freed from European thralldom, would find even more generous reward than it has heretofore known, and American civilization, advancing untrammelled, would reach the perfection dreamed of by the founders of the Republic.

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### MR. McCULLOCH ON OUR FINANCES.

MR. McCULLOCH'S Indiana speech, the financial part of which we give elsewhere in full, is generally regarded as a summary of the policy he will recommend to Congress in his forthcoming report. The chief measure in this policy on which public attention fixes are the contraction of the redundant volume of our paper money, and the gradual restoration of the currency so that the paper dollar shall be equal to the dollar in gold.

It is currently reported that a strong pressure will be brought to bear on Congress, with a view to obtain power for the National Banks to increase their circulation beyond the 300 millions now authorised by law. The emission of notes is so profitable during a suspension of specie payments that we need not wonder if such a mischievous scheme has been dreamed of by some of the advocates of inflation. It is clear, however, that any project of this kind will meet the determined opposition of the Secretary of the Treasury, as of every citizen who understands the true interests of the country. To allow the banks to increase the currency on the one side, while the people with great cost and effort are diminishing it on the other, would be to impoverish the many for the advantage of the few, and by causing the most ruinous fluctuations in prices it would spread discontent and suffering among the industrious masses of our citizens.

But contraction of our paper money, it has been said, is found to be practically impossible; and even if further additions can be prevented, Mr. McCulloch, in the present condition of the National Treasury and of the public credit, must fail in all his attempts to curtail the currency. In proof of this statement, we are pointed to the noteworthy fact that the least movement towards contraction makes money tight, and that when this happens, the banks immediately begin to draw out their deposits from the government. These deposits are paid off in greenbacks from the Treasury vaults; and these greenbacks fill up once more the recently depleted channels of the circulation, thus restoring the disturbed equilibrium. An illustration of this argument is just now offered by the results of the negotiation of the new 50 million loan. Several millions of old compound interest notes, which have long been imprisoned in the reserve-chests of the banks, were paid into the Sub-Treasury. Now as these compound notes were legal tender and formed part of the 25 per cent reserve which the banks are required by law to keep on hand, their place had to be supplied. This circumstance combined with others to cause a temporary scarcity in the supply of greenbacks here. The evil would have

remedied itself in a few days, but as while it lasted a rise in the rate of interest was produced, the banks, to escape the pressure and oblige their customers, called in their loans from the Sub-Treasury to the amount of several millions of dollars. Hence, as we predicted a few weeks ago, the consequence of the negotiation seems likely to be that almost as much legal tender paper will be poured out of the Treasury as will be gathered in by the loan. If this should prove so, the gorged channels of the circulation, instead of being depleted, will be once again surcharged and overflowing.

In view of these facts then it has been feared that contraction is an impossibility, and that every such effort to restore a sound currency is foredoomed to miscarry. We do not assent to this discouraging conclusion. Our financial maladies, though bad enough, inspire hope and not despair. The right method of contraction, it is true, may not as yet have been hit upon. But assuredly we are near to its discovery, nearer perhaps than our least desponding prophets suppose. However this may be, it is certain that a man as practical and clear-sighted as Mr. McCulloch, would not have spoken so confidently of his policy of contraction if he were not sure of averting an ignominious and damaging defeat.

Our experience so far has abundantly demonstrated the fact that the chief obstacles in the way of contraction are the call loans, of which the amount in the Treasury at present is over 100 millions bearing 5 and 6 per cent interest. These call loans are as potent stimulants of speculation as the inflated currency itself, inasmuch as they aggravate the evil and prevent its cure.

We conclude, therefore, that the paying off of these temporary loans to the banks is a fundamental part of Mr. McCulloch's plans. And it is a most fortunate circumstance that the currency balance in the Treasury is so ample, and the receipts from taxes and from the sales of government property are so rapidly accumulating, that the payment of these call loans will be very much facilitated. Probably it will not be deemed expedient, even were it possible, to pay off the whole immediately. Of the outstanding 100 millions perhaps one-fourth or 25 millions might with advantage be left in the form of Clearing-House certificates, bearing, as at present, 5 per cent interest, and payable on demand in greenbacks. It is found that on an average the sum we have mentioned is ample for the monetary requirements of the banks in making their daily exchanges. There will also be some further advantages incidentally secured by the arrangement. The pressure on the money market must be severe and real to induce the banks to convert their Clearing-House certificates into cash; and yet whenever the emergency is present, and is sufficiently urgent, these institutions can relieve themselves; and the stringency, if it becomes unmanageable by other palliatives, can be checked by the temporary conversion of a part of the certificates into greenbacks.

A second expedient will, of course, be to carry steadily forward the funding of the compound interest notes; but from what has been said it will be evident that some further machinery is necessary. The contracting process must be applied to the greenbacks as well as to the other legal tenders. Of this species of currency the amount afloat is about 428 millions. The greenbacks must be eventually absorbed into long interest-bearing bonds, and no method seems so practicable for this purpose as to

convert them first into compound notes; and then, hereafter, to fund them as sufficient interest accrues, and they have gradually withdrawn from active use as currency. This process must at first be gradual, and it might not be practicable to carry it on at a more rapid rate than about ten millions a month. If this scheme should be approved, new legislation by Congress will have to be sought; for the only authority Mr. McCulloch has at present to fund greenbacks is to convert them directly into bonds, which has hitherto seemed to be practically impossible.

In venturing to suggest this method for gradually and safely funding the currency, restoring specie payments, preventing ruinous speculation, and terminating the reign of extortionate prices, we do not pretend that it is perfect or final. But if the prevailing rumors are correct some such expedient for conversion and funding will be offered for the action of Congress, and if any practicable improvements can be suggested they will doubtless be adopted and incorporated into the plan.

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#### BRAZIL.—ITS POPULATION, PRODUCTS, COMMERCE, ETC.

BRAZIL occupies in relation to population, production, and commerce nearly the same statistical position that the United States did in 1820.

In whatever light we view this great American Empire it presents an infinity of subjects worthy of consideration by the statesman and merchant. At the present time any information relating to it is both important and interesting. It has a great war on its hands, waged against one of the most powerful and best trained States of the Southern continent—a war which will test the strength of the nation, made up, as it is, of heterogeneous savage materials but little civilized by European commixture; and its African element, at least a third of the aggregate, is an additional danger, foreshadowing internal insurrection and aid to the invader from within. Then, again, Brazil will probably become the residence of many American families dispossessed at home and self exiled on account of their complicity with the late rebellion.

But it is to the merchant that Brazil will always be interesting. It produces several of the most important staples of commerce, coffee, sugar, cotton, tobacco, India rubber, gutta percha, etc., and is the chief source of several of these to which the United States looks for supplies. The commerce of the country in these articles is expanding from year to year, as the interior is reached by railroads on land and steamboats on the rivers. These have made great progress already, and are liberally encouraged by the Emperor's government. Hitherto, however, the interests of the United States in Brazil have been singularly anomalous. While we have been the best customers of the Empire, we have had to go into its ports with gold in hand. Europe has enjoyed the great bulk of the import trade, and nearly all the profits of the carrying business. The reason of this commercial obliquity is that England, France, the Hanseatic Towns, etc., have fostered their interests in the country by establishing banking and other commercial facilities in the chief ports, and by keeping up regular and frequent steamer lines for mail and general purposes. In the meanwhile the United States has slept, allowing the golden prize of commerce to be seized by its competitors. The result is that the balance of trade is yearly widening against us. The day, however, is at hand when a stand will be

taken to revolutionize the course of this commerce. Our home rebellion is now squelched, and the hundreds of steamers used for its suppression are rapidly being returned to their commercial purposes; and it is to be hoped that at so favorable a juncture the opportunity will not be lost to enter not one but several lines in competition with the lines which Europe has found to be so prolific of profitable success. We have a hundred staples that are wanted in such a country as Brazil—why should we be satisfied with the exportation of a few, and those, as heretofore, the most bulky of them. Our looms and workshops indeed produce every necessity for a most extended trade with this country, which also presents a vast field for the introduction of machinery, agricultural implements, and all the other mechanical contrivances which in no small degree secured for the United States the pre-eminence it enjoys as an industrial nation.

This subject was the theme of an article which appeared in the November issue of the *Merchants' Magazine* last year. To this we refer, as it contains much valuable information relating to the country, its government and people, which we do not intend to repeat in this connection. Our object at the present time is to present a series of the latest statistics of the Empire, which we gather from the voluminous returns published by the government by order of the legislature of 1865. They refer chiefly to the statistical year 1863-64, but are the latest, and much later than any previously published in this country.

## POPULATION.

And first, as to population. In such a country, thousands of miles of which have never been seen by civilized man, it is impossible to expect accuracy in this matter. Nor can the complexion or race be distinguished except approximately. We must, therefore, be content with the estimates presented by the most authentic sources of information. These certainly are the government officials who have given the following table for the year 1864:

Provinces.	Area in leagues.	Population—			Capitals of Provinces.
		Free.	Slave.	Total.	
Amazonas.....	64,000	65,000	5,000	70,000	Manaos.
Para.....	39,000	235,000	15,000	250,000	Belem.
Maranhao.....	12,500	330,000	70,000	400,000	San Luiz.
Piahy.....	11,000	165,000	10,000	175,000	Theresina.
Ceara.....	4,500	456,000	30,000	486,000	Portaleza.
Rio Grande do Norte	1,500	205,000	5,000	210,000	Natal.
Parahyba.....	1,500	230,000	30,000	260,000	Parahyba.
Pernambuco.....	6,000	930,000	250,000	1,180,000	Recife.
Alagoas.....	1,200	205,000	45,000	250,000	Maceio.
Sergipe.....	1,200	200,000	50,000	250,000	Aracapi.
Bahia.....	14,000	950,000	250,000	1,200,000	S. Salvador.
Espirito Santo.....	1,400	45,000	10,000	55,000	Victoria.
Rio de Janeiro.....	2,400	650,000	200,000	850,000	Nitheroy.
MUNICIPIO NEUTRO..	60	350,000	50,000	400,000	S. Sebastiao
San Paulo.....	11,000	740,000	60,000	800,000	San Paulo.
Parana.....	6,000	80,000	20,000	100,000	Curitiba.
Santa Catharina...	2,200	105,000	15,000	120,000	Desterro.
Rio Grande do Sul..	9,000	390,000	30,000	420,000	P. Alegre.
Minas-Geracs.....	20,000	1,200,000	150,000	1,350,000	Ouro Preto.
Goyaz.....	21,000	185,000	15,000	200,000	Goyaz.
Mato Grosso.....	51,000	75,000	5,000	80,000	Cuiaba.
Total.....	280,460	7,791,000	1,815,000	9,106,000	

The "Município Neutro" is the seat of the general government, and includes Rio and vicinity.

The Brazilian league is the eighteenth part of a degree, and is consequently equivalent to 14.76 square miles. At this reckoning the area is 4,137,600 square miles, or about a third larger than the United States.

#### STAPLE PRODUCTIONS.

The following is a statement of the approximate production of the principal commercial and food staples of the Empire, calculated on the basis of the consumption of 9,106,000 inhabitants, and the exportation for the quinquennial period 1858-63:

Products.	Quantities.			Values in Milreis.
	Consumed.	Exported.	Total.	
Brandy.... Canadas.	17,310,855	2,313,782	19,624,637	9,812,319
Cotton.... Arrobas.	714,745	846,934	1,561,679	15,616,790
Rice.....	5,569,755	322,810	5,892,595	35,355,570
Sugar....	7,406,132	8,364,918	15,771,050	47,313,150
Cacao.....	27,010	273,746	300,756	1,804,536
Coffee.....	2,468,500	10,933,097	13,401,597	80,409,582
Mandioca. Alqueires.	17,310,855	200,000	17,510,855	26,266,202
Legumes.....	11,078,845	21,155	11,100,000	33,300,000
Tobacco... Arrobas.	1,572,870	693,126	2,265,996	13,595,976
Gum elastic.....	13,567	164,380	177,947	2,659,205
Mate.....	928,514	549,615	1,478,129	4,434,387
Grain.... Alqueires.	27,559,225	21,718	27,580,943	27,580,943
Annual products.....				75,000,000
Other products.....				20,000,000
Total value in milreis.....				393,158,660
The total value of exports in the quinquennial period 1858-63 was.				117,227,005

Leaving for consumption..... 275,931,655  
or for each inhabitant an average value of 30 : 302 milreis, or, say \$16.

#### COMMERCE AND NAVIGATION.

The aggregate commercial movement of the Empire in 1863-64 was 252,506,574 milreis, a gain of 30,863,870 milreis (13.92 per cent) over the preceding year. The value of importations in 1863-64 was 123,045,857 milreis, or 23,873,167 (24.7 per cent) milreis greater than the preceding year. The value of the products exported in 1864 was 129,470,699 milreis, a gain of 6,990,703 (5.76 per cent) milreis. The difference in favor of the export trade in 1863-64 was 6,424,824 milreis. The shipping employed in the import trade amounted to 915,801, and in the export trade 1,030,053 toneladas, making a total in and out of 1,945,854 toneladas. The following tables give the details:

#### FOREIGN GOODS IMPORTED.

The following table exhibits the value of goods and merchandise of foreign production imported into the the ports of the Empire in 1863-64.\*

\* The quantities and values in the following statements are given in Brazilian denominations, and hence the following explanation will be necessary to readers unacquainted with them.

The "arroba" is 32 lbs. Brazilian or 32.52 lbs. avoirdupois.

The "oitava" is the eighth part of an ounce, or 55½ grains English.

The "Canada" is 0.36414 gallon.

The "milreis" is 1000 reis and is valued in gold at \$0.54½ and in silver at \$0.51½.

Ports of Importation.	Average 1858-61. Milreis.	Year 1863-64. Milreis.	Countries of origin.	Year 1863-64. Milreis.
Rio de Janeiro...	61,918,867	70,633,356	Sweden .....	409,988
Bahia .....	16,860,096	16,102,871	Denmark .....	132,420
Pernambuco...	18,622,429	18,397,475	Hanseatic cities .....	5,653,868
Maranhao .....	3,370,007	3,907,915	Holland .....	116,092
Para .....	4,490,342	5,244,234	Belgium .....	1,805,904
Rio Gr. do Sul...	4,854,261	4,147,072	Great Britain, &c. ....	64,838,109
Porto Alegre .....	803,057	456,506	France, &c .....	23,110,413
Uruguayana .....	332,630	125,135	Spain, &c .....	2,250,074
Santos .....	1,222,527	1,471,631	Portugal, &c. ....	6,346,413
Paranagua .....	143,405	82,410	Italy .....	778,404
Antonina .....	2,359	8,923	Austria .....	776,543
Parahyba .....	142,771	54,306	United States .....	6,259,434
Ceara .....	1,005,643	1,496,036	Chili .....	146,682
Santa Catharina.	227,281	443,700	Peru .....	22,979
Alagoas .....	182,134	146,145	Rio de la Plata .....	9,062,371
Sergipe .....	41,108	29,149	Ports of the Amazon .....	986,596
Espirito Santo ..	1,575	1,869	Ports not stated .....	270,000
Rio Gr. do Norte.	215,102	186,347	Pisca .....	9,896
Piauby .....	215,663	187,450	Africa .....	269,624
Mato Grosso .....	183,774	73,344	Paraguay .....	13
Total .....	114,834,971	123,045,875	Total .....	123,045,875

The average imports for the previous five years was 114,834,971 milreis.

The values (milreis) of the principal articles imported in 1863-64, compared with the average of the five preceding years are shown in the annexed statement:

Articles.	Average, 1858-63.	Years 1863-64.	Increase or decrease.
Oils .....	1,004,502	1,122,287	inc. 117,785
Cod and other Fish .....	2,773,918	1,383,366	dec. 1,390,552
Spiritous Liquors .....	1,661,572	1,665,725	inc. 4,153
Stationery .....	1,439,401	1,326,209	dec. 113,192
Provisions .....	5,301,930	7,143,775	inc. 1,841,845
Stone Coal .....	2,540,868	1,833,667	dec. 707,200
Hats .....	1,535,356	1,384,498	" 150,858
Hides .....	857,988	901,241	inc. 43,253
Drugs .....	1,456,411	1,468,158	" 41,747
Flour .....	7,679,907	4,142,582	dec. 3,537,325
Ironware .....	6,167,996	4,796,916	" 1,370,080
Iron .....	1,292,761	670,053	" 622,708
Earthenware and Glass .....	1,712,912	1,462,856	" 250,056
Machinery .....	796,025	621,374	" 174,651
Butter .....	2,149,864	1,840,136	" 209,728
Cotton fabrics .....	30,501,715	23,970,897	" 6,530,818
Woolen " .....	4,968,841	4,401,000	" 567,841
Linen " .....	2,616,734	2,992,637	inc. 375,903
Silk " .....	2,865,479	2,350,992	dec. 514,487
Mixed " .....	2,670,756	2,735,943	inc. 65,187
Gold and Silver Coin .....	4,376,413	19,607,060	" 15,230,647
Gold and Silver Manufactures .....	3,487,673	1,542,555	dec. 1,945,118
Paper .....	1,039,907	1,207,456	inc. 167,539
Powder .....	556,058	518,602	dec. 37,456
Silver .....	665,888	765,238	inc. 99,350
Clothing .....	1,538,215	1,529,561	dec. 8,654
Salt .....	1,026,423	1,326,722	inc. 300,299
Wines .....	4,606,726	5,632,062	" 1,025,336
Other articles .....	15,542,732	22,571,317	" 7,028,585
Total milreis .....	114,834,971	123,045,875	inc. 8,210,904

The following table exhibits the value (milreis) of textile fabrics imported yearly for the five years ending with 1863-64 :

Years.	Cotton.	Woolen.	Linen.	Silk.	Mixed.	Total.
1859-60....	27,514,978	5,783,570	2,986,218	3,405,531	2,531,633	42,221,930
1860-61....	34,435,526	5,116,674	2,699,187	2,983,048	2,213,819	47,453,254
1861-62....	34,938,768	3,916,984	2,366,073	2,139,542	2,797,581	46,158,948
1862-63....	23,827,407	3,967,059	2,170,397	2,187,718	2,486,071	34,638,752
1863-64....	23,970,897	4,401,000	2,952,637	2,350,952	2,735,943	36,451,469
Average..	28,937,575	4,637,057	2,642,902	2,604,366	2,553,009	41,384,849

Coal, iron, ironware and machinery were imported in the same years to the following values :

Years.	Coal.	Iron.	Hardware.	Machinery.	Earthenware.
1859-60.....	2,120,706	1,141,724	5,654,007	938,687	1,585,948
1860-61.....	3,534,381	1,356,913	7,123,886	692,241	1,619,446
1861-62.....	2,805,465	1,032,412	6,198,371	764,209	1,624,975
1862-63.....	2,076,342	1,450,728	5,207,886	850,927	1,841,740
1863-64.....	1,833,667	470,053	4,797,916	621,374	1,462,856
Average milreis	2,486,112	1,130,286	5,796,413	773,487	1,626,993

The importations of provisions, flour, fish, salt and drugs were valued as follows :

Years.	Flour.	Fish.	Provisions.	Salt.	Drugs.
1859-60.....	10,685,862	3,609,020	3,415,233	1,128,794	2,109,580
1860-61.....	7,285,613	2,725,635	5,568,618	812,671	1,490,436
1861-62.....	5,799,797	1,514,857	8,410,941	1,129,272	1,239,295
1862-63.....	4,922,627	1,489,532	5,497,468	1,168,076	999,610
1863-64.....	4,142,682	1,383,366	7,143,775	1,326,722	1,493,158
Average (milreis)	6,567,296	2,144,482	5,928,017	1,113,107	1,467,414

The following table shows the aggregate importations for the five years ending with 1863-64, the amount of coin and the imports not including coin :

Years.	Aggregate Imports.	Gold and Silver coin.	Imports not Including coin
1859-60.....	113,027,995	4,193,481	108,834,514
1860-61.....	123,720,345	5,332,672	118,387,673
1861-62.....	110,531,198	2,043,488	108,487,701
1862-63.....	99,172,708	4,388,887	94,783,821
1863-64.....	123,045,875	19,697,060	103,438,815
Average (milreis).....	113,899,622	7,113,117	106,786,505

—and from the above there should also be deducted for re-exportations the following—2,226,291, 1,593,056, 1,504,790, 1,578,976, and 1,547,415 milreis for the five years respectively, being an average of 1,690,105 milreis.

#### NATIONAL PRODUCTS EXPORTED.

The following statement shows the value of national exports from the Empire, giving the ports of destination for the fiscal year 1863-64 :

Ports of Exportation.	Average.	Year.	Destination.	Year.
	1858-63.	1863-64.		1863-64.
	Milreis.	Milreis.		Milreis.
Rio de Janeiro.....	59,861,360	54,224,641	Russia .....	494,814
Bahia .....	13,906,599	13,058,166	Sweden & Norway ..	1,684,798
Pernambuco.....	11,473,576	18,453,455	Denmark .....	667,377
Maranhao.....	2,899,115	6,151,676	Hanseatic Cities....	1,184,378
Para .....	5,469,335	5,829,874	Belgium .....	620,344
Rio Grande do Sul...	4,461,121	4,757,032	Great Britain, &c....	52,485,098
San Jose do Norte...	2,029,494	1,773,195	France, &c .....	17,060,936
Porte Alegre.....	177,788	283,039	Spain, &c .....	4,316,617
Uruguayana.....	379,351	107,106	Portugal, &c.....	6,662,258
Santos.....	6,963,027	6,239,534	Italy .....	565,147
Paranagua .....	1,159,030	1,106,526	Austria .....	764,834
Antonina .....	101,522	160,971	Ports of the Baltic..	308,140
Parahyba.....	3,030,323	5,819,057	Ports of the Amazon.	13,579,229
Ceara .....	1,643,914	2,675,800	Greece.....	92,245
Santa Catharina....	131,107	153,306	Turkey .....	597,189
Alagoas.....	2,539,947	6,593,133	Mediterranean .....	638,352
Sergipe .....	705,150	1,201,143	United States.....	21,666,766
Espirito Santo .....	10,505	87,763	Mexico.....	291,518
Rio Grande do Norte..	419,220	414,087	Chile .....	1,188,657
Piahy .....	170,058	246,265	Rio de la Plata.....	4,014,263
Mato Grosso .....	44,723	134,580	Other ports.....	587,739
Total .....	117,227,005	129,470,699	Total .....	129,470,699

The annual average exports for the previous five years was milreis 117,227,005. The quantities and values of the principal articles of national product exported in 1863-64 and the annual average for the five previous years are shown in the annexed :

Articles.	Quantities.		Value in milreis	
	Average.	1863-64.	Average.	1863-64.
Brandy, canadas.....	2,213,782	1,748,993	766,010	650,271
Cotton, arrobas.....	846,934	1,297,228	8,262,873	28,335,609
Sugar, " .....	8,364,918	7,941,310	19,412,038	19,844,783
Hair, " .....	40,381	52,786	363,753	431,941
Cacao, " .....	273,746	284,190	1,495,694	1,308,742
Coffee, " .....	10,933,097	8,183,293	61,072,434	54,130,684
Hides, salt, No. ....	634,454	764,336	8,443,547	5,226,074
" dry, arrobas.....	369,748	445,625		2,721,518
Diamonds, oitavas .....	10,658	10,255	3,662,338	4,123,724
Tobacco, arrobas .....	693,126	907,218	4,106,457	3,512,635
Gum-elastic " .....	164,380	232,288	2,785,633	3,695,373
Mate " .....	549,615	719,069	1,668,901	1,510,408
Gold, oitavas .....	370,586	31,898	1,054,162	114,036
Articles not specified .....			3,833,123	3,855,801
Total value .....			117,227,005	129,470,699

As indicated in the above table the most important of the exports of Brazil are (1) coffee, (2) sugar, (3) hides, (4) cotton, (not looking to the returns of 1863-64, which are exceptional), (5) tobacco, (6) diamonds, and (8) gum elastic. These are the principal staples. Mate (Paraguay tea), cacao, gold, etc., are secondary materials, and there are also a number of others which together make up the aggregate. The tables which follow show the amount of coffee, sugar and cotton exported for a number of years with their average prices at the ports of exports :

COFFEE.—Coffee is exported wholly from Rio de Janeiro, Santos, Bahia,

Ceara, and Pernambuco. The following are the quotations (arrobas) exported in the five years ending with 1863-64 :

Years.	Rio de Janeiro.	Santos.	Bahia.	Ceara.	Pernambuco.	Total.
1859-60 .....	8,573,063	1,481,730	195,638	56,430	432	10,207,293
1860-61 .....	13,054,061	1,288,604	198,304	44,146	143	14,585,258
1861-62 .....	8,162,195	1,371,729	198,313	147,939	648	9,880,824
1862-63 .....	6,891,872	1,390,804	286,167	147,777	215	8,716,836
1863-64 .....	6,810,343	1,062,686	187,432	109,976	1,795	8,183,293

The average export prices (reis per arroba) at each of the above ports in the years named were as follows :

Years.	Rio.	Santos.	Bahia.	Ceara.	Peanamb'o.	Aver'ge
1859-60 .....	5.986	5.146	5.121	5.110	6.831	5.844
1860 61 .....	5.508	5.030	5.099	5.837	7.298	5.461
1861-62 .....	5.896	6.230	5.678	6.360	5.622	5.945
1862-63 .....	6.576	6.047	6.160	6.976	7.864	6.484
1863 64 .....	6.749	5.857	6.311	6.094	8.460	6.614

SUGAR.—The sugar of Brazil is of two kinds—white and muscovado. The first is exported only from Bahia, Pernambuco, and Rio de Janeiro. The amount and average price per arroba from each of these ports for the past five years have been as follows :

Fiscal Years.	Bahia.		Pernambuco		Rio de Janeiro.	
	arrobas.	reis.	arrobas.	reis.	arrobas.	reis.
1859-60 .....	194,562	3,351	683,634	4,312	46,573	4,297
1860-61 .....	1,201,363	2,245	583,419	3,656	39,495	5,238
1861-62 .....	943,722	2,657	1,279,056	3,061	114,929	3,634
1862-63 .....	775,971	2,567	995,847	2,967	47,244	3,676
1863-64 .....	374,496	2,642	762,120	3,542	37,350	4,886

The following shows the exports of muscovado sugar (arrobas), from the six principal exporting ports for five years :

Years.	Pernambuco.	Bahia.	Sergipe.	Alagoas.	Parahyba.	Rio.
1859-60 ...	2,220,346	797,044	187,712	242,782	833,918	125,026
1860 61...	1,611,715	.....	86,040	193,467	405,194	87,548
1861-62...	3,103,242	2,662,779	404,092	569,888	742,545	556,167
1862-63...	2,391,858	3,000,464	631,738	603,608	620,279	401,541
1863 64...	2,491,494	1,826,960	654,150	440,710	447,019	537,153

The average prices (in reis per arroba) were as follows :

Years.	Pernambuco.	Bahia.	Sergipe.	Alagoas.	Parahyba.	Rio.
1859-60 .....	2.569	2.794	2.476	2.147	1.965	3.437
1860-61 .....	2.308	.....	2.469	2.287	1.822	3.193
1861-62 .....	2.040	1.951	1.903	1.817	1.513	2.461
1862-63 .....	1.796	1.647	1.699	1.650	1.323	2.506
1863-64 .....	2.473	2.402	1.808	2.210	1.902	3.112

COTTON.—The principal cotton provinces are Pernambuco, Maranhao, Alagoas, Parahyba, and Ceara, which produce nine-tenths of all the cotton grown in the empire. The following table shows the quantity (in arrobas), exported from Brazil for the last 14 years :

Years.	Pernamb'o.	Maranhao.	Alagoas.	Parahyba.	Ceara.	Total.
1850-51 .....	163,148	859,259	144,937	108,982	55,467	870,464
1851-52 .....	182,237	252,308	140,070	214,501	42,921	898,294
1852-53 .....	213,131	297,212	156,024	185,266	67,523	997,907
1853-54 .....	123,915	402,422	156,371	133,379	50,860	892,272
1854-55 .....	131,272	306,750	150,600	196,665	48,367	877,176
1855-56 .....	111,607	292,020	232,487	256,495	65,646	1,024,801
1856-57 .....	153,708	267,823	230,270	289,593	61,578	1,088,025
1857-58 .....	121,458	281,255	312,661	188,741	76,826	1,014,550

Years.	Pernamb'o.	Maranhao.	Alagoas.	Parahyba.	Ceara.	Total.
1858-59.....	83,457	230,903	167,024	156,151	74,324	751,348
1859-60.....	130,765	240,777	152,951	221,557	77,580	854,624
1860-61.....	79,586	207,954	130,443	173,267	58,728	670,860
1861-62.....	116,718	210,259	273,397	183,900	50,785	872,210
1862-63.....	256,649	230,451	583,200	201,899	44,250	1,085,628
1863-64.....	394,492	245,381	260,521	222,795	67,691	1,297,228

The average export prices of cotton (per arroba) for the same years was—

	reis.		reis.		reis.		reis.
1850-51.....	6.443	1854-55....	5.342	1858-59....	7.447	1862-63....	15.491
1851-52....	4.773	1855-56....	5.498	1859-60....	7.526	1863-64....	21.843
1852-53....	5.105	1856-57....	6.424	1860-61....	6.979		
1853-54....	5.494	1857-58....	6.559	1861-62....	8.928	1850-64 ...	8.132

The average prices at the ports severally for the last five years are shown in the following table:

Years.	Pernambuco.	Maranhao.	Alagoas.	Parahyba.	Ceara.	Average.
1859-60.....	8.247	7.684	6.765	7.166	7.683	7.526
1860-61.....	7.851	6.928	6.311	7.142	7.148	6.979
1861-62.....	10.348	9.808	7.004	9.740	9.224	8.928
1862-63.....	16.863	17.385	13.193	14.963	14.898	15.491
1863-64.....	22.657	22.160	21.402	21.918	20.905	21.843

#### FOREIGN IMPORTS RE-EXPORTED.

The following table shows the values (milreis) of foreign imports re-exported from the several ports of the Empire for the year 1863-64, compared with the average of the five preceding years:

Ports.	Average of 5 years.	Year 1863-64.	Ports.	Average of 5 years.	Year 1863-64.
Rio de Janeiro....	1,283,504	923,011	Paranagua.....	20,663	....
Bahia.....	262,654	244,223	Ceara.....	1,008	8,250
Pernambuco.....	135,991	225,781	Santa Catharina..	39,471	60,038
Maranhao.....	36,152	4,955	Alagoas.....	4,176	....
Para.....	51,075	32,589	Parahyba.....	82	....
Rio Grande do Sul.	100,553	42,966	Rio Grande do Sul.	628	30
Uruguayana.....	2,253	....	Piahy.....	791	....
Santos.....	1,041	5,522	Mato Grosso.....	907	....

Total..... 1,940,949 1,547,415

#### TOTAL COMMERCE.

The following table exhibits the values (milreis) of both exports and imports for the fifteen years and the three quinquennial periods ending with 1863-64:

Years.	Exports.	Imports.	Total.
1849-50.....	55,032,461	59,165,749	114,198,210
1850-51.....	67,788,170	76,918,619	144,706,789
1851-52.....	66,640,304	92,860,415	159,500,919
1852-53.....	73,644,724	87,362,896	161,007,620
1853-54.....	76,842,492	85,839,386	162,681,828
Average.....	67,989,650	80,429,408	148,419,033
1854-55.....	90,698,614	85,170,961	175,869,575
1855-56.....	94,432,478	92,779,246	187,211,724
1856-57.....	114,553,890	125,351,935	239,905,825
1857-58.....	96,247,463	130,440,173	226,687,636
1858-59.....	106,805,972	127,722,619	234,528,591
Average.....	100,547,683	112,292,987	212,840,670

Years.	Exports.	Imports.	Total.
1859-60 .....	112,957,972	113,027,995	225,985,967
1860-61 .....	123,171,163	123,720,345	246,891,508
1861-62 .....	120,719,942	110,531,189	231,251,131
1862-63 .....	122,479,996	99,172,708	221,652,704
1863-64 .....	129,470,699	123,045,875	252,516,574
Average .....	121,759,954	118,899,622	235,659,576
Average 15 years .....	96,765,756	102,207,337	198,973,093

The increase per centum, by periods, has been as follows:

Second over first period .....	47.89	39.61	43.40
Third over second period .....	21.09	1.43	10.25
Third over first period .....	79.08	41.61	58.80

The figures for 1859-64 show a large increase in exports, with scarcely any movement in imports. Previously to this period the balance of trade had been uniformly against Brazil, in both the former quinquennial periods, to the amount of 12,000,000 milreis a year. It is questionable, however, whether in this instance the favorable balance in the last period is the result of increased home manufactures. It is more probably owing to the non-increase of consumption by a nation two-thirds of whose inhabitants are only semi-civilized.

#### COMMERCE WITH THE UNITED STATES.

To the above may be added, with advantage, an outline of the commerce between Brazil and the United States, in more detail, for the year 1863-64. The following shows the value of imports from and exports to the United States:

Ports.	Exports to United States.	Imports from United States.	Total exports and imports.
Rio de Janeiro .....	15,394,906	3,139,495	18,534,401
Bahia .....	707,870	401,268	1,109,138
Pernambuco .....	1,155,972	864,726	2,020,698
Maranhao .....	122,209	296,223	418,437
Para .....	1,973,047	1,014,553	2,987,600
Rio Grande do Sul .....	1,423,386	481,312	1,904,698
San Jose do Norte .....	42,500	....	42,500
Porte Alegre .....	....	....	....
Uruguayana .....	....	....	....
Santos .....	706,560	....	706,560
Antonina .....	....	....	....
Paranagua .....	....	....	....
Parahyba .....	46,965	....	46,965
Ceara .....	37,629	43,309	80,938
Santa Catharina .....	2,342	18,593	21,435
Alagoas .....	....	....	....
Sergipe .....	....	....	....
Espirito Santo .....	....	....	....
Rio Grande do Norte .....	52,879	....	52,879
Piahy .....	....	....	....
Mato Grosso .....	....	....	....
Total (milreis) .....	21,666,766	6,259,484	27,926,250

#### NAVIGATION.

The following table exhibits the amount of shipping engaged in the foreign trade in 1863-64:

Flags.	Entered.			Sailed.		
	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
National.....	374	61,604	3,791	368	45,793	2,676
Foreign.....	2,516	854,197	37,687	2,428	984,257	36,139
<b>Total, 1863-64...</b>	<b>2,890</b>	<b>915,801</b>	<b>41,478</b>	<b>2,796</b>	<b>1,030,053</b>	<b>38,815</b>
“ 1862-63...	3,064	946,213	46,309	2,727	1,097,016	43,193
“ 1861-62...	2,793	938,907	43,036	2,598	1,083,128	42,226
“ 1860-61...	3,033	992,482	38,926	2,765	1,070,801	37,387
“ 1859-60...	2,861	917,582	30,931	2,817	1,010,775	31,564
“ 1858-59...	3,155	956,017	31,942	2,807	956,337	29,166

The number of entrances and clearances in the *coasting trade* in 1863-64 is shown in the annexed tabulation :

	Entered.			Sailed.		
	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
<b>Total, 1863-64...</b>	<b>3,370</b>	<b>658,651</b>	<b>49,909</b>	<b>2,966</b>	<b>567,432</b>	<b>40,018</b>
“ 1862-63...	3,452	726,390	51,746	3,411	724,489	48,521
“ 1861-62...	3,110	659,420	46,580	3,013	610,345	44,341
“ 1860-61...	3,119	657,728	42,770	2,853	556,392	38,664
“ 1859-60...	3,359	630,990	41,181	3,178	598,260	38,209
“ 1858-59...	3,114	494,360	36,081	3,059	477,368	33,864

We conclude this article with an abstract from a dissertation on the relations between the United States and Brazil, which lately appeared in *O Coroto Mercantil*, an influential commercial paper published at Rio de Janeiro, the object of which is mainly to make plain the benefits both countries would derive from regular steam communication, and the more intimate knowledge of each other, this would bring about. Though the object for which it was written is now gained, steam lines from New York and Boston to the ports of Brazil having been formally arranged, much of the information it contains is not only new but exceedingly interesting :

“ With regard to steam communication, the following may be considered as a brief notice of the general views taken of it in the United States. Figures and facts drawn from the history of the past, and the statistics of the actual commerce, seem to guarantee the success of the enterprise. The most intelligent observers do not discover any plausible reason for not auguring the most happy result, and at the same time the most advantageous occasion is offered to vastly increase the traffic and the means of transport of passengers between the United States and Brazil; the commerce between them and other South American countries will likewise be considerably augmented.

“ As regards the Empire of Brazil, does it answer its interests to have direct steam communication with the United States? It has been already proved that, of all its customers, the United States is the best—not only the best but equal to all the others united. This is a very important fact. If it be evident in itself that in private affairs, by smoothing the ways and augmenting the facilities between purchasers and sellers, the quantity of transactions and exchanges will be increased, it will be difficult to prove the contrary with regard to nations; and certainly, among private persons a seller would not desire to see his best customer badly served.

“ Brazil is comparatively a new country or nation, possessing a territory of vast extent, greater than that of the United States, a large portion of which is of extreme fertility and abundant in precious woods and mineral wealth, with an extensive coast provided with fine and safe harbors, and

with a climate equal, if not superior, to any portion of the earth. Already with a population twice greater than that of the United States in the year 1790, with its system of internal improvements vigorously pursued, and with the rapid development of its resources, which to-day are buried in complete lethargy, its future greatness will be on a far larger scale.

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

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

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

“The consumption of Brazilian coffee, during the last seven years, was 964,700 bags yearly, whilst during the seven preceding years it was on an average yearly only 661,670 bags, showing for that short period an increase of 46 per cent. This answers exactly the period of seven years during which railroads were regularly opened in the interior of the United States; and the greatly increased shipping of coffee to New Orleans and New York—two principal points which provide the interior—shows the wholesome influence exercised by the establishment of railroads. The demand for an article like coffee will increase in the United States, in a greater proportion than that of its increased population, because the railroad, although a mere machine, is at the same time a great civilizer, and soon transforms what at first was luxury, into common want, and afterwards into necessities.

“And for the same reason, if Brazil continues its policy of internal improvements, the demand for those articles which the United States is able to furnish in exchange, at moderate prices, will also increase. It is not possible to fix any limits to the amount of this exchange traffic between the two nations. However, the true policy of Brazil cannot be to put any

obstacle in the way of the progress of this traffic; on the contrary, it is its interest to accord to it all possible facility, in order to improve and complete it. Certainly there is every probability that between Brazil and the United States the most amicable relations will continue, if there is taken into consideration the reciprocity of their interests and position with regard to other nations.

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

“The United States are to-day the second, and will soon be the first commercial nation in the world. They behold in Brazil another great and young nation, rising in the same hemisphere and pursuing the same general policy, viz.: That of conferring the greatest quantity of well being on the greatest number possible. And if the United States, which have not yet ceased to be a young nation, are already the greatest customer of Brazil, what may be expected within twenty years, when their net of Railways, whose length already exceeds 30,000 miles, will be still more extended, especially if Brazil should persevere in the same manner in its domestic improvement with regard to foreigners? Here are two young nations, near each other, whose yearly exchanges amount to nearly twenty millions of dollars. In a few years these figures will have doubled; and shall such a considerable commerce, and the money transactions resulting from it, forever continue in their present embarrassing position because these two countries are forced in their mutual communications to have recourse to an immense circuit? One of the principal reasons of that state of things being continued is that the two nations know very little of each other. Generally the people of the United States entertain a very erroneous and false opinion of the actual state of Brazil. They are not aware of the great improvements which have taken place here during the last ten years; they know little of the progress of its political and social life; and without having more frequent relations they will be unable to duly appreciate the Brazilians. The simplest way of doing away with this inconvenience is to establish a steamship line directly from the United States to Brazil. If the Congress of the United States should extend its protection to a company for the formation of such a line, would it not be also the interest of Brazil and the Brazilians to encourage it as much as possible?

“There are many important points which concern the relations of both countries. The character of their institutions, in spite of the few relations

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

### ANALYSES OF RAILROAD REPORTS. NO. 2.

The reports analysed in the present Number are those of the Michigan Central and the Michigan Southern and Northern Indiana Companies.

#### 4.—MICHIGAN CENTRAL RAILROAD.

The Michigan Central Railroad extends in a single track from Detroit to Chicago, a distance of .....	284.8 miles
And holds a lease of the Joliet and Northern Indiana Railroad (completed in 1855), which joins it at Lake Station.....	44.5 "
Making the total length operated.....	329.3 miles

The main line stretches in a west and southwest direction across the lower Michigan peninsula, its initial point being Detroit, at which it connects with the great railways of Canada. Its western terminus is Chicago, on which converge the principal lines draining the upper and middle Mississippi countries. It is thus situated on the best line for through business; and, within its own circuit, has one of the finest agricultural regions of the West. Leaving Detroit it passes through Wayne, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Cass and Berrien counties in Michigan, and through the northern parts of La Porte, Porter and Lake counties in Indiana, into and half through Cook county in Illinois to Chicago. Along this line are situated the principal cities of Michigan, Ann Arbor, Jackson, Marshall, Kalamazoo and New Buffalo, the latter the principal port in the southern portion of Lake Michigan. Detroit is the commercial metropolis of the State and, in 1860, had 45,619 inhabitants. The other cities have populations ranging from 4,000 to 6,000 each. The population of the counties above named, in 1854 and 1864, is compared in the annexed table, which also gives the grain and wool crops return by the State census of the latter year:

Counties.	Population		Bushels, 1863		Pounds Wool.
	1854.	1864.	Wheat.	Other grain.	
Wayne.....	63,778	83,326	181,145	317,240	196,421
Washtenaw.....	28,836	34,048	714,909	259,054	879,509
Jackson.....	21,855	25,905	733,558	101,912	596,117
Calhoun.....	22,768	30,488	885,583	119,359	448,459
Kalamazoo.....	16,893	25,842	682,032	126,585	274,390
Van Buren.....	8,300	17,830	295,135	77,447	56,588
Cass.....	13,124	17,776	397,741	110,278	114,827
Berrien.....	13,847	25,856	341,363	110,658	53,421
<b>Total.....</b>	<b>191,401</b>	<b>261,075</b>	<b>4,181,466</b>	<b>1,222,533</b>	<b>2,637,712</b>

And to these figures may be added an equal enumeration for those portions of the counties adjoining those named on the north and south, which are, in a great measure, dependent on the Central Railroad for their markets. Chicago, at which city it makes its western terminus, is the largest grain, pork, beef and lumber mart in the world, and in 1865, contained 178,539 inhabitants.

The rolling stock owned by the Company at the close of the fiscal years in May, 1861 to 1865, was, as shown in the following table :

	1861.	1862.	1863.	1864.	1865-
	98	98	98	97	97
Locomotive engines.....					
Passenger and baggage cars.....	178	108	108	97	100
Freight cars.....	1,060	1,284	1,297	1,389	1,303
Working cars.....	251	262	262	269	269
Total cars.....	1,419	1,654	1,667	1,655	1,672

The mileage of engines drawing trains on the road, yearly since the full completion of the road in 1852 :

Fiscal Years.	No. of Eng's.	Miles run with trains			
		Pas'ger.	Freight.	Working.	Total.
1852-53.....	..	375,125	231,167	197,054	903,346
1853-54.....	..	550,000	450,000	150,000	1,150,000
1854-55.....	64	652,979	509,909	135,851	1,292,739
1855-56.....	81	804,161	621,508	151,202	1,376,871
1856-57.....	92	795,441	740,716	143,031	1,679,188
1857-58.....	98	676,080	503,923	108,041	1,288,044
1858-59.....	98	631,769	448,361	107,813	1,187,948
1859-60.....	98	532,638	450,449	123,916	1,156,103
1860-61.....	98	532,115	545,883	163,365	1,231,263
1861-62.....	98	507,635	672,627	156,396	1,238,658
1862-63.....	98	511,226	762,877	174,455	1,448,558
1863-64.....	97	591,994	729,182	237,105	1,558,277
1864-65.....	97	645,974	642,671	294,148	1,582,792

The following table shows the tonnage and passengers carried over the road in the same years :

Fiscal Years.	Passengers carried			T'ns of F't Carried.
	Thro'	Local.	Total.	
1852-53.....	77,492½	107,059½	247,552	161,226
1853-54.....	112,908	245,028	357,936	216,560
1854-55.....	158,635½	345,138½	503,774	241,825
1855-56.....	161,270	389,510	550,780	231,323
1856-57.....	187,029½	406,600½	593,630	328,939
1857-58.....	184,684½	307,272	461,956½	376,294
1858-59.....	92,169	269,368	361,537	235,123
1859-60.....	72,666½	251,755	324,421½	295,276
1860-61.....	65,110	262,665	327,775	378,570
1861-62.....	55,292	308,536	308,828	463,112
1862-63.....	59,689	387,672	447,361	564,827
1863-64.....	89,552½	556,206½	645,759	542,410
1864-65.....	107,540½	745,348½	852,889	485,275

The direction of travel and traffic is shown for the four last years in the following tables :

Fiscal Years.	DIRECTION OF TRAVEL.						Pas'ng's car'd 1 mile	Earnings per pas'ng per mile.
	Westward-			Eastward-				
	Local.	Thro'	Total.	Local.	Thro'	Total.		
1861-62.....	129,009	32,040	161,049	124,527	23,352	147,779	2,905,678	2.51c
1862-63.....	190,946	32,759	223,705	196,736	26,930	223,656	35,928,072	2.49c
1863-64.....	280,203½	49,627½	329,831	276,003	39,925	315,928	51,627,391	2.44c
1864-65.....	357,872	59,714½	447,586½	357,476½	47,826	405,302½	68,333,576	2.59c

Fiscal Years.	DIRECTION OF TRAFFIC.						Earnings per ton pr mile
	Tons carried one mile			Proportion			
	Westw'd.	Eastward.	Total.	West.	East.		
1861-62.....	16,869,986	64,863,488	81,733,474	20.64	79.36	1.91c	
1862-63.....	25,678,889	73,826,089	99,504,978	25.81	74.19	1.99c	
1863-64.....	31,061,968	60,867,177	91,929,145	33.77	66.23	2.25c	
1864-65.....	29,689,208	43,248,111	72,937,319	40.70	59.30	3.06c	

The following table exhibits the *earnings and expenses* of the road (including local taxes) from the 22d September, 1846, when the present company came in possession, to the 31st May, 1865 :

Fiscal years.	GROSS EARNINGS				Operating Expenses.	Net Earnings.
	Passengers.	Freight.	Mails, &c.	Total.		
1846-47 (7½ mos.)	\$60,760	\$146,952	\$1,588	\$209,300	\$86,167	\$123,133
1847-48 (13 mos.)	152,053	234,649	14,254	401,047	201,858	199,189
1848-49	197,767	214,439	15,223	427,429	239,234	188,195
1849-50	365,437	279,411	44,124	691,972	301,649	390,323
1850-51	490,120	408,449	48,778	947,347	341,665	605,682
1851-52	581,477	412,438	76,033	1,069,948	404,747	665,200
1852-53	589,489	504,956	59,216	1,153,661	566,722	585,939
1853-54	855,918	673,020	50,475	1,579,413	908,944	670,469
1854-55	1,246,409	900,446	68,429	2,215,284	1,335,627	879,657
1855-56	1,497,855	1,209,925	92,663	2,800,443	1,571,818	1,228,625
1856-57	1,610,416	1,418,492	80,695	3,104,608	2,083,199	1,021,404
1857-58	1,321,039	1,033,748	73,970	2,428,757	1,531,218	897,539
1858-59	933,609	831,435	64,085	1,838,129	1,072,732	765,398
1859-60	803,508	962,622	66,815	1,832,945	1,077,483	755,462
1860-61	800,950	1,171,735	75,809	2,048,494	1,137,724	910,770
1861-62	724,915	1,559,061	77,265	2,361,241	1,149,153	1,212,088
1862-63	589,682	1,933,757	73,121	2,946,560	1,272,360	1,674,200
1863-64	1,262,415	2,073,274	98,859	3,434,548	1,720,125	1,714,423
1864-65	1,771,812	2,233,529	140,077	4,145,419	2,406,149	1,739,270

The United States taxes on dividends and passengers, not included in any of the above items, amounted in 1862-63 to \$28,385; in 1863-64 to \$55,222, and in 1864-65 to \$165,265.

The *profit and loss account*, which differs somewhat from the Superintendent's statements, on which the above table is based, gives the following as the result of operations for the same years :

Fiscal years.	Total Resources.	Current expenditures.	Interest and Exchange.	Sinking Fund.	Dividends declared.	Surplus to credit.
1846-47	\$209,300	\$86,167	\$.....	\$.....	\$100,751	\$23,382
1847-48	433,429	201,858	.....	.....	176,000	45,571
1848-49	473,001	239,234	.....	.....	176,000	57,776
1849-50	752,188	301,649	242,109	.....	190,363	18,062
1850-51	985,166	400,840	277,469	.....	230,544	76,314
1851-52	1,151,607	470,931	274,379	.....	404,139	2,153
1852-53	1,151,796	566,722	279,509	.....	320,000	14,335
1853-54	1,574,260	903,944	269,587	.....	388,536	12,192
1854-55	1,274,128	1,235,628	360,903	.....	340,860	236,737
1855-56	3,115,059	1,566,819	478,639	.....	602,840	466,761
1856-57	3,628,650	1,872,895	586,502	.....	604,450	564,803
1857-58	2,932,719	1,890,557	701,887	.....	302,555	87,420
1858-59	1,977,196	1,072,732	735,488	.....	.....	108,976
1859-60	1,961,449	1,077,483	730,760	60,000	.....	78,206
1860-61	2,126,699	1,137,724	684,328	75,000	181,713	38,494
1861-62	2,407,023	1,149,153	679,463	84,500	181,713	312,194
1862-63	3,260,111	1,272,360	617,657	84,500	484,573	772,636
1863-64	4,189,822	1,720,125	600,217	84,500	726,864	1,002,894
1864-65	5,124,107	2,406,149	622,691	84,500	1,136,826	708,385
					259,648	448,737

The *financial condition* of the company at the close of each fiscal year from 1850-51 to 1864-65 is exhibited briefly in the following table :

Fiscal Years.	LIABILITIES				Cost of Property.
	Capital.	Bonds.	Bills payable.	Income.	
1850-51	2,628,000	3,802,950	191,288	76,313	6,339,666
1851-52	3,237,500	3,965,950	949,579	2,153	8,156,700
1852-53	4,234,000	3,994,313	631,176	.....	8,856,834
1853-54	5,681,000	3,985,063	234,570	12,192	9,951,999
1854-55	5,621,916	5,594,063	315,223	236,737	12,163,939
1855-56	6,033,432	5,408,063	1,098,760	466,766	13,609,936
1856-57	6,058,092	5,736,563	1,459,824	564,803	13,914,986
1857-58	6,057,840	8,284,063	118,576	87,420	14,548,411
1858-59	6,057,840	8,184,489	.....	108,376	14,251,799
1859-60	6,057,820	7,914,489	90,782	78,206	14,141,676
1860-61	6,057,784	7,968,489	125,000	38,434	14,191,649
1861-62	6,057,710	7,999,489	.....	312,194	14,371,174
1862-63	6,057,436	7,999,489	.....	772,636	14,834,954
1863-64	6,315,906	7,740,989	.....	1,002,894	15,066,822
1864-65	6,491,386	7,565,489	.....	708,385	14,781,571

The total includes also several small balances not otherwise designated. The construction account, which includes the cost of steamboats, was increased in 1862-43 by the transfer of sundry items, properly belonging to construction, and not before charged to that account.

On the 31st May, 1865, the Trustees of the Sinking Funds reported \$565,368 71 to the credit of the First and \$167,643 50 to the credit of the Second Sinking Fund, which, deducted from the Bonded debt leaves the net amount debt of \$6,832,376 78.

The cost of road and equipment *per mile*, the earnings, expenses and profits per mile, and the rate of dividends, as deduced from the foregoing tables, are shown in the following statement:

Fiscal Years.	Miles of Road.	Cost of R'd p. m.	Earnings. per mile.	Exp. p. m.	Profits. p. m.	Exp. to earn'gs.	Rate of Div.
1846-47 (7½ mos.)	143.1	\$13,976	\$1,462	\$602	\$760	\$4117	8
1847-48 (13 mos.)	159.4	23,699	2,516	1,266	1,250	50 32	8
1848-49	217.9	21,037	1,961	1,098	863	56 00	8
1849-50	217.9	23,261	3,176	1,384	1,792	43 58	8
1850-51	227.5	27,866	4,164	1,502	2,662	36 07	9
1851-52	284.8	28,640	3,737	1,421	2,316	38 08	14
1852-53	284.8	29,324	4,057	1,989	2,062	49 10	8
1853-54	284.8	32,559	5,545	3,174	2,371	57 24	8
1854-55	284.8	37,373	7,778	4,639	3,089	60 29	10
1855-56	284.8	40,692	9,833	5,519	4,314	56 12	11
1856-57	284.8	42,699	10,901	7,314	3,587	67 10	10
1857-58	284.8	46,204	8,328	5,376	2,952	63 04	...
1858-59	284.8	46,204	6,454	3,766	2,688	58 35	...
1859-60	284.8	46,204	6,435	3,783	2,652	58 82	...
1860-61	284.8	46,204	7,193	3,994	3,199	55 52	3
1861-62	284.8	46,198	8,291	4,035	4,256	48 66	3
1862-63	284.8	48,474	10,346	4,468	5,878	43 19	8
1863-64	284.8	48,474	12,059	6,040	6,019	50 05	12
1864-65	284.8	48,474	14,555	8,449	6,106	58 05	18
Dividend declared June 20, 1865—Cash 4 and stock 6							10

The fluctuations of the *market price* of the stock of the Michigan Central Railroad Company at New York monthly for the five years ending with June, 1865 has been as follows:

Months.	1860-1.	1861-2.	1862-3.	1863-4.	1864-5.
July	47½@60¼	41 @47¼	57 @ 63¼	107 @116½	132 @140
August	59½@73¼	40½@43	59½@ 69¼	113 @128	133¼@140¼
September	67½@72¼	41½@43½	66½@ 81¼	116 @133¼	123¼@134¼
October	59½@70¼	41 @52	81½@ 92¼	120½@128¼	114¼@130
November	45 @64	41 @54¼	85½@ 91¼	120½@128¼	124¼@132¼
December	41 @50¼	41 @50¼	88½@ 93	119½@128¼	115 @133
January	51½@61¼	47 @55¼	91 @ 99	118½@139	103¼@117¼
February	49½@60¼	48½@54¼	94½@ 98¼	131¼@143	107¼@114¼
March	54 @60	55½@58¼	97 @104¼	130¼@152	89½@112
April	40 @58	53½@56¼	99½@105	135 @157	93 @114
May	40 @46	56½@63¼	105 @124¼	131 @146¼	106 @115
June	59½@44¼	62½@68¼	106 @119¼	142¼@156¼	105¼@110
YEAR.....	40 @73¼	40½@68¼	57 @124¼	107 @157	89½@140¼

The Michigan Central Railroad Company was chartered by the Legislature of Michigan March 28, 1846, with a capital of \$5,000,000, with authority to increase it to \$8,000,000, and to purchase the railroad partially completed by the State extending west from Detroit to Kalamazoo, 143 miles.

The construction of a railroad from Detroit on Lake Erie to St. Joseph on Lake Michigan was commenced by a company originally chartered in 1831, which up to 1837 had expended on the work \$116,902. In 1837, the State having undertaken an elaborate system of internal improvements, assumed the construction of this line, which formed a part of the system, and opened the first section from Detroit to Ypsilanti 29.4 miles in January, 1839.

The road was extended and opened to Ann Arbor 8 miles further west in October, 1839; to Dexter  $9\frac{1}{2}$  miles in July, 1840; to Jackson 28.7 miles in January, 1842; to Marshall 31.7 miles in August, 1844; to Battle Creek 12.9 miles in November, 1845; and to Kalamazoo 22.8 miles in March, 1846—making a total length completed and operated at this time 143 miles.

The credit of the State had by this time become exhausted, and its finances so embarrassed as to necessitate the abandonment of its public works. At this juncture the Legislature passed an act authorizing their sale, and under this act the present Michigan Central Railroad Company was formed, and the road sold to them for the sum of \$2,000,000. The work had been constructed after the fashion of the day, with a flat rail laid upon longitudinal sleepers, and in the cheapest if not most economical manner. The cost to the State had been about \$2,500,000.

The new company took possession of the property on the 23d September, 1846, and immediately provided the means for its extension westward to New Buffalo on Lake Michigan, a distance of 74 miles from Kalamazoo, the point attained under the State administration, and for the reconstruction of the portion already open, but which was already in a delapidated condition. The graduation of the new line was commenced in March, 1847, and the work was completed in the spring of 1849, having been opened for traffic in sections as follows: From Kalamazoo to Paw Paw, 16.3 miles, in July, 1847; to Decatur, 7.7 miles, in August; to Dowagiac, 11.1 miles, in September; and to Niles, 12.5 miles, in October, 1848, and to New Buffalo early in the year 1849. The road between New Buffalo and Michigan City 9.6 miles was completed on the 30th October, 1850. Upon reaching the lake, communication was maintained with Chicago by means of steamboats. The road was finally constructed into Chicago, and the first trains entered that city on the 21st April, 1852. That portion of the line west of Michigan City was constructed nominally by the New Albany and Salem Railroad Company, under authority granted by their charter to construct branches—the State of Indiana having refused to give the Michigan Central Company the required powers. For the Illinois portion of the line the Illinois Central Railroad was used under a perpetual agreement made between the two companies. The stations, etc., in Chicago are owned and occupied conjointly with the Illinois Central and the Chicago, Burlington, and Quincy companies. The Michigan Central Railroad Company has been one of the most fortunate in the West. With the exception of the three years 1858, '59, and '60, in which the result of the financial panic of 1857 were chiefly felt, this company has never failed to pay dividends to its stockholders. Its geographical position is admirable, and its connection either by rail or steamboat complete. But much of the success it has enjoyed must be attributed to the able minds that have directed its destinies, and which still labor in its behalf. Since the present company acceded to the property the stockholders have received an average dividend of 7.26 per centum yearly.

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## 5.—MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD.

THE Michigan Southern and Northern Indiana Railroad consists of the several divisions and branches as shown in the following statement :

Main line.....	Toledo to Chicago.....	242.06 miles.
Air line.....	Toledo to Elkhart.....	133.20 "
Detroit, Monroe & Toledo line.....	Air Line Junc. to Detroit & Mil. Junc..	59.12 "
Monroe branch.....	Adrian to Monroe.....	33.60 "
Jackson branch.....	Lenawee Junction to Jackson.....	41.90 "
Lenawee branch.....	Palmyra Junction to Lenawee Junction..	2.50 "
Constantine branch.....	White Pigeon to Constantine.....	4.18 "
Total (on which are 53.23 miles of side track).....		516.56 miles.
Track (with 0.75 miles side track) owned conjointly with Chicago and Rock Island Railroad Company.....		1.67 "
Track of Detroit and Milwaukee Railroad from Junction to Detroit under permanent lease.....		3.21 "
Total length operated by M. S. & N. I. R. R. Co.....		521.44 miles.

This road, in its several divisions, traverses eight counties in Southern Michigan, three in Northwestern Ohio, eight in Northern Indiana, and one county (Cook) in Illinois. It has three several termini to the east, viz: Toledo, Monroe, and Detroit, all of which it connects directly with Chicago, which is its western terminus. At Toledo it joins the Lake Shore Line of Railroads, through which it reaches the seaboard markets. At Monroe it has direct access to Lake Erie and its navigation. At Detroit it connects with the great Canadian railroads. These facts assure to the road a very large through traffic, for which there is only a single competitor, and that, only so far as the Detroit trade is concerned. This competitor is the Michigan Central Railroad. There is no difference, however, in the distance between Chicago and Detroit by either line, each having a length of 284 miles. The country drained by the Southern road has an extreme width of sixty miles, narrowing as it proceeds west, and towards the Illinois line becoming limited to the immediate shore of Lake Michigan. But from this territory, which is a fine agricultural and well populated country, it derives from local travel and traffic fully half its gross annual income and nearly three-fifths of its net revenue, the rate of local carriage being higher than the through rate, the average difference in favor of through carriage having been in 1864-65 for passengers 9.5 mills and for tonnage 16.7 mills per mile. A competing line for the local business would have the effect of equalizing these charges. The result, however, has been an enormous revenue for the work done, and a highly prosperous condition of late years, and especially during the progress of the late war; all of which will be seen in the following tables exhibiting the yearly results of operations. For several years (1858-61) swamped by debt, it has recently emerged from its difficulties, and become one of the most remunerative of enterprises.

The *rolling stock* on the road has been as follows :

Year Ending	Locom's Engines	Pass.	Cars in Trains	
			Fre't.	Total
January 1, 1858.....	90	139	1,275	1,414
" 1, 1859.....	91	135	948	1,111
March 1, 1860.....	89	113	929	1,072
" 1, 1861.....	83	109	934	1,069
" 1, 1862.....	83	111	958	1,089
" 1, 1863.....	83	111	1,087	1,218
" 1, 1864.....	86	110	1,135	1,245
" 1, 1865.....	97	123	1,337	1,460

The *mileage of engines with trains* is given in the following statement :

Years Ending	Passenger.	Freight.	Wood & Gravel.	Total.
Jan. 1, 1858	858,974	561,819	149,310	1,569,603
" 1859	768,396	567,184	139,219	1,874,799
March 1, 1860	669,482	704,349	156,247	1,530,078
" 1861	571,314	881,818	139,245	1,592,377
" 1862	657,970	990,851	146,899	1,775,758
" 1863	682,382	1,187,909	190,846	2,060,637
" 1864	736,985	1,245,465	198,027	2,171,477
" 1865	785,286	1,151,612	250,226	2,187,124

The *amount and direction of travel and traffic* on the road are shown in the following statements :

AMOUNT AND DIRECTION OF TRAVEL.

Years Ending	Number of Passengers			Mileage of Passengers		
	Thro'	Local.	Total.	Thro'	Local.	Total.
Jan'y 1, 1858	159,992	374,558	534,550	39,240,118	14,626,845	53,866,963
" 1859	85,237	317,692	402,929	20,705,032	14,114,858	34,819,880
March 1, 1860	64,213½	275,773	339,986½	15,823,144	11,488,097	37,311,241
" 1861	64,147½	304,652	368,799½	15,663,978	12,312,051	27,976,029
" 1862	57,094	280,546	337,640	13,962,242	11,142,989	25,105,231
" 1863	66,138	330,585	396,723	16,544,660	12,930,716	29,475,376
" 1864	96,413	480,482	576,895	23,690,063	18,040,202	41,730,270
" 1865	125,197	696,168	821,365	33,260,246	23,212,298	61,472,544

The number of passengers carried *eastward* in 1864-65 was 400,798½, and *westward* 430,566½.

The earnings from passengers per mile in 1859-60 was 2.61 cents, viz : 2.27 through and 3.07 local ; in 1860-61 2.68 cents, viz : 2.29 through and 3.17 local ; in 1861-62 2.33 cents, viz : 2.10 through and 3.26 local ; in 1862-63 3.02 cents, viz : 2.17 through and 3.26 local ; in 1863-64 2.70 cents, viz : 2.17 through and 3.40 local ; and in 1864-65 2.75 cents, viz : 2.33 through and 3.28 local.

AMOUNT AND DIRECTION OF TRAFFIC.

Year Ending	Through tonnage			Way tonnage			Total Tons.	T'ns car'd 1 mile.
	East.	West.	Total.	East.	West.	Total.		
Jan. 1, 1856	13,468	35,648	49,116	91,843	51,341	143,184	102,300	28,082,924
" 1857	19,637	48,484	68,121	85,774	77,919	163,693	231,814	37,524,532
" 1858	11,207	40,414	51,621	96,819	86,364	183,183	294,804	28,532,565
" 1859	26,996	17,724	44,720	127,614	79,279	206,893	261,613	30,893,589
Mar. 1, 1860	78,872	27,416	106,288	162,039	77,973	240,012	346,300	45,744,920
" 1861	103,190	34,500	137,690	187,234	73,755	260,989	398,679	56,423,071
" 1862	143,306	39,833	183,139	181,757	87,812	269,569	452,708	66,468,104
" 1863	193,262	53,370	246,632	2,366,4	83,330	296,994	543,626	81,141,241
" 1864	183,475	6,430	243,905	206,361	108,713	315,074	558,979	86,303,461
" 1865	126,631	68,038	194,669	223,941	103,891	332,832	527,501	77,882,529

The gross earnings per ton per mile for the same years were : 2.768, 2.558, 2.817, 2.742, 2.292, 2.201, 2.092, 2.099, 2.296, and 2.833 cents and thousandths.

The *gross earnings, expenses, and profits* of operating the road (including steamers) are given in the following statement :

Years Ending	Gross earnings				Operat'g expenses	Prof't's f'm operat'ns
	Pas'ng's.	Frei't.	Other.	Total.		
Jan. 1, 1856	\$1,520,675	\$954,428	\$120,927	\$2,595,630	\$1,319,154	\$1,276,476
" 1857	1,598,919	957,121	158,808	2,714,848	1,598,770	1,116,078
" 1858	1,316,478	803,703	189,246	2,309,487	1,765,176	544,311
" 1859	920,174	872,419	226,832	2,019,425	1,242,152	777,273
March 1, 1860	714,126	955,752	164,533	1,834,411	1,067,493	766,918
" 1861	749,297	1,296,589	89,653	2,075,459	1,039,830	1,035,629
" 1862	710,417	1,419,498	120,603	2,250,518	1,112,970	1,137,548
" 1863	892,198	1,804,582	117,114	2,813,831	1,352,555	1,461,276
" 1864	1,244,129	2,016,851	123,314	3,384,294	1,753,517	1,630,777
" 1865	1,875,061	2,242,772	171,432	4,289,465	2,408,352	1,881,113

The *rate and character* of the dividends paid on the capital stock of the company since the completion of the road into Chicago, have been as follows :

	—Stock—				—Stock—		
	Cash.	Scrp.	Guar. st'k: cash.		Cash.	Scrp.	Guar. st'k: cash.
January, 1853 .....	5	..	..	January, 1857 .....	5	..	..
July, " .....	7	..	..	August, 1863 .....	..	..	5
January, 1854 .....	..	10	..	Febr'y, 1864 .....	..	..	5
July, " .....	5	7	..	August, " .....	3½	..	5
January, 1855 .....	..	5	..	Febr'y, 1865 .....	3½	..	5
July, " .....	5	..	..	August, " .....	..	..	5
January, 1856 .....	5	..	..	Total .....	44	22	25
July, " .....	5	..	..				

The financial condition of the company at the close of each of the last ten fiscal years is exhibited in the following statement:

Years ending.	—Stock—		Funded Debt.	All other Liabilities.	Total of all acc'ts.
	Common.	Guar'd.			
Jan. 1, 1856 .....	\$6,928,900	.....	\$5,800,000	\$518,224	\$13,247,124
" 1857 .....	7,263, 00	.....	1,910,000	2,840,349	17,013,549
" 1858 .....	5,983,200	\$2,893,200	8,593,000	1,990,943	19,460,343
Mar. 1, 1859 .....	6,081,800	2,893,600	9,343,000	1,277,007	19,595,207
" 1860 .....	6,024,600	2,893,600	9,721,000	1,336,762	19,975,962
" 1861 .....	6,124,600	2,893,600	9,719,704	603,084	19,340,988
" 1862 .....	6,124,600	2,893,600	9,750,707	449,560	19,218,467
" 1863 .....	6,124,600	2,893,600	9,527,078	245,047	18,790,325
" 1864 .....	7,536,800	2,583,600	8,287,255	224,311	18,651,966
" 1865 .....	7,536,600	2,183,600	8,564,115	709,902	18,994,217

Against which have been charged—

Years ending.	—M. S. & N. I. R.R.—		Steamers and Prop'rs.	—D. M. & T. R.R.—		Total cost of fixed prop.
	Length. miles.	Cost of road & equip.		Length. miles.	Cost of road.	
Jan. 1, 1856 .....	378	\$11,226,757	\$418,457	.....	.....	\$11,645,208
" 1857 .....	460	15,237,170	527,607	59	491,865	14,256,642
" 1858 .....	460	14,742,754	676,932	59	1,346,855	16,766,541
Mar. 1, 1859 .....	460	14,714,731	698,245	59	1,411,067	16,824,043
" 1860 .....	460	15,193,670	712,678	59	1,523,786	17,439,134
" 1861 .....	460	15,238,379	691,278	59	1,560,043	17,489,700
" 1862 .....	460	15,260,663	691,278	59	1,560,182	17,512,123
" 1863 .....	460	15,257,883	.....	59	1,653,382	16,911,265
" 1864 .....	460	15,263,444	.....	59	1,663,568	16,927,012
" 1865 .....	460	15,263,444	.....	59	1,693,763	16,962,212

The company also held, March 1, 1865, the following property and assets:

Available property and assets .....	\$1,072,409	
Nominal assets .....	73,656	
Profit and loss, Balance of Income .....	886,940	2,032,005
Total Property and assets .....		\$18,994,217

The cost of road and equipment per mile and earnings per mile of road are shown in the subjoined table:

Year ending	Cost per mile of road, &c.	—Per mile of road.—			Expenses per cent.		—Divi.—
		Earn'gs.	Expen's.	Profit.	Com.	Guar	
Jan. 1, 1856 .....	\$29,701	\$6,867	\$3,489	\$3,378	50.81	10	..
" 1857 .....	28,999	5,902	3,475	2,427	58.88	10	..
" 1858 .....	29,074	4,450	3,401	1,049	76.43	..	..
" 1859 .....	31,071	3,891	2,393	1,498	61.50	..	..
Mar. 1, 1860 .....	32,211	3,534	2,057	1,477	58.21	..	..
" 1861 .....	32,366	3,999	2,003	1,996	50.09	..	..
" 1862 .....	32,410	4,236	2,144	2,192	49.45	..	..
" 1863 .....	32,584	5,421	2,606	2,815	48.07	..	..
" 1864 .....	32,614	6,521	3,378	3,143	51.80	..	10
" 1865 .....	32,682	8,265	4,640	3,625	56.14	7	10
Dividend paid August, 1865 .....							5

The lowest and highest prices of the company's stocks at the New York Stock Exchange Board for each month of the five years ending March 1, 1865, were as shown in the following tables:

COMMON STOCK.					
Months.....	1860-61	1861-62.	1862-63.	1863-64.	1864-65.
March.....	7½@12	14½@18½	22½@25	53½@61½	98 @118½
April.....	9½@14	12½@17½	22 @23½	55½@67½	84½@118½
May.....	11½@13	10½@13½	23 @26½	67½@88	85½@100
June.....	10½@14	10½@12½	25½@28½	68½@81	93½@100
July.....	13½@19	12 @15½	23½@27½	73½@89½	80½@94½
August.....	17½@25	12½@14	24½@32½	88 @113	82½@92½
Septemb'r.....	19½@24½	13 @14½	31 @39½	77 @108½	71 @85
October.....	15½@23½	13½@19½	37½@47	79 @89½	87 @71½
November.....	12½@18	17½@20½	37½@43½	79 @87½	68½@77½
Decemb'r.....	10½@15	16 @19½	36½@41½	77 @89	68½@74½
January.....	14½@16½	19 @22	45½@65½	84½@90	61 @74½
February.....	12½@15½	20½@24½	55 @63½	83½@99	63½@70½
Year.....	7½@25	10½@24½	22 @65½	53½@113	87 @118½
GUARANTEED 10 PER CENT STOCK.					
Months.....	1860-61.	1861-62.	1862-63.	1863-64.	1864-65.
March.....	17 @24½	33 @39½	46 @49½	94½@109	143 @150
April.....	19½@26	26 @39½	44½@47½	98 @110	127 @165
May.....	22 @26½	24½@29½	47 @58½	108½@122½	130 @143
June.....	23 @30½	2½@27½	57 @64	110½@119	140 @143½
July.....	30 @44	26½@33½	52½@60½	111 @117	132 @140
August.....	43 @50	27½@30	55½@64	112½@140	140 @149½
Septemb'r.....	42½@50½	23½@31½	61½@74	124 @137	125½@147
October.....	35 @50½	31 @40½	72½@85	134½@155	132 @132
November.....	28½@38½	35½@41½	80½@85½	135 @151	140 @146½
Decemb'r.....	23 @33	36½@41½	82 @85	130 @135	141 @146
January.....	33 @38	39½@43½	86½@107	132½@140	135 @147
February.....	27½@34	40½@49½	102 @106½	133 @142½	135 @140
Year.....	17 @50½	22½@49½	44½@107	94½@156	125½@165

The Michigan Southern and Northern Indiana Railroad Company is a consolidation of the Michigan Southern and the Northern Indiana Railroad companies.

The "Michigan Southern Railroad Company" was chartered May 9, 1846, under an act of the Legislature of Michigan providing for the sale of the State works. By this act the Southern Railroad and its equipments were to be sold for the sum of \$500,000. This road had been undertaken by the State as part of the internal improvements authorized by the act of March, 1837, and at the date of sale had been completed from Monroe to Hillsdale, 69 miles, at a cost of \$1,300,000. The capital of the new company was fixed at \$2,000,000, with the right to increase it to \$3,000,000. According to the terms of sale the main line was to be continued west to Lake Michigan, and the Tecumseh branch then open 10 miles, was to be extended to Jackson. The section from Hillsdale to Sturgis was placed under construction early in 1850, and completed and opened for traffic to Jonesville in November, to Coldwater in December, and to Sturgis in March. The remainder of the line in Michigan was commenced in May, 1851, and completed in the following July. In the meanwhile the road had been extended from Monroe to Monroe Pier on Lake Erie. In 1849 and 1850 the Legislature passed acts supplementary to the charter authorizing the relaying of the road with heavy iron, the original track having been constructed of flat bars laid on longitudinal sills. This change was completed before the end of 1852.

The "Northern Indiana" was chartered under the name of the "Buffalo and Mississippi Railroad Company" by the Legislature of Indiana February 6, 1835. The portion of this road in Ohio was chartered March 3, 1851, with a provision for consolidation with the Indiana road. Construction was commenced in 1853, and the road completed to Bryan, 72 miles west from Toledo in 1855, and to the junction with the main line at Elkhart early in 1857.

The portion of the Michigan Southern Railroad within Indiana was built under the charter of the Buffalo and Mississippi Company, and that within Illinois under a separate charter granted June 16, 1852. The whole of the main line was completed into Chicago in May, 1853, a short link next to the city having been built conjointly by the Michigan Southern and the Chicago and Rock Island railroad companies.

The Michigan Southern and Northern Indiana companies had from the first been intimately connected, and their roads constructed and operated under one superintendence. It now became necessary to form the two into a single corporation, and to this end articles of consolidation were signed on the 25th April, 1855.

The Tecumseh, now Jackson Branch, was extended to Manchester in 1855, and to Jackson in 1857. A further extension to Lansing has been spoken of, and will probably be completed at some future day.

The Constantine Branch from White Pigeon to Constantine was opened in 1857. The St. Joseph Valley Branch, extending from Constantine to Three Rivers, was built by a separate company, and purchased by the Michigan Southern Company. In 1864 it was again transferred to the original company on condition of extending it to Schoolcraft. The old branch from Elkhart to Goshen is now a part of the Air Line. A branch or siding of fourteen miles in length from Baileytown to Michigan City also exists, but is simply used for supplying the road with wood from the lake.

The Erie and Kalamazoo Railroad was chartered in 1835, but not built until 1852. Subsequently the stock of the company was bought up by the consolidation, and it now forms part of the main line between Toledo and Chicago.

The Detroit, Monroe and Toledo Railroad was also built by a separate company, the chief part of the stock of which was held by the consolidation, and all is now so held except 73 shares. The construction of this road was commenced in the summer of 1856, and the section between Detroit and Monroe completed in December. The remainder of the line southward was opened in 1857.

The Company formerly owned a number of steamers and propellers which connected the Lake Erie termini of the road with Cleveland, Buffalo, etc. These were sold in 1862.

Few roads in the United States are better equipped than this one. Stations, storehouses, piers, etc., are abundantly supplied, and all that conduces to facilitate the movement of goods and passengers has been sedulously attended to by those in charge of the works. The increase of rolling stock from year to year is shown in tabular form, but numbers alone cannot express the full measure of the increase. We must also take into consideration the increased power of the engines and capacity of the cars, which have nearly doubled within the last ten years. The facilities of the road, indeed, are ample for a very large increase of its present business.

The first years of this road were surprisingly prosperous. At the time of its completion into Chicago both foreign and domestic immigration were in the highest state of activity, and both passengers and tonnage paid handsomely. The business of 1856 reached \$2,714,848. Large dividends were in vogue in those days. But the panic of 1857, which swept over the west country with its full force, stopped almost wholly the west-

ward movement, and in that and the subsequent years the business of the road fell off nearly one-half. To make the matter worse, the lateral and branch roads of the company were found to earn less than their proper share, and to cost vastly out of proportion to their earnings. Dividends of course ceased, and it was with great difficulty that the debt alone could be managed. The year 1859-60 was one of the greatest gloom, the earnings and profits having come to bare living amounts. By this time, however, a large portion of the floating debt of the company had been liquidated, and the war coming on with its great business movement, the company now commenced to recuperate in earnest, and from year to year has been increasing in strength and prosperity. It is now, indeed, wholly relieved from debt; and for the last two fiscal years has been able to pay ten per cent interest on its guaranteed stock, and for the last year seven per cent on its common stock. Five years ago the common stock of this company sold heavily at from  $7\frac{1}{2}$  to 12, and the guaranteed stock at 17 to 24; in March last the first was selling at  $63\frac{1}{2}$  to 70, and had sold as high as  $118\frac{3}{4}$ , and the latter was selling at 135 to 140, and had sold at 165.

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#### STATISTICS OF ENGLISH LIFE.

DR. W. FARR, of the General Register-office, has completed his supplementary volume on the mortality of England in the ten years 1851-60, the census of 1851 and of 1861 furnishing the means of comparing the population with the deaths. He tells the story of life from its beginning. There is little definite information respecting the rate of embryonic mortality; but some years ago Dr. GRANVILLE collected statistics of the history of 400 mothers, married women, who applied to the Westminster General Dispensary, and found that though 272 of them had had only live children, the other 128 had in the previous ten years borne 556 live children and 305 dead embryos, the latter most frequently in their earlier months, just as the mortality in the first year of breathing life increases rapidly as we proceed backwards from the 12th to the third, second, and first month. In the 26 years 1838-63 there were registered in England the deaths of no less than 2,374,379 infants born alive but not living for a single year. At this present time 100,000 infants of less than a year old die every year in England. The French returns are very minute, and show in 1856 a mortality of 154 per cent annum in the first seven days after birth, 120 in the second seven days, and 54 in the sixteen days following. The mortality among children under five years of age in the ten years 1851-60 was very little over 4 per cent, in the more healthy districts of England; in one or two thinly peopled districts in the extreme north it was under 2.5 per cent. Among the children of peers it has been calculated to be little over 2 per cent; among the children of the clergy in 1829 and 1858 rather over 3 per cent. On the other hand, there are 151 districts of England where, taken as a whole, the child mortality of 1851-60 exceeded 8 per cent; there were in those districts in 1861 1,391,420 children, and every year nearly 65,000 more die than if the death-rate were the same as in healthy districts. In the ten years 1851-60 the mean annual mortality among children under five was 10.49 per cent

in the city of London (east division;) 10.219 in Nottingham; 10.852 in St. Giles's; 11.725 in Manchester district; and 13.198 in Liverpool district. There is no reason to suspect that any great number of the infants in these districts fall victims to deliberate crime, but there is, no doubt, great negligence on the part of parents, great ignorance of the conditions on which health depends, and great privation among the poor. It may be said that the weaklier lives are thus cut off, but it must be borne in mind that many of the strongest children are weakened for life.

Passing on to the higher ages, we find the rate of mortality declining with every year of life up to 12 or 13, when it is at its lowest. Between 10 and 15 years of age less than five boys in a thousand die in the year. Twenty years later in life the mortality is doubled, and goes on increasing to the close. At all ages the variation in the rate in different districts is shown to be very striking. The mortality of men in towns demands a careful investigation. At 45-55 the mortality of London men is not far from double that of men in the healthy districts of the country. It is much higher at every age than the mortality of women in London. Ill-ventilated workshops may have something to do with this, and so may indulgence in spirits and other stimulants. The workmen in all large towns suffer as much as, and often more than, the workmen of London. For instance, at the age 25-35, and again at the age 35-45, and again at the age 45-55, the workmen of Liverpool, Manchester, Bristol, and Newcastle-upon-Tyne die at a still greater rate than the men of London. In the ten years 1851-60 the deaths in 30 large town districts of England, with an aggregate mean population of 2,541,630, comprising seven London districts and the principal provincial town districts, averaged 71,194 a year, while the deaths at the rate in healthy country districts would have been only 38,459—an annual loss of above 32,735 lives in much less than a seventh of the population.

If the mortality of all England is arranged in five great groups, the following result appears:—Where the mortality was 14, 15, or 16, per 1,000 persons living, the population was only 86 to the square mile; where the mortality was 17, 18, or 19, the population was 172 to the square mile; where 20, 21, or 22, 250; where 23, 24, or 25, 1,128, and where 26 and upwards, 3,399. Yet there can now be no doubt that mere proximity of dwellings does not necessarily involve a high rate of mortality. If an adequate water supply and sufficient arrangements for drainage and cleansing are secured, the evils which make dense districts so fatal may be mitigated. It is remarkable that some of the dense districts of cities are already comparatively salubrious. The mortality of a district is by no means bound to its density of population. Bermondsey is less densely inhabited than St. James' Westminster, but the mortality is considerably greater. Next to each other in these tables stand Westminster district (St. John's and St. Margaret's), and the district of St. George, Hanover square, with equal density of population in each taken as a whole; but the former has a mortality far heavier than the latter. It is also to be noted that in London the mortality fell from the annual rate of 25 per 1,000 in the decenniad 1841-50 to 24 per 1,000 in 1851-60. The mortality of Lancashire and Cheshire also declined from 27 to 26. Taking all England, though the growth in numbers, of course, increased the density of population, the rate of mortality did not increase, but continued at 22 per 1,000.

## FINANCES OF MINNESOTA.

"THE wealth of nations," says a distinguished statist, "is composed of three distinct elements, of which population is one, real property is the second, and personal property the third."

Minnesota was erected into a Territory of the Union in 1849, with a population of 4,049 souls. Here it becomes a political community, and takes its statistical start. Eight years later when preparing to take its place in the sisterhood of States, a census was taken, which showed that its population had increased to 150,037. In the meanwhile the assessed valuation of real and personal property had risen from \$514,936 to \$35,000,000.

Thus, in less than ten years, had arisen from the wilderness, a State equaling in population more than one sovereignty of Europe, the structure of a thousand years! This same State contains now (1865) not less than 250,000 inhabitants, and possesses a taxable valuation of not less than \$50,000,000.

It took Ohio, Indiana and Michigan each thirty-five years from their foundation to reach the same status. Illinois gained the same point in twenty-five years. Wisconsin, Iowa and Minnesota had each 250,000 fifteen years after being erected into separate territories. It would appear from this that the further we progress into the wilderness the greater and more rapid the influx of population. This, however, may be explained by the greater facilities now enjoyed than those vouchsafed to the immigrants of an earlier date. They had to break the untrod wilderness, unmarked by even ordinary roads, while the immigrant of to-day reaches his destination by railroad and steam navigation. So much for facilities, and as to time, the work of thirty days is now compressed into a single day. Other elements have also favored later times—adverse policy has driven to our shores millions of foreigners, refugees from tyranny and starvation, and the vast increase of population in the older States has compelled the young and able to seek new homes in the West. It is not wonderful then that the extreme portion should receive this foreign and domestic overflow, which, passing the older settlements, seeks new fields on which to expend its forces.

## POPULATION AND VALUATION.

The progress of Minnesota since it became a State, in population, land occupation, and wealth is shown in the following table:

Fiscal Year.	Popula- tion.	Land, acres.	Valuation for Taxation—		
			Real estate.	Pers l prop'ty.	Total.
1858.....	155,000	5,182,309	\$34,533,144	\$7,313,634	\$44,846,778
1859.....	163,000	5,957,645	28,349,116	7,227,176	35,576,292
1860.....	172,022	6,404,491	32,021,918	4,629,907	36,753,408
1861.....	190,000	7,171,559	34,066,830	5,914,683	39,981,513
1862.....	215,000	7,274,318	24,791,888	5,040,831	29,832,719
1863.....	230,000	7,580,161	25,100,198	6,560,570	31,660,768
1864.....	250,000	8,026,285	33,111,956	8,500,000	41,611,956

The apparent falling off from the valuation of 1858 is caused by change in the assessment laws. The depression in 1862 and 1863 is the result of Indian hostilities in those years, which temporarily disorganized the

frontier counties, which though appearing in the land column are absent for valuation.

## TAXATION.

The amount of taxes assessed on the above valuations, collectable in the next succeeding year, is shown in the annexed table :

Taxed Year.	State Taxes			County and Local taxes.	Aggregated Taxation.
	Revenue.	Interest.	Total.		
1859.....	\$146,463	\$62,777	\$209,234	\$345,135	\$554,369
1860.....	124,517	53,364	177,881	327,349	505,230
1861.....	91,884	55,130	147,014	508,971	655,985
1862.....	99,954	59,926	159,926	498,432	658,358
1863.....	74,765	58,507	133,272	448,392	581,664
1864.....	79,913	63,864	143,777	526,976	670,753

The state taxes for 1850-60 were at the rate of 5 mills, and for the four subsequent years at the rate of 4 mills— $3\frac{1}{2}$  and  $2\frac{1}{2}$  mills being for revenue, and  $1\frac{1}{2}$  mill for interest on the funded debt.

It may be proper in this place to state that there has been great delinquency in the payment of taxes, and that, if all were to pay, the rate might be substantially reduced. The amount for each of the above years remaining unpaid at the end of 1864 was as follows:—of the tax of 1859, \$75,015; of 1860, \$24,751; of 1861, \$20,989; of 1862, \$23,556; of 1863, \$16,869; of 1864 \$25,772.

The taxation for county and other local purposes of course varies in rate for different years, and in the several counties and towns. The aggregates for each purpose for the years 1863 and 1864 are shown the following statement :

Purposes.	1863.	1864.	Purposes.	1863.	1864.
School Tax.....	\$59,042	\$63,539	City Tax .....	\$5,700	\$51,709
County Tax.....	118,912	158,055	Road and Bridge ..	31,502	12,428
Township Tax.....	40,223	39,594	Poor Tax.....	1,309	29,607
Town Tax .....	6,424	23,550	Other Special .....	122,280	13,7494
Aggregate local Taxes.....				\$448,392	\$526,976

## INDEBTEDNESS.

The state inaugurated its existence by creating a debt of \$250,000 wherewith to pay its first expenses and a further debt was incurred for war purposes. At the present time its funded debt may be described as follows :

State loans of July, 1858, (Act, March 13) for which bonds were given, bearing 8 per cent interest, payable semi-annually in January and July at New York, and principal, payable July 1, 1867.....	\$250,000
State War loan of November 1, 1862, for which bonds were given, bearing 7 per cent interest, payable semi-annually in May and November at New York, and principal payable in 1872. ....	100,000
Total Funded Debt.....	\$350,000

The state has also made itself liable for an issue of bonds to railroad companies to the amount of \$2,275,000.

A floating debt amounting at the end of 1864 to \$42,567 existed. This debt consists of unredeemed Treasury warrants issued in compliance with law, and expenditures properly incurred in behalf of the state, for which appropriations have not been made.

The constitution of Minnesota requires that a law authorizing a state loan shall also provide for levying a tax sufficient to pay the annual interest and the principal, within ten years, and shall specifically appropriate and set apart said taxes for said purposes, and the same shall not be repealed or diminished until the principal and interest of the debt shall have been wholly paid. Both the existing loans of the state have been made under this constitutional provision.

## EXPENSES OF GOVERNMENT.

The following statement shows the ordinary expenses of the State government for the years under-stated:

	1861.	1862.	1863.	1864.
Executive .....	\$18,550 00	\$18,814 57	\$14,420 79	\$20,046 12
Legislative.....	24,035 82	25,979 49	18,826 73	19,803 42
Judicial .....	19,200 00	21,995 97	19,736 25	20,400 64
Public printing.....	7,510 96	15,053 70	11,993 03	14,596 18
State prison.....	6,269 34	7,603 18	7,925 00	10,144 69
Normal School.....	1,315 19	183 10	.....	3,000 00
Miscellaneous.....	6,415 51	3,041 30	15,677 74	12,004 30
Deficiencies .....	12,153 06	4,639 40	15,364 09	12,000 60
Land office.....	.....	6,127 28	2,671 53	3,657 70
Military .....	.....	23,971 00	10,685 00	4,320 94
Soldiers' voting fund.....	.....	850 82	2,200 00	2,203 30
Insane.....	.....	.....	2,500 00	3,575 39
Blind and deaf mutes .....	.....	.....	1,300 00	4,640 65
Sufferers of Sioux War.....	.....	.....	3,000 00	626 00
Capitol repairs.....	.....	.....	.....	4,303 70
Sick and disabled soldiers.....	.....	.....	.....	3,644 07
	<hr/>	<hr/>	<hr/>	<hr/>
Interest on loans.....	\$97,749 88	\$128,259 81	\$126,300 16	\$138,967 10
	22,500 00	21,800 00	26,309 73	27,073 60
	<hr/>	<hr/>	<hr/>	<hr/>
Total.....	\$128,249 88	\$150,059 81	\$152,609 89	\$166,040 70

The total receipts and expenses for the same years were:

	1861.	1862.	1863.	1864.
State taxes and polls.....	\$100,186 83	\$156,013 81	\$173,529 07	\$191,915 04
United States war tax.....	.....	40,263 44	26,355 15	7,714 13
\$100,000 war loan.....	.....	.....	101,250 00	.....
U. S. on account of Sioux war.....	.....	.....	200,000 00	.....
School lands.....	.....	16,001 80	149,058 28	174,024 33
Miscellaneous .....	5,599 77	4,073 28	9,116 48	3,503 50
	<hr/>	<hr/>	<hr/>	<hr/>
Total income.....	\$105,786 60	\$216,362 33	\$659,308 98	\$377,157 00
State warrants cancelled.....	\$101,732 00	\$137,505 71	\$450,758 61	\$197,020 18
Permanent school fund invested .....	.....	.....	111,687 50	134,335 09
General school fund disbursed.....	.....	.....	11,169 13	70,573 49
Apportionment of int. imp. fund.....	.....	.....	2,742 43	964 42
United States war tax .....	.....	47,030 17	.....	.....
Miscellaneous.....	.....	.....	181 65	58 97
	<hr/>	<hr/>	<hr/>	<hr/>
Total disbursements.....	\$101,732 00	\$184,535 88	\$576,539 32	\$402,952 15
Balance in treasury.....	4,729 42	36,555 87	119,325 53	93,530 33

## CENSUS OF CHICAGO AND COOK COUNTY, ILLINOIS.

ILLINOIS, like New York, takes a census every ten years, at a period between the federal enumerations. The census of Chicago and the county in which it is located has just been published, with the following results :

## CITY OF CHICAGO.

The city is divided into sixteen wards, which contained an aggregate population of 178,539, distributed thus :

Ward.	White.	Colored.	Total.	Sub. to Mil. Duty.
First.....	11,694	316	12,010	3,868
Second....	11,787	771	12,558	3,106
Third.....	12,632	829	13,461	3,336
Fourth.....	8,938	31	8,969	1,814
Fifth.....	10,336	...	10,336	2,732
Sixth.....	9,721	...	9,721	1,485
Seventh....	15,397	10	15,407	3,297
Eighth....	8,213	22	8,235	1,360
Ninth.....	10,660	65	10,625	1,755
Tenth.....	10,565	97	10,662	1,900
Eleventh..	12,380	14	12,394	2,144
Twelfth..	9,343	11	9,354	1,521
Thirteenth.	7,227	6	7,233	1,083
Fourteenth.	9,890	26	9,916	1,521
Fifteenth.	14,113	4	14,117	2,258
Sixteenth.	13,521	1	13,522	2,988
Total.....	176,347	2,192	178,539	35,668

The following table shows the ages of all persons, male and female, in all the wards of the city :

	Males.	Females.
Under 10 years of age.....	27,997	27,453
Over 10 and under 20 years of age.....	12,159	15,387
Over 20 and under 30 years of age.....	18,199	18,188
Over 30 and under 40 years of age.....	17,775	14,206
Over 40 and under 50 years of age.....	9,227	6,260
Over 50 and under 60 years of age.....	3,483	2,703
Over 60 and under 70 years of age.....	1,270	1,223
Over 70 and under 80 years of age.....	339	370
Over 80 and under 90 years of age.....	61	59
Over 90 and under 100 years of age.....	1	8
Over 100 years of age.....	....	1
Total.....	90,516	85,831
Number of colored persons of all ages.....	1,050	1,142
Aggregate population 178,539. Subject to military duty 35,668.		

## LIVE STOCK.

Value of the live stock owned in the several wards of the city :

First Ward....	\$56,900	Seventh Ward....	\$7,230	Thirteenth Ward..	\$42,295
Second " ....	110,005	Eighth " ....	46,445	Fourteenth " ..	09,260
Third " ....	107,160	Ninth " ....	87,197	Fifteenth " ..	52,930
Fourth " ....	123,955	Tenth " ....	69,225	Sixteenth " ..	35,860
Fifth " ....	39,075	Eleventh " ....	191,700		
Sixth " ....	23,475	Twelfth " ....	45,721	Total.....	\$2,858,463

GRIST-MILLS, SAW-MILLS, AND DISTILLERIES.

Flouring and grist mills.....	12	Saw mills.....	1
Distilleries.....	5		

EDUCATIONAL.

University.....	1	Pupils in attendance.....	201
Academies, gram'r & private schools,	48	Pupils in attendance.....	9,518
Common schools.....	18	Pupils in attendance.....	16,549

COOK COUNTY.

The total population of the county was 217,309, distributed as follows :

Towns, &c.	Whites.	Colored.	Total.	Lib'l to Mil. d'ty
Barrington.....	1,223	14	1,287	228
Bremen.....	1,494	..	1,494	234
Bloom.....	1,244	..	1,245	236
Chicago (City).....	176,347	2,192	178,539	35,668
Cicero.....	1,589	8	1,597	204
Elk Grove.....	1,011	4	1,015	145
Evanston.....	1,626	..	1,626	278
Hanover.....	946	2	948	126
Hyde Park.....	941	13	954	83
Jefferson.....	1,754	45	1,799	191
Lemont.....	1,765	..	1,765	358
Lake.....	1,334	..	1,334	315
Lake View.....	1,140	16	1,156	176
Lyons.....	1,467	13	1,480	172
Maine.....	1,527	..	1,527	216
New Trier.....	819	2	821	113
Niles.....	1,450	30	1,480	191
Northfield.....	1,114	1,615	1,615	191
Orland.....	1,090	..	1,090	191
Palatine.....	1,626	..	1,626	244
Palos.....	951	..	951	164
Proviso.....	1,640	..	1,640	232
Rich.....	1,454	..	1,454	250
Schaumburg.....	861	..	861	132
Thornton.....	1,703	..	1,703	276
Wheeling.....	1,822	5	1,827	238
Worth.....	1,439	24	1,463	282
Leyden.....	1,477	8	1,485	185
Calumet.....	1,577	2	1,579	298
<b>Total.....</b>	<b>214,937</b>	<b>2,872</b>	<b>217,309</b>	<b>41,354</b>

The following shows the ages of all persons in the county, including Chicago, with the number and sex of the colored people, and the number of persons liable to military duty—

	Males.	Females.
Under 10 years of age.....	34,691	33,853
Over 10 and under 20 years of age.....	16,005	18,974
" 20 " 30 " ".....	20,835	20,785
" 30 " 40 " ".....	20,527	16,640
" 40 " 50 " ".....	11,322	7,917
" 50 " 60 " ".....	4,842	3,708
" 60 " 70 " ".....	1,879	1,683
" 70 " 80 " ".....	485	502
" 80 " 90 " ".....	95	84
" 90 " 100 " ".....	8	10
" 100 years of age.....		1
<b>Total.....</b>	<b>110,575</b>	<b>104,362</b>
<b>No. of colored persons of all ages.....</b>	<b>1,150</b>	<b>1,213</b>

Aggregate population, 217,309; No. subject to military duty, 41,354.

AGRICULTURAL.

Value of live stock, \$5,479,825; grain products, \$1,782,484; other agricultural products, \$1,040,667; No. of pounds of wool grown, 94,031. Flouring and grist mills, 14; saw mills, 1; distilleries, 6.

EDUCATIONAL.

Universities, 3; pupils in attendance, 361; academies, private and grammar schools, 53; pupils in attendance, 10,087; common schools, 198; pupils in attendance, 23,619.

MANUFACTURES IN THE COUNTY.

Number of manufactories of various kinds in the county, with the value of the goods annually manufactured in the several establishments:

Clothing, 56, \$619,850; boots and shoes, 57, -1,102,555; confectionary, 8, \$490,500; book and job printers, 17, \$466,246; blank books, 4, \$169,547; newspapers, 10, \$956,933; cigars, 25, \$11,050; iron foundries, 26, \$5,502,711; liquor, 7, \$3,706,000; cabinet, 36, \$324,369; corn-sellers, 1, \$20,000; trunks, 8, \$114,820; picture frames, 1 \$4,300; show cases, 1, \$1,200; agricultural implements, 7, \$380,425; glass, 1, \$45,000; paper collars, 4, \$104,300; tobacco 4, \$321,000; saddlery, 1, \$25,000; tin and hardware, 34, \$268,850; marble, 14, \$215,500; lightning rods, 1, \$11,000; carriages, 55, \$1,094,650; sidewalk lights, 1, \$19,000; upholsterers, 4, \$25,000; sash door and blinds, 17, \$648,000; bakeries, \$635,175; tanning and currying, 19, \$1,050,300; willow-ware, 1, \$800; wood carving, 2, \$6,000; flouring mills, 14, \$1,729,955; gas works, 3, \$628,418; box factories, 2, \$51,378; soap 6, \$102,200; brick, 14, \$508,250; glue, 1, \$238,242; oil and candles, 14, \$1,987,925; coopers, 43, \$340,811; whips, 1, \$800; caps, 2, \$150,000; treasuries, 38, \$2,195,300; wash boards, 1, \$1,000; moulding, 2, \$90,000; pumps, 2, \$77,000; brooms, 8, \$354,750; piles, 1, \$15,000; lime, 4, \$165,000; organs, 4, \$64,000; faucets, 1, \$35,000; nails, 1, \$200,000; soda, 3, \$55,000; rolling mill, 1, \$900,000; rope, 1, \$4,000; sugar, 1, \$149,505; cotton, 2, \$32,000; malt, 3, \$129,000; hats and caps, 10, \$121,950; banners, 22, \$36,768; vinegar, 6, \$142,625; baskets, 1, \$1,000. Total, \$25,710,202.

## COMMERCIAL LAW.—NO. 27.

### MARINE INSURANCE.

(Continued from page 274, vol. 53.)

#### THE INTEREST WHICH MAY BE INSURED.

A mere possibility or expectation cannot be insured; but any actual interest may be. If one has contracted to buy goods, he may insure them, and will recover if the property be in him at the time of the loss; for if they are then destroyed it will be his loss. (For what is meant by the property being in him, see chapter on Sales.)

If one has taken on himself certain risks, or agreed to indemnify another for them, he may insure himself against the same risks. The policy may

express and define the interest in such a way that any change in the nature of it will discharge the insurance. If it is not so defined and declared, a change, as from the interest of an owner to that of a mortgagor, or of a mortgagee, will not defeat the policy.

A mere indebtedness to a party on account of property gives the creditor no insurable interest; thus, one who has repaired a house or ship cannot insure the house or ship merely because the owner owes him; but if the creditor has a lien on the property, this is an insurable interest. And generally, every bailee or party in possession of goods, with a lien on them, may insure them. And a lender on bottomry or respondentia may insure the ship or goods. And any persons who have possession of property, or a right to possession, and may legally make a profit out of it, as factors on commission, consignees, or carriers, may insure their interest.

If a mortgagee be insured, and recovers from the insurers, he, generally at least, transfers to them the security for his debt, on accounts with them for its value; because, to the extent of that security, he has met with no loss, and, if he did not transfer it, would recover his money twice; but a recent decision in Massachusetts throws some doubt on this obligation of the insured to transfer the security for the debt to the insurers.

A policy usually adds to the description of the property, "lost or not lost." This phrase makes the policy retrospective; and attaches it to the property if that existed when, by the terms of the policy, the insurance began, whether this were for a voyage or for a certain time, although it had ceased to exist when the policy was made. In a case in Boston, there was an insurance on the cargo of the ship *Tarquin*, "lost or not lost, now on a whaling voyage." The court said; "To construe this policy, so as to make the risk commence on the day of its date, it would be necessary to limit the word 'voyage' to a very small part of the voyage, without any words expressing such limitation, and would render the words 'lost or not lost' wholly inoperative: We are of opinion that this policy would attach upon the oil from the time the vessel first began to take whales in the course of this voyage."

An interest which was originally valid and sufficient, cannot be defeated by that which threatens, but does not complete, an actual divestment of the interest in property; therefore, not by attachment, or an execution for debt; nor by liability to seizure by government for forfeiture, nor a right in the seller to stop the goods *in transitu*; nor capture; because after all these the property may remain in or return to the insured. But sale on execution, actual seizure by government and forfeiture, stoppage *in transitu*, or condemnation by court as lawful prize, divest the property, and therefore discharge the insurance.

The insurance never attaches, if the interest is illegal originally, and it is discharged if the interest becomes illegal subsequently to the insurance, or if an illegal use of the subject-matter of the insurance is intended. And any act is illegal which is prohibited by law, and made subject to a penalty. The effect would be the same if the policy opposes distinctly the principles and purposes of law, as wagering policies do.

Mariners, or mates, are not permitted by the law-merchant to insure their wages, but may insure goods on board bought with their wages; and one legally interested in the wages of a mariner may insure them; as one to whom they are assigned by order or otherwise. A master may in-

sure his wages, commissions, or any profit he may make out of his privilege.

An unexecuted intention of illegality, if not distinctly acted upon, will not defeat a policy; nor a remote and incidental illegality; as smuggling stores on board, or not having on board the provisions required by law; nor a change from legality to illegality, which cannot be proved or supposed to be known to the insured. And upon these questions, the court, if the case be balanced, will incline to the side of legality. A cargo may be insured, which is itself lawful, but was purchased with the proceeds of an illegal voyage.

If a severable part of a cargo or a voyage is legal, it may be insured, by itself, although other parts are illegal. But if a part of the whole property insured together is illegal, this avoids the whole policy.

A compliance with foreign registry laws certainly is not necessary, and with our own probably is not, to sustain the insurance of an actual owner in good faith.

By the law of nations, goods contraband of war are forfeited if captured by a belligerent against whom they might be used. Goods are contraband which are munitions of war, or are designed or capable of supporting an enemy in carrying on war—as even food, if sent to a place which an enemy seeks to reduce by starvation; and so are any goods sent to a blockaded port. No contraband trade is, strictly speaking, illegal, in the neutral country which carries it on; that is, the courts of that country will not declare it illegal, or annul contracts which have this trade in view for illegality. But if the owners of a ship contemplate contraband trade, either in the place they send her to, or in the goods they put on board, this is an additional risk, and therefore it must be communicated to the insurers, or the policy is void.

Freight is a common subject of insurance. In common conversation this word means sometimes the cargo carried, and sometimes the earnings of the ship by carrying the cargo. The latter is the meaning in mercantile law, and especially in the law of insurance. It includes in insurance law the money to be paid to the owner of a ship by the shipper of goods and the earnings of an owner by carrying his goods, and the amount to be paid to him by the hirer of his ship, and the profits of such hirer, either by carrying his own goods, or by carrying, for pay, the goods of others.

An interest in freight begins as soon as the voyage is determined upon, and the ship is actually ready for sea, and goods are on board, or are ready to be put on board, or are promised to be put on board by a contract which binds the owner of the goods to put them on board, for that voyage.

If a ship is insured on a voyage which is to consist of many passages, and sail without cargo, but a cargo is ready for her, or contracted for her at the first port she is to reach and sail from, the owner has an insurable interest in the freight from the day on which he sails from his home port.

If one makes advances towards the freight he is to pay, and this is to be repaid to him by the ship owner if the freight is not earned, the advancer has no insurable interest in what he advances; but if he is to lose it, without repayment, if the ship be lost or the freight not earned, he has an insurable interest.

## PRIOR INSURANCE.

Our marine policies generally provide for this by a clause, to the effect, that the insurer shall be liable only for so much of the property as a prior insurance shall not cover. The second covers what the first leaves, the third what the second leaves, and so on; and as soon as the whole value of the property is covered, the remainder of that policy, and the subsequent policies, have no effect. This priority relates not merely to the date of the instrument, but to the actual time of insurance. Sometimes the policy provides that the insured shall recover only the same proportion of the whole loss which the amount insured in that policy is of the whole amount insured by all the policies on the whole property.

When a prior policy is deducted, from this deduction is taken the amount of the premium paid for the insurance.

It sometimes happens that the property is increased in value, or in the valuation, after the first insurance is effected; but in settling with a second, only the actual amount covered by the first is deducted.

A subsequent policy may be suspended by the fact that prior policies cover all the property, and when any of these prior policies is exhausted, the next policy begins to take effect.

If all once attach, and afterwards the property is diminished, we should prefer the rule that all the policies should be diminished *pro rata*. It has been held, however, that the rule as to prior policies operates, and the last policy is discharged or lessened by the whole amount of the diminution.

Where no provision is made in the policies as to priority, all are insurers alike, but all together only of the whole value at risk. The insured, therefore, may recover of any one insurer at his election, and this insurer may compel the others to contribute to him in proportion to their respective insurances.

Insurances may be simultaneous, and then no clause as to prior policies has any application, and all the insurances are liable *pro rata*. They are simultaneous, if said to be so in the policies; or if made on the same day, and bearing the same date, and there is no evidence as to which was, in fact, first made.

## DOUBLE INSURANCE AND RE-INSURANCE.

If there be double insurance, either simultaneously or by successive policies, in which priority of insurance is not provided for, we have seen that all are insurers, and liable each in proportion; thus, if all the policies cover twice the value of the property insured, each policy is valid for one-half of its own amount.

But there is no double insurance, unless all the policies insure the very same subject-matter, and, taken together, exceed its whole value.

Many insurances of the same subject-matter, for the benefit of different parties, do not constitute double insurance.

Re-insurance is lawful; for whoever insures another has assumed a risk against which he may cause himself to be insured. This is often done by companies who wish to close their accounts, to lessen their risks, or get rid of some especial risk.

## THE MEMORANDUM.

This word is retained, because the English policies have attached to them a note or memorandum providing that the insurers shall not be liable for any loss upon certain articles therein enumerated, (and thence called memorandum articles,) unless it be total, or greater than a certain percentage. In our policies the same thing is provided for, but usually by a clause contained in the body of the policy. The general purpose is to guard against a liability for injuries which may very probably not arise from maritime peril, because the articles are in themselves perishable; but which injuries it might not be easy to refer to the precise causes which produced them. Thus grain, fish, hides, fruit, etc., are very liable to be somewhat injured on the voyage, and if there has been bad weather, or a greater leak than usual, it is impossible to say whether these goods have lost value from their own decay, or from a peril of the sea. It is therefore provided that the insurers shall not pay unless there be a total loss by a sea peril, which ends all question, or so large a loss as ten or twenty per cent; for this could hardly happen without visible and certain cause. And then if the cause were shown to be not a peril insured against, the insurers would not be liable.

The articles excepted, and the percentage of loss necessary to charge the insurers, vary very much at different times and in different States.

## WARRANTIES.

A stipulation or agreement *in the policy*, that a certain thing shall be or shall not be, is a warranty. And every warranty must be, if not strictly, at least accurately complied with. Nor is it an excuse that the thing is not material; or that the breach was not intended, or not known; or that it was caused by an agent of the insured. A warranty is equally effectual if written upon a separate paper, but referred to in the policy itself as a warranty. And the direct assertion or allegation of a fact may constitute a warranty.

If the breach of the warranty exists at the commencement of the risk, it avoids the whole policy, although the warranty was complied with afterwards and before a loss; and although all other risks were distinct from that to which the warranty related; and even if the breach was caused by one of the risks against which there was insurance. Thus, if a vessel is warranted "coppered," and she is not coppered, and is lost by the ignition of cotton in the hold. Here the breach of the warranty, that is, the want of the copper, has nothing to do with the loss; but the insurers would be discharged.

If the breach occur after the risk begins, and before a loss, and is not caused or continued by the fault of the insured, the insurers are held; as they are if a compliance with the warranty becomes illegal after the policy attaches, and it is therefore broken.

The usual subjects of express warranty are, first, the ownership of the property, which is chiefly important as it secures the neutrality, or freedom from war risks, of the property insured. The neutrality is sometimes expressly warranted; and this warranty is not broken, if a part of the cargo that is not insured is belligerent. But it is broken if a neutral has the legal title, but only in trust for a belligerent. The neutrality of the ship

and of the cargo must be proved by the ship's having on board all the usual and regular documents. False papers may, however, be carried for commercial purposes, either when leave is given by the insurers, or when it is permitted by a known and established usage.

If neutrality is warranted, it must be maintained by a strict adherence to all the rules and usages of a neutral trade or employment. Without warranty, every neutral ship is bound to respect a blockade which legally exists by reason of the presence of an armed force sufficient to preserve it, and of which the neutral has knowledge.

The second most common express warranty is that of the time of the ship's sailing. She sails when she weighs anchor or casts off her fastenings, and gets under way,—if she be then ready for sea and intended for sea,—although stopped immediately after, or driven back. But however ready and intended, if she is stopped before she gets under way, this is a breach of the warranty of sailing. Nor is it complied with by leaving a place to return to it immediately; or by going from one port of the coast or island, which she is warranted to leave, to another. If the ship is warranted "in such a harbor or port," or "where the ship now is," this means at the time of the insurance. And "warranted in port" means the port of insurance, unless another port is expressed or distinctly indicated.

#### IMPLIED WARRANTIES.

The most important of these warranties—which the law makes for the parties without their saying anything about them, although they may, if they please, make them for themselves—is that of *seaworthiness*. By this is meant, that every person who asks to be insured upon his ship, by the mere force and operation of law, warrants that she is, in every respect,—hull, sails, rigging, officers, crew, provisions, implements, papers, and the like,—competent to enter upon and prosecute that voyage at the time proposed, and encounter safely the common dangers of the sea. If this warranty be not complied with, the policy does not attach, whether the breach be known or not, unless there is some peculiar clause in the policy waiving this objection.

If the ship be seaworthy and the policy attaches, no subsequent breach discharges the insurers from their liability for a loss previous to the breach. Even if it does not attach at the beginning of the voyage, if the unseaworthiness be capable of prompt and effectual remedy, and be soon and entirely remedied, the policy may then attach. Especially if it could be considered as attaching in the port, and then as suspended only by the sailing in unseaworthy condition, and then reviving, or re-attaching, on repair. The true rule should be, that if unseaworthiness prevents the policy from attaching at the proper commencement of the *risk*, the contract becomes a nullity.

If she becomes unseaworthy in the course of the voyage, from a peril insufficient to produce it in a sound vessel, this may be evidence of inherent weakness and original unseaworthiness; and then the policy never attached. But if originally seaworthy, and by any accident made otherwise, the policy continues to attach until she can be restored to a seaworthy condition by reasonable endeavors. And the general rule is, that she must be so restored as soon as she can be. It is the duty of th

to repair her as soon as he can; by the aid of another ship if that may be, but otherwise not to keep her at sea if she can readily make a port where she can be made seaworthy; and not to leave that port until she is seaworthy. The neglect of the master would not generally discharge the insurers, but it is the rule that a ship must not leave a port in an unseaworthy condition, if she could there be made seaworthy; if she does, the insurers are no longer held. But their liability may be, not destroyed, but only suspended, if the seaworthiness be cured at the next port, especially if that be not a distant port. Thus, if a ship loses her best anchor, and goes into a port where she may get one, leaves it without an anchor because the master thinks the anchor costs too much there, and he will buy one at the next port, she is unseaworthy as soon as she goes to sea, and the insurance is suspended; but if as soon as she arrives at the next port she gets an anchor, the unseaworthiness is cured, and the policy revives. For a loss happening while their liability is suspended, we should say, they are not liable, whether the loss was occasioned by that unseaworthiness or not. But there are some who hold that the insurers are liable for a loss happening during an occasional unseaworthiness which could have been repaired, unless the loss arise from that unseaworthiness.

There cannot possibly be a definite and universal standard for seaworthiness. The ship must be fit for her voyage or for her place. But a coasting schooner needs one kind of fitness, a freighting ship to Europe another, a whaling ship another, a ship insured only while in port another. So as to the crew, or provisions, or paper, or a pilot, or certain furniture, as a chronometer or the like; or the kind of rigging or sails. In all these respects, much depends upon the existing and established usage. There is, perhaps, no better test than this; the ship must have all those things, and in such quantity and of such quality as the law requires, provided there is any positive rule of law affecting them; and otherwise such as would be deemed requisite according to the common consent and usage of persons engaged in that trade. And the reason for this rule is, that this is exactly what the insurers have a right to expect, and if the insured intend anything less, or the insurers desire anything more, it should be the subject of special bargain.

If a policy be intended to attach when a ship is at sea,—as, for example, upon a whaler that has been out a year or more,—we should say the same principle would apply, and ought to be sufficient as a rule of law, although it might sometimes involve difficult questions of fact. That is, we think the ship must be seaworthy, in that sense and in that way in which a ship of her declared age, size, employment, and character, after being at sea for that time, under ordinary circumstances, ought to be in, and may be expected to be in, by all concerned. It seems to be admitted that the standard of seaworthiness is to be found from the usage and understanding of merchants, at the place where the ship belongs, and not at that where the ship is insured.

If the question arises on a time policy, whether a ship must be at the beginning seaworthy, and in such condition that she will remain so unless some accident intervene during the whole of the period, we should answer, she must be seaworthy in the beginning, only in the sense in which her then place and condition require; as, if in port, seaworthy for that port;

if just going to sea seaworthy for that; if at sea seaworthy for that. And then she must be kept in a seaworthy state, which means fit to encounter the perils of any service she is put to, from time to time, during the whole period. And if at any time during that period she is unseaworthy for her then place and the work, through the fault of the insured or his agents, and a loss occurs by reason of such unseaworthiness, the insurers will not be liable therefor; and perhaps not if a loss occurs from any cause during such unseaworthiness.

There are other implied warranties. One of these is, that the insured shall deal honestly with the insurer, and make a distinct and true statement of all material circumstances affecting the risk. Another is, that the ship shall pursue the usual course of her voyage, without deviation from it, or the unnecessary encounter of unusual risks. But these will be considered in subsequent sections.

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## COMMERCIAL CHRONICLE AND REVIEW.

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Navigation Laws should be Altered—Rates of Interest—Prices of Articles—Dry Goods for month—Specie Movements—Rates of Exchange—Prices U. S. Paper—Government Sales of Gold, &c.

WHEN, towards the close of the sixteenth century, Venice had lost the greater portion of her previously immense commerce, partly through the fact that the discovery of America had deprived her of her former advantageous situation in the centre of the commercial world, and partly from her desolating wars with Turkey, there were but two countries in the world of a rank which entitl'd them to wear her fallen diadem. These countries were Spain and the Low Countries, at that time both under one crown. Spain, however, was afflicted with many embarrassing commercial regulations, which had not yet been carried into the Low Countries, and which more than counterbalanced her vast natural advantages. Consequently it was not long before nearly all that trade from America which would otherwise have flowed into Europe through Spain made its way to the Low Countries, thence to be distributed to all parts of the Continent by means of the numerous canals which intersected the country. This latter feature had not a little to do with the advance which the Low Countries henceforth made in commerce. Spain was destitute of either canals or common roads; so was England; so was France. The Low Countries on the contrary, were cut up in every direction by canals. Vessels penetrated far into the interior; and this at a time when wheeled vehicles were rude and lumbering, was a great advantage. The banks of the canals also made good common roads; and in winter time sledges were used upon the frozen water. The result of these natural advantages untrammelled by restrictive laws was that the whole trade of the civilized world found its way to the Baltic. After the year 1630, when the Low Countries were divided into Holland and Belgium by the independence of the former, under the name of the Seven United Provinces, this commercial prosperity was increased. Liberty afforded security; security invited capital; capital carried on commerce; and the ships which carried on this commerce ruled the seas. VON TROMP scoured the Channel with a broom at his mast-head and DE RUYTER sailed defiantly up the Thames and blockaded the port of London.

But now a great change occurred. England by resolutely taking ground against the tyranny of the crown, succeeded in establishing constitutional government. With the head of Charles I. fell hundreds of odious enactments which had hitherto restricted the growth of the country, and for the first time in history she was enabled to avail herself of the natural advantages for commerce which her insular position afforded her. The Habeas Corpus Act was passed in 1679. WILLIAM brought over many valuable customs from Holland, among them that of passing promissory notes by endorsement, an invention which in England before that time was unknown. The Bank of England was established. The government for the first time paid its debts. Ministerial responsibility was recognised. The Act of Grace was passed. The press was declared free. The coinage was purified. The independence of the judiciary was established. These reforms begat security; security begat capital; and capital begat commerce. England rose to be the first nation in the world, Holland remaining for a long time but just behind her. At the beginning of the present century, England by means of her railways shot far ahead of Holland, and has remained so ever since.

Among those laws of restriction which England failed to throw off when the Long Parliament purified the country, were some which related to navigation; indeed that Parliament actually through mistaken zeal strengthened them, for it combined a code of regulations, which, under the name of Navigation Laws, continued to exist until a late period.

After the foundation of constitutional government in England, such was her great superiority over all other nations (except Holland) that her commerce prospered in spite of these laws; and to such an extent, too, that when the United States government was formed in 1790, our legislators erroneously imputing the prosperity of England to her Navigation Laws copied them literally, and put them in force by the acts of 1792-3. The freedom of our institutions in other respects, and the wars which followed between England and France soon gave to this country a very large share of the world's commerce; which as in England's case, instead of being ascribed to its true cause was again erroneously attributed to these very Navigation Laws, which all the while formed almost the only obstacle to a much greater commerce.

Prominent among these laws was one which forbids the employment or purchase of foreign vessels by native merchants, and was enforced by means either of discriminating charges or forfeiture. To-day an American merchant cannot purchase a foreign vessel and sail her under the United States flag. The object of the law was to protect American shipbuilders. So long as the latter could build ships cheaper than other people the law was effective enough; but the same results would have followed had no law existed at all. As soon as other people could build ships cheaper than we could, and this occurred when the value of iron in the construction of ships was generally recognized, the law became inoperative.

We have now arrived at a period when the position of affairs loudly demands the repeal of these obnoxious statutes. Our foreign carrying trade, once the most profitable source of income to us, is at zero. Our ports are filled with foreign flags, and our own waves only from the peaks of coasting schooners.

Prohibited from purchasing the cheap and enduring iron ships built in England and Scotland, and incapable of competing with them for freight with the expensive and perishable wooden ships of this country, our merchants have been obliged to retire from this profitable occupation and take up some other, less remunerative. The law as it stands actually gives a preference to foreigners over Americans; for a Bremen merchant can send to the Clyde, purchase an iron ship, send it to the United States and employ it in her carrying trade, and thereby exclude American merchants from trading, and this is actually the case. The Grinnell line of wooden ships unable to earn remunerative profits in the Liverpool trade was sent to Antwerp. From Antwerp it was again driven off by the cheap iron ships purchased in England, and the vessels were eventually sold, and the business abandoned. Nothing could be worse than laws which conduce to such a state of things, and the sooner they are repealed the better.

The discount market has experienced a sharp stringency through the influence of the fifty million conversion loan noticed under the head of Financial. The banks being drawn upon for interest-bearing legal tenders found themselves short of cash resources and were compelled to refuse commercial accommodation to a large extent. Meanwhile the state of commercial credit having gradually expanded, and considerable paper being made, an increased demand for money was coupled with a decreased supply. The consequence is seen in the following rise in the rates of discount during the month.

	1st week.	2d week.	3d week.	4th week.
Prime paper, short.....	6½ @ 7	@ 7	7 @ 8	8 @ 9
Jobbing paper .....	7 @ 9	8 @ 9	8 @ 10	10 @ 15
Produce Commission.....	8 @ 10	10 @ 12	10 @ 15	10 @ 15

Money, on call, rules nominally at the end of the month at 7 per cent, and gold is lent without interest.

The following comparative table of the prices of several leading articles of general merchandise will exhibit the present state of the markets as compared with the two previous months:

	Aug. 26.	Sept. 30.	October 27.
Ashes, pots, 1st sort.....	\$7 50 @ 7 62½	\$7 75 @ ..	\$8 12½ @ ..
Coffee, Rio, prime. ....	21 @ 21½	18 @ 22	.. @ 22½
Cotton, N. O. mid. ....	.. @ 45	.. @ 45	.. @ 59
Flour, State, superfine.....	6 70 @ 7 40	7 60 @ 7 95	7 70 @ 8 10
Hay, N. R. shipping.....	80 @ 85	70 @ 80	60 @ 65
Nails, cut .....	5 50 @ ..	.. @ 8 00	.. @ 8 00
Petroleum, crude 40@47 grav	31½ @ 32	38½ @ 39½	0 36 @ ..
Pork, mess, new .....	31 50 @ 32 00	34 50 @ 34 75	33 62½ @ ..
Tobacco, Kentucky lugs....	7 @ ..	7 @ ..	05½ @ 09
Leather, oak (Sl.) light....	34 @ 38	34 @ 38	35 @ 40
Lumber, spruce, Eastern....	18 @ 22	19 @ 22	21 @ 24
Corn, yellow Western ....	.. @ ..	.. @ ..	.. @ 92
Sheetings, brown, standard..	30 @ 3 39	35 @ 37½	.. @ 38

The changes which appear are to be ascribed more to circumstances of supply and demand than to any effect of the currency, or the conversion loan. Many articles of produce always advance at this season of the year in view of the approaching close of canal navigation.

The following table shows the imports of dry goods at this port for the past month, reckoned at their foreign gold value, duty and freight unpaid:

## VALUE OF DRY GOODS ENTERED FOR CONSUMPTION IN OCTOBER, 1864 AND 1865.

	1864.	1865.
Oct. 5.....	\$441,496	\$2,043,931
" 12.....	163,981	2,884,685
" 19.....	427,142	2,557,676
" 26.....	223,465	2,807,703
Total.....	\$1,256,084	\$10,293,995

## WITHDRAWN FROM WAREHOUSE.

	1864.	1865.
Oct. 5.....	\$623,313	\$189,670
" 12.....	737,085	199,845
" 19.....	803,427	228,467
" 26.....	884,371	215,983
Total.....	\$3,048,196	\$833,970

## ENTERED FOR WAREHOUSING.

	1864.	1865.
Oct. 5.....	\$293,683	\$236,005
" 12.....	588,612	481,833
" 19.....	359,369	845,976
" 26.....	498,352	329,523
Total.....	\$1,740,016	\$1,892,337

	1864.	1865.
Total entered for consumption.....	\$1,256,084	\$10,293,995
Add withdrawn from warehouse.....	3,048,196	833,970

Total thrown on the market.....	\$4,304,280	\$11,127,965
Total entered for warehousing.....	\$1,740,016	\$1,892,337
Add entered for consumption.....	1,256,084	10,293,995

Total entered at the port.....	\$2,996,100	\$12,186,332
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Notwithstanding the high tariff which now exists upon imported goods, such is the negligence encouraged among manufacturers when the sharp incentive of competition is withdrawn from them, that foreign goods can still be brought into market to compete with them. The great import movement which commenced some two months ago is still in full operation, the imports for the past month in dry goods alone having been six times as much as during the corresponding month in 1864; while the amount thrown on the market was nearly thrice as much. This activity in trade is very encouraging, and would be still more so if the profits derived from freighting the goods were earned by American houses.

The statistics of specie movements for the city of New York are as follows :

## SPECIE RECEIPTS, SHIPMENTS, &amp;C.

		1864.		1865.		Gold in Bank.
		Received.	Exported.	Received.	Exported.	
July	1.....	.....	560,677	5,012	156,578	15,854,990
"	8.....	301,207	486,339	793,175	15,408	19,100,544
"	15.....	.....	301,244	.....	261,846	20,500,441
"	22.....	249,095	556,464	299,629	132,115	22,332,903
"	29.....	.....	.....	248,629	180,715	20,773,155
Aug.	5.....	.....	90,111	.....	21,108	19,400,340
"	12.....	.....	341,883	710,319	324,018	20,163,292
"	19.....	571,281	48,009	147,930	245,365	19,604,636
"	26.....	.....	206,398	1,000,900	743,164	16,023,615
Sept	2.....	387,281	444,503	955,142	340,377	14,443,837
"	9.....	.....	486,451	.....	422,202	13,755,824
"	16.....	369,592	669,733	.....	358,656	14,604,159

	1864.		1865.		Gold in Bank.
	Received.	Exported.	Received	Exported.	
" 23,.....	.....	1,288,659	.....	646,012	14,222,062
" 30,.....	.....	.....	2,027,144	967,971	13,643,182
Oct. 7,.....	275,131	287,758	.....	316,092	13,470,134
" 14,.....	191,781	739,491	1,362,175	812,120	15,890,775
" 21,.....	.....	616,426	785,820	449,229	15,581,540
" 28,.....	279,121	932,648	1,118,312	930,914	14,910,561

The following is a statement showing the supply of specie from California, foreign countries and hoards, for the first nine months of 1865, and the corresponding period in 1864 and 1863; also the amount exported, and the amount remaining in the banks and Sub-Treasury at the end of each month, and of the periods compared :

Months, &c	Sources of Supply				Exports to foreign countries	Treasure in b'ks & Sub-Treas
	Rec'd f'm California	Foreign imports	Domestic hoards	Tot'l new to market		
January, 1865	\$2,043,457	\$52,268	\$1,370,928	\$3,473,653	\$3,184,853	\$30,392,350
February, "	914,735	100,704	4,181,853	5,203,292	1,033,201	34,522,340
March, "	1,663,975	242,232	799,350	2,710,567	381,913	36,851,995
April, "	2,307,035	236,492	1,372,324	3,916,841	871,249	39,897,087
May, "	1,257,651	177,085	8,882,448	10,317,184	7,245,071	42,969,200
June, "	750,469	249,732	5,529,172	6,329,373	5,199,472	44,099,101
July, "	1,092,805	253,640	4,710,940	6,357,385	723,986	49,732,500
August, "	1,676,177	182,072	2,668,542	4,536,893	1,554,398	52,404,892
September "	2,040,446	194,224	.....	2,234,670	2,494,973	46,595,974
Jan-Sept. 1865	13,751,740	1,695,459	23,783,441	39,230,640	32,689,116	46,595,974
" " 1864	8,905,530	1,859,144	18,163,268	28,927,942	34,935,862	31,944,614
" " 1863	9,603,712	1,228,121	20,190,118	31,021,951	32,846,494	30,146,451

The actual sum of the column marked \* is \$29,332,077, and marked † \$14,779,346; but during September \$5,548,616 was returned to hoards, leaving the net totals as represented.

The amounts of treasure and specie in the banks and Sub-treasury on the 1st of January and 1st of October compare as follows :

	1865	1864	1863
January 1.....	\$30,054,450	\$37,092,524	\$40,970,994
October 1.....	46,595,974	31,944,614	39,146,451
Increase.....	\$16,541,524	.....	.....
Decrease.....	.....	\$5,947,920	\$1,824,543

The decrease in 1863 and 1864 was wholly due to the excess of exports over imports and new supplies, and the increase in 1865, chiefly to the increase of the California supply and decreased exports.

The rates of exchange have ruled as follows :

RATES OF EXCHANGE IN GOLD.						
	London, 60 days.	Paris, 60 days.	Amsterdam.	Frankfort.	Hamburg.	Berlin.
July 7	108 @ 108 1/2	5.22 1/2 @ 5.16 1/2	40 1/2 @ 41	40 1/2 @ 40 3/4	35 3/4 @ 36 1/2	71 @ 71 1/2
" 14	109 @ 109 1/2	5.16 1/2 @ ...	40 1/2 @ 40 3/4	40 1/2 @ 40 3/4	35 1/2 @ 36	71 @ 71 1/2
" 21	108 3/4 @ 109	5.18 3/4 @ ...	40 1/2 @ 40 3/4	40 1/2 @ 40 3/4	35 3/4 @ 35 7/8	70 3/4 @ 71 1/2
" 28	108 3/8 @ 109	5.18 3/8 @ 5.17 1/2	40 1/2 @ 40 3/4	40 1/2 @ 40 3/4	35 3/4 @ 37	70 3/4 @ 71 1/2
Aug. 5	108 1/2 @ 108 1/2	5.22 3/4 @ 5.21 1/2	40 @ 40 3/4	40 @ 40 3/4	35 1/2 @ 35 3/4	70 1/2 @ 71
" 12	108 3/4 @ 109 1/4	5.17 1/2 @ 5.16 1/4	40 1/2 @ 40 3/4	40 1/2 @ 40 3/4	35 1/2 @ 35 7/8	70 3/4 @ 71
" 19	109 1/2 @ 109 3/4	5.15 @ 5.13 3/4	40 3/4 @ 40 3/4	40 1/2 @ 40 3/4	35 3/4 @ 36 1/4	71 @ 71 3/8
" 26	109 1/2 @ 109 3/4	5.16 1/2 @ 5.15	40 1/2 @ 41	40 1/2 @ 41	35 3/4 @ 36 1/2	71 @ 71 3/8
Sept. 2	109 1/2 @ 109 3/4	5.17 1/2 @ 5.16 1/4	40 1/2 @ 40 3/4	40 3/8 @ 40 3/4	35 3/4 @ 36 1/4	71 @ 71 1/2
" 9	109 3/4 @ 109 3/4	5.17 1/2 @ 5.16 1/4	40 3/8 @ 40 3/4	40 3/8 @ 40 3/4	35 3/4 @ 36 1/4	70 3/4 @ 71 3/8
" 16	109 1/2 @ 109 1/2	5.17 1/2 @ 5.16 1/2	40 3/8 @ 40 3/4	40 3/8 @ 40 3/4	35 3/4 @ 36 1/2	70 3/4 @ 71 3/8
" 23	109 3/4 @ 110	5.15 @ 5.13 3/4	40 3/8 @ 41	40 3/8 @ 40 3/4	35 3/4 @ 36 1/4	71 1/2 @ 71 3/8
" 30	109 3/4 @ 110	5.18 3/4 @ 5.15	40 3/8 @ 41 1/2	40 3/8 @ 41	35 3/4 @ 36 1/4	71 3/4 @ 71 3/8
Oct. 7	109 3/4 @ 110	5.16 1/2 @ 5.15	40 3/8 @ 41	40 3/8 @ 41	35 3/4 @ 36 1/2	71 3/4 @ 71 3/8
" 14	108 3/4 @ 109 1/2	5.18 3/4 @ 5.17 1/2	40 3/8 @ 41	40 3/8 @ 41 1/2	35 3/4 @ 36 1/2	70 3/4 @ 71 3/8
" 21	109 1/2 @ 109 1/2	5.18 1/2 @ 5.17 1/2	40 3/8 @ 40 3/4	40 1/2 @ 40 3/4	35 3/4 @ 36 1/2	70 3/4 @ 71 1/2
" 28	108 3/8 @ 109	5.21 1/2 @ 5.17 1/2	40 3/8 @ 40 3/4	40 3/8 @ 40 3/4	35 3/4 @ 36 1/2	70 3/4 @ 71 1/2

The rates for foreign exchange have lately been tending downward. This is due to the prospect of an ample supply of cotton and breadstuffs bills, which superadded to the present supply seem destined to maintain low rates for some time to come.

Government bonds and gold have ruled as follows :

PRICES OF UNITED STATES PAPER AND GOLD.							
	6's, 1881.		5-20's, new iss.		10-40's.	1 year certif.	Gold price.
	Reg.	Coup.	Reg.	Coup.			
July 5,....	110 $\frac{1}{2}$	110 $\frac{1}{2}$	104	105	97 $\frac{3}{8}$	99 $\frac{1}{8}$	139 $\frac{1}{2}$ a 140 $\frac{3}{8}$
" 12,....	107 $\frac{1}{2}$	107 $\frac{3}{8}$	105	105 $\frac{1}{2}$	97 $\frac{3}{8}$	99 $\frac{1}{8}$	140 $\frac{3}{8}$ a 142 $\frac{3}{8}$
" 19,....	107 $\frac{1}{2}$	107 $\frac{3}{8}$	104 $\frac{3}{4}$	105	97	99 $\frac{1}{8}$	142 $\frac{1}{2}$ a 143
" 26,....	107	107 $\frac{1}{8}$	105	105 $\frac{1}{2}$	97	98	143 $\frac{1}{2}$ a 143 $\frac{3}{4}$
Aug. 5,....	107	107 $\frac{1}{8}$	104 $\frac{3}{4}$	105 $\frac{1}{2}$	97 $\frac{1}{2}$	97 $\frac{3}{8}$	143 $\frac{3}{8}$ a 143 $\frac{3}{4}$
" 12,....	106 $\frac{1}{2}$	106 $\frac{3}{8}$	104 $\frac{1}{2}$	104 $\frac{3}{8}$	97 $\frac{1}{8}$	97 $\frac{3}{8}$	141 $\frac{1}{2}$ a 142
" 19,....	106 $\frac{1}{2}$	106 $\frac{1}{2}$	104 $\frac{3}{8}$	104 $\frac{7}{8}$	97 $\frac{3}{8}$	98 $\frac{1}{8}$	143 $\frac{1}{2}$ a 144 $\frac{1}{8}$
" 26,....	106 $\frac{1}{2}$	106 $\frac{1}{2}$	104 $\frac{3}{4}$	104 $\frac{3}{4}$	98 $\frac{1}{8}$	98 $\frac{1}{2}$	144 a 144 $\frac{3}{8}$
Sept. 2,....	107 $\frac{1}{2}$	107 $\frac{1}{2}$	104 $\frac{3}{4}$	104 $\frac{7}{8}$	94 $\frac{3}{4}$	98 $\frac{1}{2}$	144 $\frac{1}{2}$ a 144 $\frac{3}{8}$
" 9,....	107 $\frac{3}{4}$	107 $\frac{3}{4}$	165 $\frac{1}{2}$	105 $\frac{5}{8}$	14 $\frac{1}{2}$	98 $\frac{7}{8}$	144 $\frac{3}{4}$ a 144 $\frac{3}{4}$
" 16,....	107 $\frac{3}{4}$	107 $\frac{3}{4}$	105 $\frac{3}{8}$	105 $\frac{1}{2}$	94	98 $\frac{3}{4}$	142 $\frac{1}{2}$ a 143 $\frac{1}{2}$
" 23,....	107 $\frac{3}{4}$	108	106 $\frac{1}{2}$	106 $\frac{1}{2}$	94 $\frac{3}{8}$	98 $\frac{3}{4}$	143 $\frac{1}{2}$ a 143 $\frac{3}{4}$
" 30,....	107 $\frac{5}{8}$	107 $\frac{3}{4}$	106	107 $\frac{3}{4}$	94 $\frac{1}{2}$	98 $\frac{3}{4}$	144 a 144 $\frac{1}{2}$
Oct. 7,....	107 $\frac{5}{8}$	107 $\frac{3}{4}$	101 $\frac{1}{2}$	101	93 $\frac{3}{4}$	98 $\frac{3}{4}$	146 a 146 $\frac{1}{2}$
" 14,....	107	107 $\frac{1}{2}$	102	10 $\frac{1}{2}$	93 $\frac{3}{4}$	98 $\frac{1}{2}$	144 $\frac{3}{4}$ a 144 $\frac{7}{8}$
" 21,....	106	106 $\frac{7}{8}$	101 $\frac{1}{2}$	10 $\frac{1}{2}$	93	97 $\frac{3}{4}$	145 $\frac{3}{4}$ a 146 $\frac{3}{8}$
" 28,....	106	106 $\frac{5}{8}$	101	10 $\frac{1}{4}$	92 $\frac{7}{8}$	98	145 $\frac{3}{4}$ a 145 $\frac{3}{8}$

The fall in five and six per cents is to be attributed partly to their increase, through the Conversion loan, and partly to censure rumors of complications with Great Britain, growing out of the depredations of the Confederate privateers, for which we have demanded, but she has refused, compensation. The prices of the last week of the month are for ex-November coupons. The one year certificates having been reduced in quantity by the late conversion, advanced during the last week of the month, having previously fallen a fraction. Gold was steady up to the 4th day of the month, when the prices rapidly advanced from 144 $\frac{1}{2}$  to 149 on the 6th. On this day the Sub-Treasury, alarmed at the turn affairs had taken, sold, through three or four brokers, some \$6,000,000 gold at "sellers three." These lots were eagerly bought up, and the entire sale only depreciated the market to 146 $\frac{1}{2}$  a 146 $\frac{3}{8}$ . This was on a Friday. A few minutes after these sales, much to the consternation of the purchasers, who did not expect to be called upon to take the gold before the following Monday, the sellers took advantage of their options, and demanded checks for the amount of their contracts. The operation was completely successful in checking speculation. Its effects on stocks are detailed below, while the fears it created have tamed the gold market, and combined with the influence of the Conversion loan, have kept it lower ever since.

The following table exhibits the price of railway shares :

PRICES OF RAILWAY SHARES.						
	June 29.	July 24.	Aug. 25.	Sept. 23.	Oct. 28.	
New York Central .....	93 $\frac{1}{4}$	95 $\frac{1}{2}$	92 $\frac{7}{8}$	94	97 $\frac{1}{2}$	
Hudson River.....	108	...	109 $\frac{1}{2}$	109 $\frac{1}{2}$	106 $\frac{1}{2}$	
Erie.....	77	95	87 $\frac{1}{2}$	88	92 $\frac{1}{2}$	
Reading .....	95 $\frac{1}{2}$	106	105 $\frac{3}{4}$	109 $\frac{1}{2}$	114 $\frac{1}{2}$	
Mich. So. and N. I.....	60 $\frac{1}{2}$	66 $\frac{3}{4}$	64	68	78 $\frac{3}{4}$	
Illinois Central.....	128	...	122	129	137 $\frac{3}{4}$	

	June 29.	July 24.	Aug. 25.	Sept 23.	Oct. 28.
Cleveland and Pittsburg.....	67½	71	71½	71½	82½
Chicago and N. W.....	25	27½	27½	28	30
Chicago and R. I. ....	98½	108½	109½	112½	107½
Fort Wayne.....	96	96½	96½	98½	99½

The month has witnessed an active speculation in stocks, so active that the Treasury, in order to save its one hundred millions of temporary deposits at four per cent from being withdrawn, attempted to check the market by the gold *ruse* already mentioned. This produced a sudden rush for funds, and temporarily put a check to stock speculations. Combined with other causes, so great a scarcity of money was occasioned on Thursday and Friday the 5th and 6th, and Thursday and Friday the 12th and 13th, that the market was twice imminently threatened with a serious panic. The treasury, seeing the position of affairs, rapidly let out its four per cent deposits, waiving notice of call, and the market was relieved. Nothing daunted by its check, and not ignorant of its triumph, the Stock Market has gone up again, and prices generally rule five per cent higher than at the beginning of the month. As we anticipated in our October number there is a genuine demand for dividend paying stocks, and nothing can stop them from increasing in price so long as the demand continues. How long this will be it is hard to say: but so long as it does, it is mere folly on the part of the Treasury to attempt to stop it.

The result of this new "interference," like that of the many others which have been tried at Washington, fully illustrates their futility and pernicious influence.

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## JOURNAL OF BANKING, CURRENCY, AND FINANCE.

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Contracting Currency—Taxation of National Banks—New York and Philadelphia Bank Returns  
—Banks of England and France—European Finances, etc.

AN experiment has been tried this month, by the Treasury, which gives us a foretaste of what we are to expect should any further attempt be made to bring our currency to a specie basis. We have time and again remonstrated in these columns against the whole system of finance inaugurated by Mr. Chase, and compelled to be followed by his successor in office. We have repeatedly shown that the issue of legal tender notes by the Government was a mistake; that there was no necessity for it; that the war could have been conducted, armies paid and supplies purchased without recourse to paper money, and at much less expense; and, that while expansion was very easy, contraction was next to impossible. Events have, over and over again, confirmed the truth and soundness of these views; and future events will, we doubt not, still further confirm them.

In the early part of the month the Secretary of the Treasury announced a Fifty Million Conversion Loan. This amount of Five-Twenty bonds was offered for an equal amount either of Certificates of Indebtedness or Interest Bearing Legal Tenders at the rate of 103 of the latter for 100 of the Five-Twenties. Immediately the banks were drawn upon for interest-bearing notes, and as these were largely held by them for the redemption of their issues as

required by law, they had to be replaced by Greenbacks as fast as they were withdrawn. This in turn compelled the banks to refuse to loan money. A sharp stringency therefore ensued, so sharp, indeed, that but a little more pressure was required to precipitate the whole money market into a ruinous panic. By dint of paying usurious rates of interest, and resorting to every known shift for raising money, the crisis was passed, but not without a keen sense of the difficulties with which it was fraught.

To give the reader an idea of the troubles incident to a return to specie payments, let us suppose that the government determines to return to specie payment in one year from now. Let us see what it would have to do. For simplicity's sake we will say that its expenses and receipts from taxes, &c., are equal; and we leave out of the question what amount of contraction would ensue in other portions of the currency (National and State bank notes, promissory notes, credits, &c). The amount of government currency afloat now is about \$650,000,000. In order to fund this sum in one year, subscriptions to the amount of *over two millions per day* throughout the entire year would have to be made. Every moment of this time would be marked by the curses and execrations of perhaps one-third of our population; for while expansion floats upon the bosom of the smooth ebb, contraction surges back against the angry flow.\* It is evident, therefore, that the process of returning to specie payments will be a long and unpleasant one.

In the Court of Appeals of the State of New York, Judge DENIO has decided that the shares of the stockholders in a National Bank may be taxed by State authority. The decision is a very important one, and will probably not be overruled with that ease which it is expected the late decisions will be which hold that the Legal Tender Act is unconstitutional.

The rates for call loans during the month have fluctuated violently; commencing at 5 to 6 per cent, they reached as high as 11 or 12 per cent, during the "tight" days of the late spasm, seven per cent *in gold* having been paid during that time by first class houses for call loans in paper. The rates during the latter portion of the month have become more steady, but still the market is anything but easy. We quote call loans to first class houses or stock collaterals at 7 per cent.

The following are the returns of the New York City Banks:

NEW YORK CITY BANKS.

(Capital, Jan., 1864, \$69,494,577; Jan., 1865, \$69,658,737; April, \$76,658,737.)

Date.	Loans.	Specie.	Legal tender.	Circulation.	Net Deposits.	Clearings.
July 1,	216,585,421	15,854,990	60,904,454	5,818,445	191,656,773	473,720,318
" 8,	218,541,975	19,100,590	62,519,708	9,001,774	198,199,005	875,504,141
" 15,	221,285,052	20,400,441	60,054,646	6,250,945	200,420,283	550,959,312
July 22,	222,960,205	22,332,903	62,756,229	6,589,766	193,790,096	517,174,950
" 29,	222,341,766	20,773,115	46,956,782	7,085,454	186,766,671	494,854,139
Aug. 5,	219,102,793	19,400,380	43,561,973	7,656,370	178,247,674	576,961,325
" 12,	215,409,342	20,163,292	43,006,428	8,050,361	175,738,185	463,433,275
" 19,	210,827,581	19,604,636	45,583,980	7,639,575	174,593,016	492,697,782
" 26,	209,423,305	16,923,615	54,249,806	7,932,414	179,083,676	372,124,309

\* Those who may desire to further examine the effects of contraction, should examine *Hume's Political Essays*, vol. iii, p. 351; *Tooke's History of Prices*, vol. iv.; *Report of William H. Crawford, Secretary U. S. Treasury*, 1820.

Date.	Loans.	Specie.	Legal tender.	Circulation.	Net Deposits.	Clearings.
Sept. 2,	211,394,870	14,448,827	57,241,739	8,509,175	180,316,658	395,963,678
" 9,	214,189,842	13,755,824	56,320,734	8,814,142	179,353,511	434,257,376
" 16,	215,552,331	14,604,159	53,153,235	9,104,550	177,501,735	427,195,276
" 23,	215,879,454	14,222,062	54,018,475	9,294,805	177,320,789	393,503,366
" 30,	221,818,640	13,643,182	57,665,674	10,645,697	133,830,716	463,352,113
Oct. 7,	228,520,727	14,470,134	58,511,752	10,970,397	188,504,466	572,703,232
" 14,	227,541,834	15,890,775	50,459,195	11,722,847	132,364,156	699,348,446
" 21,	224,030,679	15,587,540	46,169,855	12,338,441	174,192,110	559,166,848
" 28,	219,965,639	14,910,561	46,427,027	12,823,725	173,624,751	575,945,581

These figures exhibit the severe stringency, the particulars of which we have already related. A large falling off in loans, a still larger decrease in legal tenders, an increase of circulation and specie reserve, and a heavy decline in deposits are observable. The latter feature was largely owing to the withdrawals by Western banks of funds left with the New York banks on call at four per cent, a practice which our bankers will find it to their interest to honor more in the breach than in the observance, so fraught is it with danger.

The following statement shows the operations of the Bank Clearing House for the weeks corresponding with those for which the above bank averages are given:

Weeks ending	CLEARINGS		BALANCES	
	Total of week.	Daily averages.	Total of week.	Daily averages.
July 1.....	\$473,720,318	\$78,953,386	\$17,883,010	\$2,980,501
" 8.....	375,604,141	62,581,023	18,234,535	3,039,091
" 15.....	550,959,312	91,826,552	20,150,787	3,358,464
" 22.....	517,174,956	86,395,826	22,396,080	3,732,680
" 29.....	494,354,139	82,475,622	18,577,262	3,086,210
Aug. 5.....	576,961,325	96,161,221	21,707,926	3,617,987
" 12.....	463,483,276	77,247,212	19,374,247	3,229,041
" 19.....	492,697,733	82,116,297	19,132,977	3,188,829
" 26.....	572,124,310	62,020,728	19,720,131	3,287,688
Sept. 2.....	395,963,697	65,993,946	18,944,140	3,157,256
" 9.....	434,251,378	72,208,563	17,976,061	2,996,010
" 16.....	427,195,277	71,199,213	17,562,313	2,927,135
" 23.....	393,503,666	65,583,944	18,551,060	3,092,243
" 30.....	463,352,113	77,225,352	19,484,342	3,247,390
Oct. 7.....	572,703,232	95,450,539	19,488,250	3,248,041
" 14.....	669,348,497	111,558,083	25,466,909	4,244,485
" 21.....	554,166,848	92,361,141	21,851,249	3,641,853
" 28.....	575,945,581	95,990,930	19,662,938	3,277,116

The following are the returns of the Philadelphia Banks :

PHILADELPHIA BANKS.

(Capital, Jan., 1863, \$11,740,080; 1865, \$13,315,720; Feb., 1865, \$14,485,450.)

Date. 1856.	Loans.	Specie.	Circulation.	Deposits.	Legal tenders.
July 3,...	\$50,449,649	\$1,216,243	\$6,888,488	\$39,127,801	.....
" 10,...	50,188,778	1,187,700	6,758,585	41,344,366	.....
" 17,...	50,221,528	1,152,911	6,821,938	43,966,927	.....
" 24,...	52,454,760	1,154,537	6,886,449	46,166,928	\$19,413,364
" 31,...	53,877,799	1,158,070	6,941,625	49,121,554	21,328,422
Aug 7,...	54,357,695	1,154,005	6,986,662	47,762,160	21,219,466
" 14,...	54,529,718	1,153,931	6,989,217	44,561,749	20,845,048
" 22,...	51,920,580	1,160,222	7,076,537	41,348,173	20,561,963
" 29,...	50,577,243	1,155,197	6,983,523	38,864,910	19,640,768
Sept. 4,...	50,096,499	1,100,242	6,980,826	38,417,473	19,038,164
" 11,...	49,693,065	1,079,635	7,007,727	37,082,478	17,695,755
" 18,...	49,931,573	.....	7,014,580	37,461,269	.....
" 25,...	49,603,233	1,089,880	7,038,403	37,405,333	.....

Date. 1865.	Loans.	Specie.	Circulation.	Deposits.	Legal tenders.
Oct. 3,...	49,924,281	1,092,755	7,056,984	33,347,232	17,267,021
" 10,...	49,742,036	1,037,705	7,082,197	37,238,078	16,403,360
" 17,...	49,682,319	1,060,579	7,084,667	36,252,038	16,201,787
" 24,...	48,959,072	1,052,357	7,074,066	35,404,524	15,875,105

The changes are so slight as scarcely to deserve notice. They, however, show towards the latter part of the month some animation. A falling off in loans, deposits and legal tenders is observable, the same being a faint reflection of the far greater movements which simultaneously occurred in New York.

The following table exhibits the condition of the national banks of Chicago for the quarters ending July 1st and October 2d respectively :

## CHICAGO NATIONAL BANKS.

	Oct. 2, 1865.	July 1, 1865.
Capital.....	\$5,110,000 00	\$5,054,750 00
Discounts.....	6,220,124 31	4,936,356 04
Deposits.....	10,417,185 38	12,946,539 42
Circulation.....	3,733,450 00	3,345,630 00
Currency on hand.....	4,764,073 28	6,423,978 18
Specie on hand.....	34,736 58	64,739 61

It will be seen that there is an increase in discounts since the 1st of July of \$1,243,768 27, and a decrease of currency on hand of \$1,659,904 92. The deposits have decreased about \$2 500,000

The following is an abstract of the returns of the banks of Rhode Island, made to the State Auditors on the 2d inst :

	In Providence.	Out of Providence.
Capital.....	\$2,637 800	\$1,436,500
Circulation.....	909,410	575,069
Deposits.....	1,072,988	596,489
Loans.....	4,147,553	2,216,031
Specie.....	33,676	15,825

The following table exhibits the number, capital, and circulation of the National Banks :

## NATIONAL BANKS.

Date.	Banks.	Capital.	Circulation
July 1, .....	1,378	\$340,938,000	\$146,927,975
" 8, .....	1,410	356,230,986	149,093,605
" 15, .....	1,447	364,020,756	154,120,015
" 22, .....	1,481	372,635,756	157,907,665
Aug. 5, .....	1,504	377,574,281	165,794,440
" 12, .....	1,523	379,731,701	169,598,960
" 19, .....	1,530	390,000,000	172,664,460
" 26, .....	1,534	392,614,333	175,265,690
Sept. 2, .....	1,549	394,104,333	177,487,220
" 9, .....	1,556	394,960,333	179,981,520
" 16, .....	1,560	395,310,333	183,402,870
" 23, .....	1,567	397,066,701	186,081,720
Oct. 7, .....	1,578	399,344,212	194,182,630
" 14, .....	1,592	401,406,013	197,798,330
" 21, .....	1,597	402,071,130	200,925,780

The transactions for last week of the month at the Custom-house and Sub-treasury were as follows :

	Custom-House. Receipts.	Sub-Treasury	
		Payments.	Receipts.
Oct. 16 .....	\$485,685 40	\$3,419,321 78	\$2,142,443 45
Oct. 17 .....	372,457 66	1,969,318 63	3,101,581 94
Oct. 18 .....	287,195 89	9,605,512 89	5,012,569 94

Oct. 19 .....	552,961 56	1,096,070 34	1,724,370 22
Oct. 20 .....	346,575 85	2,430,617 34	2,148,247 60
Oct. 21 .....	566,703 23	3,009,647 46	4,661,724 56
Total ....	\$2,561,580 59	\$21,530,488 44	\$18,790,937 71
Balance in Sub-treasury morning of Oct. 16.....			\$67,713,079 30
Deduct payments during the week.....			\$86,504,017 01
Balance at Saturday evening.....			21,530,488 44
Decrease during the week.....			\$64,973,528 57
			2,739,550 73

The following are the returns of the Bank of England :

THE BANK OF ENGLAND RETURNS (IN POUNDS STERLING).

Date.	1865.	Circulation.	Public Deposits.	Private Deposits.	Securities.	Coin and Bullion.	Rate of Discount.
July	5,...	42,717,616	9,348,667	14,413,335	33,629,456	15,099,943	3 "
"	12,...	22,943,563	4,590,233	16,229,345	31,559,914	14,561,150	3 "
"	19,...	22,789,406	4,932,103	14,894,217	30,992,455	15,083,367	3 "
"	26,...	22,590,254	4,770,902	15,939,813	32,181,100	13,603,050	3½ "
Aug.	2,...	23,203,757	5,214,377	14,681,727	31,054,027	13,603,815	3½ "
"	9,...	23,831,857	5,264,739	14,688,181	31,726,066	13,345,060	4 "
"	16,...	23,887,419	5,326,453	14,962,787	32,071,253	13,242,850	4 "
"	23,...	23,677,930	5,582,243	14,714,585	31,798,138	13,270,775	4 "
"	30,...	22,132,681	6,094,785	14,492,034	31,737,925	14,489,612	4 "
Sept.	6,...	22,236,008	5,985,710	14,207,995	31,816,545	14,322,275	4 "
"	13,...	21,949,755	6,321,640	13,860,979	31,724,718	14,155,579	4 "
"	20,...	21,843,863	6,830,869	13,567,577	34,813,637	14,219,842	4½ "
"	27,...	22,033,528	7,330,010	13,789,628	33,003,525	13,960,819	5 "
Oct.	4,...	23,321,786	6,891,910	13,798,588	34,651,489	13,133,837	6 "

The successive advances in the bank rates of interest from 4½ to 7 per cent on Saturday, October 7, created considerable surprise. The advance, in part, had been looked for, but it nevertheless produced a sudden and depressing influence. The rate is still less than it was last year at this time, when the charge for discount was 9 per cent, although the specie reserve is now half a million less.

The present successive advances are understood to have been caused by the large amounts absorbed by recent foreign loans, the recovery and immense activity of the cotton trade, the extensive operations of private and joint stock concerns, which required large sums to carry them on, without any prospect of immediate returns; the probability of heavy losses in the agricultural districts from the cattle disease, and the manifestations of the potato blight, which are becoming more apparent. The combination of all these causes sufficiently accounts for the action of the Bank, which has inspired confidence rather than alarm from its conservative character.

The rise, however, on the rate during the last week in the quarter, when many merchants have unusually large payments to make, would scarcely fail to produce a depressing result. Consols and securities of nearly all kinds receded in price, but they subsequently rallied. The discount houses and joint bank raised their rates to a corresponding extent with the prices established by the Bank of England.

The following are the returns of the Bank of France :

BANK OF FRANCE.							
		Loans.	Cash and Bullion.	Circulation.	Deposits.	Interest.	
July	6	591,852,987	521,352,745	859,170,675	221,419,887		3 $\frac{1}{2}$
"	13	594,467,985	498,683,812	884,390,025	188,481,698		3 $\frac{1}{2}$
"	20	601,711,488	493,997,271	899,347,175	179,473,477		3 $\frac{1}{2}$
"	27	610,976,748	494,212,341	898,722,675	199,182,020		3 $\frac{1}{2}$
August	3	629,135,610	493,250,442	898,333,075	219,233,136		3 $\frac{1}{2}$
"	10	619,750,846	486,367,696	897,359,923	200,211,070		3 $\frac{1}{2}$
"	17	623,253,456	488,170,183	877,349,725	202,153,615		3 $\frac{1}{2}$
"	24	591,746,248	500,449,290	879,828,825	189,888,513		3 $\frac{1}{2}$
"	31	637,672,438	498,958,920	916,501,325	192,331,850		3 $\frac{1}{2}$
September	7	585,602,649	503,716,344	849,749,975	197,738,826		3 $\frac{1}{2}$
"	14	579,090,374	499,224,478	850,146,625	209,987,979		3
"	21	578,177,257	499,913,894	841,097,725	194,689,060		3
"	28	569,891,292	492,633,492	834,850,575	220,883,613		3
October	5	668,011,320	470,917,716	883,268,625	217,360,539		4

The latest bank return shows a decline of 21,766,000f in the coin and bullion, and an increase of 68,120,000f in the discounts, of 48,418,000f in the circulation of notes, and 36,473,000f in the private deposits. In spite of this decline, the bullion and coin of the Bank amount to 470,917,716f, whilst the liabilities that could be immediately exacted are 883,268,625f of notes and 217,360,539f of deposits. In presence of such a situation, the Bank was evidently under no direct obligation to increase its rate of interest; but in consequence of the augmentation at London, and in certain markets of the Continent, joined to the fact that bankers had begun to demand heavy discounts, in order to profit by the difference between the price of money in other countries and France, the directors of the Bank in their weekly meeting raised their rate from 3 to 4 per cent for bills, and 4 to 5 for advances. As usual, the Bank will be attacked for this measure, by all these persons who believe or affect to believe that the value of money can be kept low in France when it is high in other centres of capital, and when the *encaisse* declines. But the general opinion will no doubt be that the Bank has acted prudently.

COURSE OF GOLD, OCTOBER, 1865.

The following table shows the fluctuations of gold daily during the month of October, and monthly since January 1, 1865:

DATE	Opening	Highest	Lowest	Closing	DATE	Opening	Highest	Lowest	Closing
Oct. 2	144 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	Oct. 18	146	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 3	144 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 19	146	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 4	144 $\frac{3}{8}$	146 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 20	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 5	144 $\frac{3}{8}$	147 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 21	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$
" 6	147 $\frac{3}{8}$	149	146 $\frac{3}{8}$	146 $\frac{3}{8}$	" 22	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146
" 7	146	147 $\frac{3}{8}$	146	146 $\frac{3}{8}$	" 23	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 8	146	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$	" 24	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 9	146	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$	" 25	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 10	146 $\frac{3}{8}$	147 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$	" 26	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 11	144 $\frac{3}{8}$	147 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 27	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 12	146 $\frac{3}{8}$	146 $\frac{3}{8}$	145	145	" 28	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 13	144 $\frac{3}{8}$	147 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 29	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 14	144 $\frac{3}{8}$	147 $\frac{3}{8}$	144 $\frac{3}{8}$	144 $\frac{3}{8}$	" 30	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146	146 $\frac{3}{8}$
" 15	145	147 $\frac{3}{8}$	145	145 $\frac{3}{8}$	" 31	146	146 $\frac{3}{8}$	146 $\frac{3}{8}$	146 $\frac{3}{8}$
" 16	145	147 $\frac{3}{8}$	145	145 $\frac{3}{8}$	Month	144 $\frac{3}{8}$	149	144 $\frac{3}{8}$	146 $\frac{3}{8}$
" 17	145 $\frac{3}{8}$	146 $\frac{3}{8}$	145 $\frac{3}{8}$	145 $\frac{3}{8}$					

The monthly fluctuations since the commencement of the year have been as follows:

January	2-6	234 $\frac{3}{8}$	197 $\frac{3}{8}$	204 $\frac{3}{8}$	July	141	146 $\frac{3}{8}$	138 $\frac{3}{8}$	144
February	2-02 $\frac{3}{8}$	210 $\frac{3}{8}$	198 $\frac{3}{8}$	202	August	144 $\frac{3}{8}$	145 $\frac{3}{8}$	140 $\frac{3}{8}$	144 $\frac{3}{8}$
March	2-00 $\frac{3}{8}$	201	148 $\frac{3}{8}$	157 $\frac{3}{8}$	September	144 $\frac{3}{8}$	145	142 $\frac{3}{8}$	144 $\frac{3}{8}$
April	1-51	154 $\frac{3}{8}$	143 $\frac{3}{8}$	146 $\frac{3}{8}$	October	144 $\frac{3}{8}$	149	144 $\frac{3}{8}$	146 $\frac{3}{8}$
May	1-45 $\frac{3}{8}$	145 $\frac{3}{8}$	128 $\frac{3}{8}$	137 $\frac{3}{8}$	Ten months	226	234 $\frac{3}{8}$	128 $\frac{3}{8}$	146 $\frac{3}{8}$
June	1-37 $\frac{3}{8}$	147 $\frac{3}{8}$	135 $\frac{3}{8}$	141 $\frac{3}{8}$					

## THE UNITED STATES DEBT.

We give below the statement of the Public Debt, prepared from the reports of the Secretary of the Treasury, for August, September, and October, 1865.

DEBT BEARING INTEREST IN COIN.			
Denominations.	August 31.	September 30.	October 31.
6 per cent, due December 31, 1867.....	\$9,415,250	\$9,415,250	\$9,415,250
6 do July 1, 1868.....	8,908,332	8,908,342	8,908,341
5 do January 1, 1874.....	20,000,000	20,000,000	20,000,000
5 do January 1, 1871.....	7,022,000	7,022,000	7,022,000
6 do December 31, 1880.....	18,415,000	18,415,000	18,415,000
6 do June 30, 1881.....	50,000,000	50,000,000	50,000,000
6 do June 30, 1861, exch'd for 7.30s	139,194,000	139,331,000	139,331,400
6 do May 1, 1867-82 (5.20 years).....	514,880,500	514,780,500	514,780,500
6 do November 1, 1869-84 (5.20 years)	91,789,000	100,000,000	100,000,000
6 do November 1, 1870-85 (5.20 years)	.....	.....	44,479,100
5 do March 1, 1874-1904 (10.40s)....	172,770,100	172,770,100	172,770,100
6 do July 1, '81 (Oregon war).....	1,016,000	1,060,000	1,016,000
6 do June 30, 1881.....	75,000,000	75,000,000	75,000,000
Aggregate of debt bearing coin interest.....	\$1,108,310,192	\$1,116,658,192	\$1,161,137,691
DEBT BEARING INTEREST IN LAWFUL MONEY.			
4 per cent Temporary Loan { 10 days' }.....	\$618,193	\$618,128	\$612,228
6 do do do { notice. }.....	35,429,398	36,249,660	21,309,710
5 do do do.....	71,101,187	79,017,861	67,185,307
6 do Certificates (one year).....	85,093,000	62,899,000	55,905,000
5 do One and two-years' notes.....	32,954,230	32,954,230	32,536,901
6 do Three years' comp. interest notes...	217,624,160	217,012,141	173,012,141
6 do Thirty-year bonds, (Union Pacific R.)	1,258,000	1,258,000	1,258,000
7.30 do Three years' treasury notes, 1st series	300,000,000	300,000,000	300,000,000
7.30 do do do 2d series	300,000,000	300,000,000	300,000,000
7.30 do do do 3d series	230,000,000	230,000,000	230,000,000
Aggregate of debt bearing lawful money int...	\$1,274,478,103	\$1,260,009,120	\$1,191,819,787
DEBT ON WHICH INTEREST HAS CEASED.			
7.30 per cent Three years' notes.....	\$394,450	\$322,250	\$308,150
do Texas indemnity bonds.....	839,000	760,000	760,000
Other bonds and notes.....	329,570	307,070	305,770
Aggregate of debt on which int. has ceased...	\$1,503,020	\$1,389,320	\$1,373,920
DEBT BEARING NO INTEREST.			
United States Notes.....	\$400,000,000	\$400,000,000	\$400,000,000
do do (in redemp. of the temp loan)	33,160,569	28,160,569	28,160,569
Fractional currency.....	26,344,742	26,487,755	26,507,469
Currency.....	\$459,505,311	\$454,648,324	\$454,218,038
Uncalled for pay requisitions.....	2,111,000	1,220,000	660,900
Aggregate of debt bearing no interest.....	\$461,646,601	\$455,868,324	\$454,878,938
Amount in Treasury—			
Coin.....	\$45,435,771	\$32,740,789	\$34,554,987
Currency.....	42,782,234	56,236,441	33,800,591
Total in Treasury.....	\$88,218,005	\$88,977,230	\$68,355,578
RECAPITULATION.			
Debt bearing interest in coin.....	\$1,108,310,192	\$1,116,658,192	\$1,161,137,691
Debt bearing interest in lawful money.....	1,274,488,103	1,260,009,120	1,191,819,787
Debt on which interest has ceased.....	1,503,020	1,389,320	1,373,920
Debt bearing no interest (currency).....	459,505,311	454,648,324	454,218,038
Uncalled for requisitions.....	2,111,000	1,220,000	660,900
Aggregate debts of all kinds.....	\$2,845,907,656	\$2,833,924,956	\$2,809,210,336
Cash in treasury.....	88,218,025	88,977,230	68,355,578
ANNUAL INTEREST PAYABLE ON DEBT.			
Payable in gold.....	\$64,500,500	\$65,001,579	\$67,670,340
Payable in lawful money.....	73,531,038	72,527,646	71,267,738
Aggregate amount of int. payable annually— not including int. on the 3 years' comp. int. notes, which is payable only at maturity.	\$138,031,628	\$137,529,216	\$138,938,078
LEGAL TENDER NOTES IN CIRCULATION.			
One and two years' 5 per cent notes.....	\$32,954,230	\$32,954,230	\$32,536,901
United States notes (currency).....	433,160,569	428,160,569	428,160,569
Three years' 6 per cent compound int. notes..	217,024,160	217,012,141	217,012,141
Aggregate legal tender notes in circulation....	\$684,128,059	\$678,126,940	\$633,126,940

## COMMERCIAL AND INDUSTRIAL STATISTICS.

### ZINC MANUFACTURE IN ILLINOIS.

THE existence of rich zinc ores in various parts of the country has long been known, and numerous attempts have been made to turn them to account. As far back as the Revolution we find these experiments beginning to be made and continuing till some 12 years since without success. The first remunerative results were realized in New Jersey by converting the zinc ore known as Franklinitite into the white oxide of zinc for paint. Similar works were erected in Pennsylvania at Bethlehem, using the calamine or carbonate and silicate of zinc. The market was soon stocked with the zinc white now so extensively used as a pigment, instead of white lead.

Practical men having thus turned their attention to the ores of zinc, several attempts were made to reduce them to a metallic state, in New Jersey, Pennsylvania, and Wisconsin. These attempts were generally failures, and the belief was confirmed that metallic zinc could not be successfully manufactured here. One exception is found in the Bethlehem works of Pennsylvania, and another in the subject of this article, the zinc works of La Salle, 90 miles west of Chicago.

The country is indebted to Messrs. MATHIESON and HEGBLER, two highly intelligent Germans, and graduates of the Mining Academy of Freiburg, for the first success in this direction. These gentlemen came to America in 1857, and began their experiments at the Lehigh zinc works, in Pennsylvania, where they produced, as it is believed, the first metallic zinc of American make. Learning of the superior richness of the Wisconsin ores, they went West in 1858, and examined the zinc ores of the lead region, which had been described in the geological reports of Wisconsin in 1853. Satisfied of their value and abundance, they looked for fuel and facilities of manufacture and transportation. La Salle, with its rich deposits of coal, building material, and unequalled means of land and water transportation, presented these conditions in the highest degree, and they at once decided to make it the location of their works. At first they rented a small temporary furnace, and, in a quiet and unpretending way, began experiments upon the ores, coal, and fire-clays within their reach.

The fire-clay for their first retorts was brought from Germany, all American fire-clays then known failing to stand the intense heat required. Great difficulty also was experienced in adjusting the old machinery and processes of Europe to the new materials. For nearly five years these men labored with a patience worthy of all praise, overcoming one obstacle after another by a rare combination of scientific knowledge and practical skill. So numerous have been their changes in the old methods of treating the ores of zinc, that they may justly claim to be the inventors as well as builders of their present furnaces. They have at last achieved a most triumphant success. Their new works are being constructed in the most permanent manner, and when completed will be the most extensive and perfect in the world. They consist, first, of a powerful mill, in which the ore and fine clay are ground; second, of an extensive pottery, in which the re-

torts, pipes, and fire brick used in constructing the furnaces are made ; third, of the reducing furnaces, each capable of holding 160 retorts. The materials used in building are brick and stone, the latter being obtained from a fine quarry on the grounds of the company. The works are situated about one mile north of La Salle, near the line of the Central Railroad, and opposite the Kentucky coal mine, from which they obtain their coal.

The reducing furnaces are large square structures built up of fire-brick, with a frame-work of iron bars on either side to sustain the retorts. These retorts are from three to five feet in length, and vary in size and shape, from round to oval, and from six inches to one foot in diameter. They are placed horizontally in rows, one above the other, slightly inclining forward to facilitate the separation of the zinc. The ore, after being roasted at the mine, ground, mixed with fine coal and moistened with water, is placed in the retorts by means of a semi-cylindrical shovel. Conical earthen pipes are inserted into the open ends of the retorts and luted in with fire-clay. The fires below are then increased until a white heat pervades the interior of the furnace. At first the openings in the tubes emit light blue flames, caused by the carbonic acid evolved ; later the flames become whiter, with tints of green, and of great brilliancy, forming at night a pyrotechnical display of wonderful beauty. Sheet-iron tubes fitting the pipes, furnished with handles and closed at one end, are then applied to catch the oxide of zinc or "blue powder" which begins to escape with the flume. These are taken off at short intervals, and the blue powder removed to be mixed with the ore and returned and returned to the retorts again. When the zinc is ready to draw, a large iron ladle is held under the beak of each retort, and the molten zinc is drawn out with an iron scraper. It is then poured into moulds which give it the form of flat rectangular ingots, weighing 25 pounds each. The tubes are then applied again, the firing continued, and after two or three hours more a fresh supply of zinc is obtained. These operations are continued all day and night, when the retorts are cleaned out and refilled. In this way a charge is worked off every 24 hours.

The daily yield of the three furnaces is about four tons. The coal used is mostly slack or waste of the mines, of which about six tons are required to produce a ton of zinc. The amount of ore consumed is about five tons, or 2400 pounds to each ton of metal produced. The zinc made here is said to be the best in the world. Telegraph zines are already extensively manufactured for Western consumption.

The ore used is obtained from the iron region of Wisconsin, 100 miles north of La Salle. It is found in great quantities among the rubbish of the old lead mines, where it has been thrown aside by the miners under the name of "dry bone." It often attends the lead ore as the matrix, or vein stone, and is in bad repute from the tendency of such veins to give out. The miners say the dry bone eats out the galena. The ore resembles a dirty limestone, and in its natural state gives no indication of the brilliant metal which it holds. Heavy deposits of it have been opened in mining for lead, but the surface supply is adequate for present purposes.

The ore is roasted at the mines, and parts with carbonic acid and water, which form 33 per cent of its weight. It is then put on the cars and transported

to La Salle, the Illinois Central Railroad, with commendable liberality, charging only a nominal price for transportation, to encourage the development of the manufacture. The price of zinc in the pig is now about \$200 per ton. The product of the La Salle furnaces is mostly sold in New York, where it is rolled and manufactured. The proprietors intend erecting rolling mills next season for the manufacture of sheet zinc. One of them is now in Germany securing the means and skilled labor for a still further expansion of the enterprise.

#### AMERICAN COAL AND IRON.

The following tables, compiled from the Report of the Internal Revenue for 1863-64 shows the extent and value of the iron and coal business in the Northern States for that year :

##### COAL PRODUCT OF THE LOYAL STATES.

Rhode Island .....	3,656	Indiana.....	146,787
Pennsylvania .....	12,691,219	Illinois .....	925,293
Maryland .....	787,269	Michigan.....	16,296
*District of Columbia..	743	Minnesota.....	50,205
West Virginia.....	398,915	Kansas .....	236
Kentucky .....	91,136	California .....	44,939
Missouri.....	66,187	Washington .....	7,753
Ohio.....	1,324,695		
		Total tons.....	16,355,329

—which, valued at \$2 50 per ton at the mines, makes a total value of \$41,181,025.

##### PRODUCTION AND MANUFACTURE OF IRON.

	Tons.	Value.
Rails re-rolled.....	159,000	\$7,155,000
Rails, new.....	117,224	9,964,040
Band, hoop and plate.....	153,936	15,393,600
Bars and blooms.....	179,292	17,929,200
Rivets and cut nails .....	127,381	25,476,200
Heavy castings.....	172,182	15,346,380
Hollow ware and stoves.....	81,955	16,391,200
Total .....	990,971	\$107,805,620
Marine engines.....	....	2,181,137
Steel, unwrought.....	10,880	3,536,000
Steel manufactures N. O. P.....	....	9,979,061
Iron manufactures N. O. P.....	....	62,964,920
Aggregate value .....		186,466,738

#### TRADE WITH THE SOUTH—ORDERS FROM SECRETARY McCULLOCH.

The following important circular, relative to southern trade, has just been issued by the Secretary of the Treasury :—

TREASURY DEPARTMENT, Sept. 18, 1865.

In the circular issued by this Department, on June 21, 1865, reference was made to the provision contained in section 46, of the Internal Revenue act of June 30, 1864, conferring upon the Secretary of the Treasury discretionary power in regard to the assessment, levy, time, and manner of collection of taxes in the States lately in insurrection.

Under the authority given by that section it was then stated that the department, without waiving in any degree the rights of the Government in regard to taxes here-

tofore accruing, would not insist at present upon their payment, so far as they were payable prior to the establishment of a collection district embracing the territory in which the tax payer resided.

It was further provided that manufactured articles found in the hands of a purchaser, which were satisfactorily shown to have passed from the manufacturer before the establishment of the district, should not be subject to tax, unless transported beyond the limits of the State lately in insurrection. No exception was then made in favor of articles which had remained in the possession of the manufacturers, and thus become liable to the tax imposed by the existing law.

The Department, preferring to test the practical workings of the regulation before exercising its power of modification in this important particular, representations since made relative to the hardship of this discrimination between manufacturer and purchaser have been corroborated by careful inquiry, and induce the conviction that a further exemption is justifiable and advisable.

It is found that considerable quantities of manufactured products have been retained by the manufacturer in his own hands as the safest mode of investing his property until the return of peace; that this retention was determined on, and carried out without the knowledge or opportunity of knowledge of the law subjecting this property to heavy taxation on sale, and that a large part of the manufactures so retained having been much deteriorated in value by the lapse of time and want of proper attention would not now sell for a sum equal to the tax.

A state of things so destructive to the usefulness of property, and to the prosperity of the manufacturing classes, is as adverse to the integrity of the government as to those of the community. For these reasons, it is hereby ordered that all articles, in whatsoever hands found, which can be shown to the satisfaction of the assessor to have been manufactured before the establishment of the district, shall be held free from the present assessment or collection of tax, unless transported beyond the limits of the States late in insurrection.

Manufacturers of articles liable to seizure for want of inspection marks will present to the assessor evidence that such articles were manufactured prior to the establishment of the district; and the assessor, if satisfied, will cause such articles to be so marked as to be identified and sold without liability to seizure.

All articles transported beyond the limits of the States lately in insurrection will be subject to the tax due under the law in force at the time they were manufactured.

Signed, H. McCULLOCH,  
*Secretary of the Treasury.*

## JOURNAL OF INSURANCE.

### FIRES IN THE UNITED KINGDOM.

The following alphabetical list of the fires which took place in the chief places in the United Kingdom in 1864, although we pass over many, may not be uninteresting. There occurred at Aberdeen 32 fires; at Belfast 36, Birmingham 132, Brighton 26, Bristol 59, Carlisle 3, Chester 12, Clifton 7, Cork 18, Dover 7, Dublin 68, Dundee 55, Edinburgh 87, Enfield 5, Exeter 17, Gasgow 308, Hull 44, Inverness 5, Ipswich 3, Kidderminster 8, Leeds 50, Leicester 36, Limerick 7, Liverpool 206, London 1,847, Manchester 291, Newport (Monmouth), 15, Northampton 24, Norwich 15, Nottingham 35, Oxford 2, Plymouth 14, Portsmouth 28, Preston 31, Rochdale 10, Salford 31, Sheffield 40, Southampton 20, Stockport 19, Stoke on Trent 1, Sunderland 32, Swansea 10, Torquay 3, Warrington 15, Waterford 1, Windsor 1, Wolverhampton, 10, Worcester 12, Yarmouth 1, and York 15. There were 568 fires last year at Berlin, 150 at Hamburg, 776 at Paris, and 152 at St. Petersburg. The approximate average yearly of fires in other places abroad is as follows: Adelaide

2, Amsterdam 28, Antigua 1, Antwerp 3, Bombay 33, Boston 172, Buenos Ayres 5, Cape Town 12, Charlestown 31, Christiania 4, Constantinople 3, Copenhagen 60, Demerara 1, Hankow 2, Havre 43, Hobart Town 20, Hong Kong 3, Honolulu 3, Manila 1, Marseilles 30, Melbourne 52, Montreal 104, Montevideo, 1, New York 350, Philadelphia 363, Port Louis (Mauritius) 50, St. John's, New Foundland 20, St. Louis 150, San Francisco 72, Shanghae 1, Stockholm 3, Tientsin 23, Warsaw 30, and Yokohama 4. It should be stated that bona fide fires only are noticed in the annual London reports, whereas chimneys and other minor alarms are generally included in the returns of foreign countries.

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#### BENEFITS OF LIFE INSURANCE.

The importance of Life Insurance, and the variety of purposes to which it may be advantageously applied, it is scarcely possible to overstate. No better criterion of the progress of a nation can be furnished than that of the extent to which the practice of Life Insurance obtains among the various classes of the community. Here the wealthy merchant finds the security he desires against the derangement, by death, of his well-planned schemes. Here the clergyman, the lawyer and the physician find a much needed provision for their families, whenever death may deprive them of the income their services, learning and talents now procure. In short, here the professional, the tradesman, the official, the clerk and the artisan, those with fixed incomes, and those of uncertain means, alike find a certain present provision for the dark and uncertain future.

The superiority of life insurance over annual savings is frequently overlooked. A man with a moderate income may feel that in a few years he may save sufficient to leave a competence for his family; but he feels likewise that at any moment he may be snatched from them, before the proposed sum is amassed; he therefore has recourse to an insurance on his life, and so renders that certain which Nature has made uncertain.

Any statement of the advantages of life insurance must be defective which omits mention of its influence in the formation and development of character. Actions having self for their object and end, exercise and strengthen selfishness, and, often repeated, form a purely selfish character. In life insurance present good is sacrificed to purchase a future advantage for others—an advantage the insured cannot share—and which is only realized after death. It is difficult to conceive of anything more calculated than such sacrifices to elevate the tone of a man's moral being, refine his nature, and render him more beneficent to men, more generous to friends, more affectionate to kindred. We have no doubt that it will be found on examination that life insurances are, in a moral point of view, the very best class of the community.

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#### DANGER TO COTTON ON SIDE WALKS.

There is a subject of much importance to our insurance underwriters, and also of considerable moment to New York pedestrians, in the matter of preparing cotton for storing, and the result consequent upon such preparation. The storage stores are mostly located in our busiest streets and most crowded mercantile resorts. In front of many of these bales of cotton completely cover the

sidewalks, occasioning the passer-by either to display his muscular agility in vaulting over them, or to take to the muddy street. This matter, considered apart, does not amount to much, as the people of this city are accustomed to this sort of thing, but it is the circumstances attendant upon all this which makes the subject of paramount importance to the insurance company. The majority of this Southern cotton is in a condition which necessitates its being picked over to make its appearance in bales of the first class, and the most of this picking is done on the sidewalks immediately in front of the warehouses. Among the throngs that are continually passing, hundreds are smokers of cigars, which are thrown away in a partially consumed state, generally into the streets, frequently upon the sidewalks, and cases have been known where these remnants have been thrown into a lot of pickings. In our storage warehouses smoking is always strictly prohibited, but this requirement does not, of course, extend to but those who are engaged in and around the premises, and does not reach the many who are continually passing between or around the cotton on the walk. Ashes and sparks can easily fall by accident among the loose pickings or upon the uncovered bales. These are soon removed into the warehouse, and sometimes the sparks are smothered, and possibly they are not, and then results follow which are not always the happiest to contemplate. The manipulation of cotton in this way is practiced so constantly, and to such an extent as to occasion wonder that more fires do not occur, having their origin in cotton thus handled and exposed to such great risk. The remedy for this lies in the hands of our underwriters, that of refusing to insure cotton in warehouses where picking takes place outside of the store, and until this remedy is applied we may reasonably expect a continuance of our fortnightly fires in warehouses where cotton is stored. Then, too, pedestrians would have a little more of the sidewalk to themselves without the hazard in running between the horses and carts in the effort to proceed. Two immense fires from this cause have recently occurred in New Orleans.

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## FEDERAL, STATE, AND MUNICIPAL FINANCES.

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### NEW LOAN—IMPORTANT TREASURY CIRCULAR.

Secretary McCulloch has issued the following circular, announcing a new loan of fifty millions of five-twenties in exchange for certificates of indebtedness and compound interest notes :

TREASURY DEPARTMENT, }  
WASHINGTON, D. C., Sept. 29, 1865. }

By virtue of the authority contained in the first section of an act of Congress entitled "An Act to provide ways and means to support the Government," approved March 3, 1865, which provides, among other things, that any Treasury notes, or other obligations bearing interest, issued under any act of Congress, may, at the discretion of the Secretary of the Treasury, and with the consent of the holder, be converted into any description of bonds authorized by said act, notice is hereby given to the holders of certificates of indebtedness which mature before the first day of January next, of compound interest notes, and of one and two year Treasury notes, of the readiness of this Department to give in exchange for them, to the extent of fifty millions of dollars, six per cent, five-twenty year bonds at three per cent premium ; that is to say,

one hundred dollars of bonds for each one hundred and three dollars in certificates and notes; provided the conversion is made prior to the first day of November next.

The bonds issued in exchange for such certificates and notes will bear an interest of six per cent per annum, payable semi-annually in coin, upon the first days of May and November, and will be redeemable at the pleasure of the Government after five years, and payable in twenty years from the 1st day of November, 1865.

The coupon and registered bonds issued under this proposal will be of the denominations of one hundred, five hundred, and one thousand dollars. Registered bonds of five thousand and ten thousand dollars will be issued if desired.

Holders of certificates, compound interest or Treasury notes, who desire to make such conversions, will deliver them to the Treasurer, the Assistant Treasurers or the designated depositories of the United States, or to any national depository bank which may consent to transact the business without charge.

Interest will be allowed on certificates of indebtedness and one and two year Treasury notes matured or maturing prior to the 1st of November, 1865, up to the date of maturity, and when maturing after the 1st of November interest will be allowed to that day.

Upon the compound interest notes the interest will be computed to November 1, 1865, upon the amount of principal and interest compounded on the back of said notes, from the period next prior to that date.

The principal and interest of such Treasury notes and obligations will be considered together as an offer for conversion; but when, after deducting the principal of the bonds and three per cent premium, there re-mains a fractional part of one hundred dollars, this fractional part will be paid to the depositor.

The Secretary reserves to himself the right of withdrawing this proposal at any time prior to said first day of November, provided fifty millions of dollars shall, prior to that date, be offered for conversion as aforesaid.

Circulars of instructions will be transmitted to the various officers authorized to receive certificates and notes, to which attention is invited.

H. McCULLOCH, Secretary of the Treasury.

#### REDEMPTION OF NATIONAL BANK NOTES.

We find in the Philadelphia *Enquirer* a letter written by a bank officer of that city, proposing a plan for redemption, and also a reply to it from Mr. McCulloch. The continued agitation of this subject, and the suggestion of different plans is a very favorable indication; for we can only hope to reach the best system after a full discussion. The following is the Philadelphia letter referred to:

PHILADELPHIA, Pa., September 22, 1865.

Hon. Hugh McCulloch, Secretary of the Treasury, Washington, D.C.—Sir:—I have received from L. S. Norris, Esq., Cashier of the First National Bank of Baltimore, a proposition to establish a National Redemption Bank in the city of New York, which he says was submitted to you, and at your suggestion is now presented to other bankers for their approval.

Certainly, whether the proposition is approved or not, every one wishing this question of redemption rightly settled will thank you and Cashier Norris for having done a very good thing in opening the subject for discussion. For if every one having a plan will now but imitate Mr. Norris in submitting it to you, and then to the bankers and the people, the true system may be found.

Acting upon this idea, I beg leave to respectfully submit for the common stock a plan so naturally suggested in my mind that I feel confident that it has frequently occurred to yourself and others.

Admitting, with Mr. Norris, that New York is "the centre of our monetary affairs," the sun of our system, if you please, I think that the commercial cities named in the Currency act may also be regarded as the suns of smaller systems, revolving around the principal sun, but equally necessary to the harmony and perfection of the whole. Therefore, whilst seeking to have New York become the grand central point for the redemption of all the National currency, I would not destroy the system of local centres provided for the interior banks in the act, but would still require them to redeem

at their local centres as well as at the grand centre sought to be created at New York.

I would, however, take the business of redemption entirely out of the hands of the banks at the grand central point of redemption, and place it with the Government, where I think it properly belongs under the national system, and will ultimately go.

I would, therefore, by an amendment of the Currency act, establish an office of the Currency Bureau at the Sub-Treasury in New York for the redemption of all national currency, charging office expenses to the Bureau, and the cost of transportation to the banks, pro rata according to the amount of circulation of each. For the redemption of their notes banks would be required to make a permanent deposit at the sub-treasury of a portion of their lawful money reserve, say five per cent of the amount of their circulation.

Each bank would be advised daily of the amount of its notes redeemed, and as the notes amounted to a certain proportion of its permanent deposit, they would be forwarded to the bank, or if an interior bank, to its local centre of redemption, when desired. In return for its redeemed notes, each bank would be required to forward to the Sub-Treasury lawful money, or the currency of the New York City or other National Banks, in such proportions and under such rules as might be found necessary to secure at all times a healthy state of the currency throughout the country.

It appears to me that with some such plan as I have briefly sketched, the Treasury Department would be better able to meet the requirements of the Government, the bankers and the people, than any organization of the banks for the purpose, whilst it would at the same time be daily fulfilling its pledge for the redemption of the National currency in a manner that would retain for the National banking system the entire confidence of the American people.

This letter sent to Mr. McCulloch elicited the following reply. Although the Secretary fails to give it his approval, still the suggestions are important, and with modifications may be found less objectionable.

TREASURY DEPARTMENT, Sept. 26, 1865.

Dear Sir:—Your favor of the 22nd inst. is received.

I have been desirous that an amicable arrangement should be made for the redemption by the Interior Banks of their notes at the seaboard cities, but I have not undertaken to suggest the manner in which this arrangement should be carried out.

There are some good points in Mr. Norris' plan, but there are likewise some serious objections to it. It is important that the whole matter should be thoroughly canvassed before the next meeting of Congress; and if, under existing law, no satisfactory plan can be agreed upon, it might be advisable to obtain an amendment of the National Currency Act, by which the object contemplated may be secured.

My present impression, is that it would not be advisable to connect the Government in any way with the redemption of the national currency at New York, and I am hopeful that everything that is desirable in the way of satisfactory redemptions may be effected without the intervention of Congress.

I am very truly, yours.

H. McCULLOCH.

#### MR. McCULLOCH'S LATE SPEECH.

The following extract from Mr. McCulloch's late speech contains all that he said with regard to our finances:

And now a word in regard to our finances: You know that I did not seek, as I did not expect to be, Secretary of the Treasury. To this fact I attribute in a great degree, the good feeling and indulgence that have been manifested toward me in the very trying and responsible position I occupy. I accepted the office of Secretary of the Treasury with great distrust of my ability to meet the public expectation, but with a sincere desire to so conduct the affairs of this great department as to aid in restoring the credit of the government which had been damaged by the greatness of the public debt, and the uncertainty in regard to the duration, if not to the result of the war, and in bringing up the obligations of the government to the specie standard.

#### IRREDEEMABLE CURRENCY AN EVIL.

I am not one of those who seem disposed to repudiate coin as a measure of value,

and to make a secured paper currency the standard. On the contrary, I belong to that class of persons, who, regarding an exclusive metallic currency as an impracticable thing among an enterprising and commercial people, nevertheless look upon an irredeemable currency as an evil which circumstances may for a time render a necessity, but is never to be sustained as a policy. By common consent of the nations, gold and silver are the only true measure of value. They are the necessary regulators of trade. I have myself no more doubt that these metals were prepared by the Almighty, for this very purpose, than I have that iron and coal were prepared for the purpose for which they are being used. I favor a well-secured convertible paper currency. No other can to any extent be a proper substitute for coin. Of course it is not expected that there shall be a dollar in coin to reserve for every dollar of paper in circulation. This is not necessary. For all ordinary home transactions a paper currency is sufficient, but there are constantly occurring periods when balances between countries, and in the United States between its different sections, must be settled by coin. These balances are insignificant in amount, in comparison with the transactions out of which they arise, and when a vicious system of credits does not too long postpone settlements, they are arranged without disturbing movements of coin. Whenever specie is needed for such a purpose, or for any other purpose, the paper currency of the country should be convertible into it, and a circulation which is not so convertible will not be, and ought not long to be, tolerated by the people. The present inconvertible currency of the United States was a necessity of the war, but now that the war has ceased, and the government ought not to be longer a borrower, the currency should be brought up to the specie standard, and I see no way of doing this but by withdrawing a portion of it from circulation.

THE BUSINESS OF THE COUNTRY IN AN UNHEALTHY STATE.

I have no faith, sir, in a prosperity which is the effect of a depreciated currency, nor can I see any safe path for us to tread but that which leads to specie payment. The extreme high prices which now prevail in the United States is an unerring indication that the business of the country is in an unhealthy condition. We are measuring values by a false standard. We have a circulating medium altogether larger than is needed for legitimate business—the excess is used on speculations. The United States are to-day the best market in the world for foreigners to sell in, and among the poorest to buy in. The consequence is, that Europe is selling us more than she buys of us (including our securities, which ought not to go abroad,) and there is a debt rolling up against us that must be settled, in part at least, with coin. The longer the inflation continues the more difficult will it be for us to get back to the solid ground of specie payments, to which we must return sooner or later. If Congress shall, early in the approaching session authorize the funding of legal tenders, and the work of a reduction is commenced and carried on resolutely but carefully and prudently, we will reach it probably without serious embarrassment to legitimate business; if not we shall have a brief period of hollow and seductive prosperity, resulting in widespread bankruptcy and disaster. There are other objections to the present inflation. It is, I fear, corrupting the public morals. It is converting the business of the country into gambling, and seriously diminishing the labor of the country. This is always the effect of excessive circulation. The kind of gambling which it produces is not confined to the stock and produce boards, where the very terms which are used by the operators indicate the nature of the transactions, but it is spreading through our towns and into the rural districts. Men are apparently getting rich while morality languishes and the productive industry of the country is being diminished. Good morals in business, and sober, persevering industry, if not at a discount, are considered too old fogyish for the present times. But I feel that this is not the occasion for croaking, and perhaps I ought to apologize for the train of remarks into which I have been led. Whatever financial troubles may be before us, Fort Wayne will suffer as little from them as any other city in the country. Good financial seed was sown here at an early day. If property is high, there are no incumbrances upon it. If expensive buildings are being erected, the owners are not indebted for them. Business is done here on the cash principle. Our merchants generally buy for cash and sell for cash. We shall doubtless wake up some fine morning and find our property worth apparently a good deal less than at present, but if we have no debts to pay in a dearer currency than that in which they were contracted, we shall have little to fear from any crisis that may occur.

## WISE LEGISLATION NECESSARY.

But, while I feel anxious about the present inflation, and its effects upon the business and morals of the country, I am hopeful that, by wise legislation, we shall escape a financial collapse, and I am confident that a grand future is before the United States. I am hopeful that the currency may be brought up to the specie standard without those financial troubles which have in all countries followed protracted and expensive wars. By the experience of the past four years we are led to the conclusion that our people have a latent power that always manifests itself when required, and is equal to any emergency. I have faith, sir, that as we have, to the astonishment of the world, raised immense armies, larger, I apprehend, than any single nation ever brought into the field, and met the enormous expenses of the war without borrowing from other nations, we shall also be able, without a financial crisis, to fund our surplus in currency and interest bearing notes, bring back the business to a specie standard, and place the credit of the country on the most stable and satisfactory basis. If we do this, we shall accomplish what the soundest thinkers in Europe have considered an impossibility, and what no other people but the free and enterprising people of the United States, occupying the grandest country in the world, could accomplish. But should we be disappointed in these hopeful expectations, should no early check be put upon the issues of paper money, should prices still further advance, and speculation be still further stimulated, and the result thereof be extensive bankruptcy, depression, and hard times, the grand destiny of this country and this government will not be affected. The United States occupy the best portion of the temperate zone of a continent, stretching out his arms to Europe on the one side, and Asia on the other, and producing all articles necessary for the subsistence and comfort of the race. If cotton be king, he is, thank God, enthroned again; if bread be king, where should his capital be but in this great valley of the Mississippi? This nation has within itself everything that is needed to make it the greatest among the family of nations. Coal and iron in juxtaposition and inexhaustible supply. Mountains and valleys rich enough in gold and silver to furnish the world, for all time, with what may be needed for circulation and other uses. Copper and lead and other minerals in no less abundance. A soil of wonderful fertility, a climate salubrious and diversified, and, above all republican institutions, and an energetic and again united people.

## CAPITAL AND LABOR IN THE SOUTH.

We have, it is true, sir, difficult questions growing out of the war, yet to be settled, but I have an abiding confidence that they will be settled as they come up for settlement, in such manner as will strengthen the Union and add to our national renown. The labor question of the South is one of these questions; but if there be no outside interference, it will not, I apprehend, be a very difficult one. On the contrary, it is quite likely to be a self-adjusting one. The planter needs the labor of his former slaves, and the high price which Southern products will command for years to come will enable him to pay liberally for it. The colored people will soon learn that freedom from slavery does not mean freedom from work. The interests of the two races will not long be antagonistic. The whites will need the labor of the blacks, and the blacks will need employment. There is much danger to be apprehended from the unwillingness of the latter to labor for a support, as from an indisposition on the part of the former to pay fair wages. Like all other economical questions, it will be settled by the necessities and interests of the parties. Fortunately for the solution of this question, and the well-being of laboring men generally, capital is not supreme in the United States. It does not, as in most other countries, hold labor under its control, and dole out to it just such remuneration only as will make it most productive. Labor is a power in this free country, with its cheap lands, which are within the reach of all industrious men, and dictates terms to capital. There is no part of the world where labor is more needed than in the Southern States, nor where it will soon command better prices. This labor question at the South will, I doubt not, be satisfactorily arranged in due time, for the best interests of all concerned. But I have trespassed too long upon your time. Accept, again, my thanks for your courtesy, and for the attention you have given to my desultory remarks.

## RECEIPTS AND EXPENDITURES OF GOVERNMENT FOR LAST QUARTER.

The following is a statement of the receipts and expenditures of the United States for the quarter ending June 30, 1865, exclusive of trust funds;—

TREASURY DEPARTMENT,  
REGISTER'S OFFICE, Oct. 10, 1865. }

## RECEIPTS.

From customs.....	\$80,140,387
Sales of public lands.....	204,521
Direct tax.....	288,398
Internal revenue.....	42,946,436
Incidental and miscellaneous sources.....	6,710,044
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Total receipts, exclusive of loans, &c.....	\$80,289,786
From fractional currency, per act of March 3, 1863.....	4,155,291
Sixes, twenty years bonds, per act of July 17, 1861.....	46,200
Temporary loans, per acts of February 25 and March 17, 1862.....	58,536,129
Certificates of indebtedness per acts of March 1 and 17, 1862.....	8,779,000
Sixes, 1881 bonds, per act of March 3, 1863.....	142,750
Sixes, compound interest notes, per acts of March 3, 1863, and June 30, 1864.....	65,900,000
Seven three-tenths 3 years' Treasury notes, per act of June 30, 1864.....	363,975,767
Sixes, five-twenty year bonds, per act of June 30, 1864.....	17,639,000
Seven three-tenths 3 year Treasury notes, per act of March 3, 1865.....	15,655,895
Gold coin purchased per act of March 17, 1862.....	3,355,000
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Total.....	\$538,175,034
Grand total.....	618,464,820

## EXPENDITURES.

Civil—Foreign intercourse and miscellaneous.....	\$12,271,896
Interior—Pension and Indian.....	1,625,453
War.....	414,196,277
Navy.....	32,985,664
Interest on public debt, including interest notes.....	36,700,812
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Total.....	\$497,780,103
Redemption of Texan indemnity stock.....	1,221,969
Reimbursements of Treasury notes, per acts prior to Dec. 23, 1857..	250
Payment of Treasury notes, per act of March 2, 1861.....	24,400
Redemption of United States notes, per act of July 17, 1861.....	19,500
Redemption of 7 3-10 3 years coupon bonds, per act of July 17, 1861.....	29,321,750
Redemption of Treasury notes, per act of February 25, 1862.....	911,153
Redemption of postage and other stamps, per act of July 17, 1862.....	979,316
Reimbursement of Treas. loans, per acts of Feb. 25 and March 17, '62.....	18,668,888
Redemption of certificates indebtedness, per acts of March 1 and 17, '62.....	65,078,000
Redemption of fractional currency, per act of March 3, 1863.....	1,992,670
Redemption of one year five per cent Treasury notes, per act of March 3, 1863.....	34,272,910
Redemption of two years five per cent Treasury notes, per act of March 3, 1863.....	20,346,700
Redemption of three years six per cent compound interest notes, per acts of March 3, 1863, and June 30, 1864.....	76,900
Purchase of gold coin, per act of March 17, 1862.....	5,072,900
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Total.....	\$177,987,308
Grand total of expenditures.....	675,767,411

S. B. COLBY, Register.

## RAILWAY, CANAL, AND TELEGRAPH STATISTICS.

## RAILROADS IN INDIA.

MR. JULAND DANVERS, the government director of the Indian railway companies, states, in his annual report, just issued, that the present system of guaranteed railways comprises a length of 4,917 miles, of which 3,186 are now open for traffic. The net profits in the year ending the 30th of June, 1863, on 2,151 miles of railway, amounted to 690,834*l*, and to 975,077*l* in the year ending 30th June, 1864, on 2,489 miles. The number of passengers conveyed in the latter year was 11,781,683, compared with 9,242,540 in the former. The total expenditures of capital on the lines which are now open, or in course of construction, amounted, on the 1st of May, 1865, to 54,942,029*l*. The expenditure this year, it is estimated, will amount to rather more than 5,000,000*l*—about 1,800,000*l* to be expended in England, and 3,350,000*l* in India. The total amount estimated to be required for the undertakings, as now sanctioned, will reach 77,500,000*l*. The number of shareholders at the end of the year 1864 was 29,303 in England, and 877 in India—the latter number consisting of 384 Europeans and 393 natives. There were also 6,453 debenture holders. Up to the end of 1864 the government had advanced 13,160,539*l* to the railway companies for guaranteed interest, but about 3,300,000*l* had been paid back out of the earnings of the railways, leaving 10,000,000*l* still due to the government. The charge upon the government was 2,567,743*l* in the past year, and by the 1st of January next it will probably have increased to 2,700,000*l*; but the receipts from traffic, which go in diminution of this, and which in the year 1863-'64 amounted to 1,000,000*l*, will in 1864-'65 probably reach 1,300,000*l*. Year by year the revenue will approach nearer and nearer to the amount of guaranteed interest, and at last the government will not only be relieved of the annual payment altogether, but the railways will begin to earn more than the guaranteed rate, and to discharge their debt for previous advances out of half the excess profits above five per cent. Although it will be some time before the government will receive back the large sum due to them, there is enough in the present condition of the lines to encourage the hope that ultimately it will be paid, and in the mean time the State obtains advantages which fully compensate for the liability it has incurred. Mr. Danvers holds that no country in the world will derive greater advantages from railways than India; that the traffic on the main line may be expected to be enormous; and when they earn six, eight, or ten per cent, the difficulty which now exists in inducing capitalists to promote public works in India will be removed.

## RAILROADS IN TEXAS.

The railroads already constructed and now in running order in this State are the Houston and Texas Central Railroad, from Houston to Millican, distance 80 miles. Washington County Railroad, from Hempstead to Brenham, distance 30 miles. Buffalo Bayou, Brazos and Colorado Railroad from Harrisburg to Alleyton, distance 80 miles. Houston Tap and Brazoria Railroad from Hou-

ton to Columbia distance 45 miles. Galveston, Houston and Henderson Railroad, from Galveston to Houston, distance 50 miles. Texas and New Orleans Railroad, from Houston to Beaumont, distance 65 miles. Besides these, there is a railroad in running order from Shreveport, La., to Marshall, Texas, distance 40 miles. A railroad is now being built from Brazos Santiago to Brownville, distance about 30 miles, and one from Indianola to Victoria, distance 40 miles.

#### VIRGINIA AND TENNESSEE RAILROAD.

The annual report of the Board of Directors of the Virginia and Tennessee Railroad, for the fiscal year ending June 30, 1865, exhibits the following facts :

The gross earnings of operating were.....	\$3,291,907 37
The expenses of operating were.....	2,990,504 76

Net earnings above operating expenses.....	\$301,402 61
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The net earnings are 9.16 per cent, and the expenses of operating 90.84 per cent of the gross earnings.

There have been six different raids during the year by the armies of the United States, and the road destroyed each time for long distances. Much property was also destroyed by the soldiers of the Confederate States, and to such an extent were these injuries committed, that there is now upon the road only three bridges, original structures, left standing, and but three depots.

The road was open for its entire length one hundred and forty-three days during the year; for ninety-one days was closed nearly its whole length, and for one hundred and thirty-one days closed the entire distance. The depots are yet unbuilt, but the bridges were repaired as speedily as possible, and the entire amount, 7,729 feet, replaced with new structures (trestle work), which will, in a majority of cases, last four or five years. One or two are in danger from high water, and will be replaced by truss bridges, similar to the original structures, as quickly as possible. The wood sheds, water stations, etc., were destroyed the same time with the depots, but are now repaired, and freight cars are now used for the reception and distribution of freight until new depots can be built. There were destroyed at the same time seventy-two passenger and freight cars and three locomotives.

#### INDIAN RAILROADS.

The through line from Lahore to Mooltan on the Indus is now in operation. The Branch Line of the Great Bombay and Calcutta which pierces the cotton country to Nagpore is making great progress; and the contractors who have this line from Lahore or Umritsir to Meerut and Delhi in hand, are hard at work. The only break which remains to be considered is that along the desert side of the Indus from Mooltan to Kotree, the terminus of the line from Kurrachee; and this will soon have to be connected by iron links. Then Calcutta will be in direct communication by rail with Kurrachee, 2,000 miles off, with Bombay, 1,600 miles off, and with Nagpore, 1,100 miles off. Whether we look at the magnitude and solidity of these works, or at the distance which they traverse, the railroads of India will far surpass any like works in Europe, and closely compete with the greatest projected works in America. They will cover 5,000 miles, and cost £70,000,000 sterling (350,000,000 dollars.)

## FEEDING ON THE ROAD.

A gentleman travelling on the continent sends to the London *Times* a note regarding a plan adopted at Vesou, a railway station in France, which he recommends to the restaurants at British stations, and which might, perhaps, be copied with advantage in this country. Trains do not stop long at Vesou, but "M. M. the travellers" are informed by plentiful advertisements that if they wish either to breakfast or dine they will find hot meals in baskets at the buffet. The meals are composed of three dishes, half a bottle of wine, bread, and desert. The passengers leave the empty basket and dishes half an hour later at the next station, and pay two francs fifty centimes, or about fifty cents in American currency, for their leisurely and comfortable repast. The number of cases of dyspepsia which would be avoided by the adoption of some such plan in this country can scarcely be computed. On through trains on a few of our railroads there are refreshment cars, which enable travellers to satisfy their appetites without frantic haste, but such institutions cannot always be made to "pay." On a few great lines, such as the Pennsylvania Central Railroad, ample time is given for meals, and every traveller who has stopped at Altoona remembers the fact with gratitude, but as a general thing the eating arrangements on most of our great routes of travel are woefully deficient.

## ALBANY BRIDGE.

The bridging of the Hudson River between Albany and Greenbush is now a fixed fact. All the piers are completed, and the work on the superstructure is progressing rapidly. Its eastern approach is located about a quarter of a mile up the river from the Western Railroad Depot, and its western end is in the New York Central Railroad yard in Albany. When completed, cars of the Western, Hudson River and Harlem railroads will be enabled to form a direct connection with those of the Centraltrains, and those loaded with freight (and eventually passenger cars) will continue on to Buffalo and the Great West without breaking bulk.

## SUEZ CANAL.

The Suez Canal was opened for traffic on the 17th August, and a vessel laden with coal passed from the Mediterranean to the Red Sea. May this be the precursor of a vast commerce, the re-awakening of the isthmus to civilization.

## MERCANTILE MISCELLANIES.

## ADULTERATION OF WINES.

SHERRY is probably the wine most in demand in England; but any dealer who knows his trade, and who is reasonably disposed to be honest, must frankly allow that we are far more indebted to Africa than to Spain for the wine that passes under the name of sherry. According to tolerably trustworthy authority, it is in proof that fully three fourths of the article sold in the country as sherry is really nothing more than common Cape wine, cleverly concocted to suit all tastes. The cost of Cape wine is low enough, as any one may easily ascertain,

but cheap as Cape wine is, we have heard of even a cheaper basis for the manufacture of a good saleable sherry. Cider, which sells sometimes at as low a price as sixpence a gallon, when the orchard produce has been very plentiful, has been found to answer admirably, in skillful hands, as a liquid out of which sherry may be made. To deprive the Cape wines and the cider of acidity, gray salt, potash and lime are used, and to clarify them, white of eggs, isinglass, or bullock's blood fresh from the slaughter house; indeed, for the very common sorts of wine, horses' blood is more frequently used. Body is given to the article by the use of Foster's neutral spirit—a perfectly colorless and strong spirit of wine. For the basis of port wine, the common red wine of Spain is extensively used; though latterly, since French wines have been admitted at a low duty the commoner sorts of claret have been brought into use in the manufacturing process, clearness and body being attained by the same methods as are applied to the perfecting of sherry. Apparently, port wine is an article of consumption that must be doctored to suit the British palate, for even the very best, as imported direct from Portugal, has to be largely adulterated with brandy to make it saleable in English markets.

But it is in the flavoring and coloring of the different sorts of port and sherry that the greatest taste and skill are shown. Here, however, chemistry steps in to aid the wine merchant, and not only relieves him of the trouble of research, but takes all the drudgery of preparation off his hands. The initiated in London are aware of the visits of an individual at certain establishments, whose sole stock in trade consists of sundry not very large bottles, containing liquids of various colors. Morning or early forenoon is his time for doing business, and the transactions are generally for ready money, with few questions asked or answered. This is the dealer in essences, and the essences play an all important part in wine making. Essence of sloe juice gives a dryness and color combined. Essence of black currants produces both body and richness of flavor—much esteemed in good port wines—and expressed juice of Orleans plums is found to answer the same purpose. A solution of tannin in spirits gives the requisite astringency and the true sherry flavor to inferior Cape wines, such as Capt. Wegg proposed to introduce into common use as “a good dinner sherry, at twelve shillings a dozen, bottles included.” For the costlier brown sheries a very superior wine called Color, worth perhaps about a hundred pounds per butt, is sparingly used for the purpose of giving color; and in the commoner sorts, caramel, or burnt sugar effects the same object. Palm oil dissolved in spirits gives a rich golden color to sherry; and almond paste produces a fine nutty flavor, which flavor can also be obtained by the use of nitro-benzole—the latter article being largely used in flavoring cheap sheries. We will not pretend to say that we can name all the ingredients used in the “doctoring” of our drinks, for there may be mysteries within mysteries; but we know that in addition to the articles just mentioned, salt, common sugar, capsicums, grains of Paradise, sulphuric acid, cream of tartar, and glycerine play their parts in adding flavor, and in producing oiliness, crustiness and beads in the liquids we are asked to consume as port and sherry.

There could be no greater mistake than to suppose that adulteration is con-

fined to the wines most commonly consumed in England. We are not sure indeed but that the adulteration of champagne is carried to even a greater extent than the adulteration of port and sherry. It is only a short time since that a suit in the Court of Queen's Bench, arising out of a dispute in connection with some dock warrants, disclosed the fact that champagne that will fetch a guinea a bottle on the race-course, need not cost the retailer more than thirteen shillings a dozen. We are not in any great degree a champagne drinking people, yet a learned counsel, on the trial just alluded to, maintained that there is more of this particular wine consumed in England in one day, than is produced in all France in the course of twenty years. This is only another mode of telling us that we don't get the real article, but of course we all know that; yet it is made a point of honor in some countries to stand up for the genuineness of the champagne they consume. In the Pall Mall clubs it would be rank neresy to hint a doubt of the sparkling vintage. Russians will swear that out of the capital of the Czars on the Neva, you have but very little chance of ever tasting the genuine product of the champagne vineyards. In California, they are quite convinced that they have the very best of undoubted Moet and Chandon; while the New Yorkers would think a man mad who could dream of questioning the fact, that only real *Veuve Clicquot* is to be had at *Delmonico's*. All cannot be right in asserting that they alone have a monopoly of the drink so much in repute, though we think there can be no doubt that the Russian has the best chance of tasting the genuine article. It is stated on good authority that, with the exception of what is retained by the French court for its own use and for sending as presents to crowned heads, there is a standing agreement that all that is left of the celebrated *Clicquot* vintage shall be sent to the Russian Government. How the rest of the world is supplied with its champagne, only a small portion of the world really knows. Germany supplies a large portion of what is sold as the best champagne; and Moselle wine deprived of the peculiar flavor of the muscatel grape, from which it is made, constitutes an excellent sparkling drink, such as may very well satisfy those who have no chance of ever seeing a bottle of unimpeachable champagne decanted. But champagne may be made of almost any beverage that will ferment and effervesce, and, in fact, we rather fear it is made of any and every liquid that can be got to bubble and sparkle for the period demanded in the drinking of it. Sugar-candy, carbonate of soda, and the requisite colorings and flavorings, play their part in the sophisticating of the desiderated drink. From gooseberry, from mangel-wurtzel, and from rhubarb good champagne may be concocted; cider, perry, mead, maple syrup, and even spruce beer, have been used, and used largely in the manufacture. There is no occasion for the rhubarb used in the making of champagne being fresh, for excellent judges have owned that they have been deceived with a wine of this description made from a very stale rhubarb. If proper skill is displayed in the flavoring, and needful care bestowed upon the racking, we really do not see how the general public can be expected to judge accurately of what they are drinking, when connoisseurs are compelled to own that they are deceived. That tin-foil, pink tissue paper, and neat but showy labels, have much to do in recommending champagne, is a fact the dealer knows very well, if he does not acknowledge it. Let

an honest man try to vend race course champagne in ginger-beer bottles at a moderate profit on his outlay, and it is very doubtful indeed if he could persuade the public to give him more than the price of ginger-beer for it.

It is comforting to know, amid so many proofs of the false character of the wines in common consumption, that a really sound, true and wholesome wine may be had at prices far below the costly adulterations now patronized by the public. The best medical testimony concurs in telling us that no better beverage can be consumed than the light clarets of France, and France is prepared to supply us with an unlimited quantity of sound claret, at a price that almost precludes adulteration. The British public, it is true, has to reacquire its taste for this wine, but, judging by the rapid increase in the quantity imported since the treaty of commerce, we are not without hope that we shall one day change wine as it is for wine as it ought to be.—*Chambers' Journal.*

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#### OYSTERS.

It is apparently impossible to estimate the consumption of oysters in New York, many hundred thousands are eaten every week. The trade in this city of not only immense but exceedingly profitable to those engaged in it. The finest flavored bivalves are found here, and from this point are furnished a large proportion of those used in the Western States. A large part of the oysters consumed by our citizens are caught in Tappan bay, in the Hudson River, distance some thirty miles. These are caught when they are small and sold by the bushel. They are then planted in the numerous bayous in the neighborhood of this city and along the sound, left to grow and get fat for a year or two, when they are brought to market. The freshness or saltness of the oyster depends entirely upon the water in which it is planted, and any of the dealers can furnish a fresh or salt bivaly as required. Two objects are in view in transplanting the oyster ; to have the different transplanting depots convenient to the local trade, and to improve the oysters planted in various waters which differ in form and regularity. For instance, the East River oysters differ essentially from those grown in Tappan Bay, and the same is true of other varieties. The best oyster that comes to market are the Saddle Rocks. Years ago the supplies from this quarter were extensive, but now one large dealer could sell double what are brought to the city. Thousands of bushels are, however, planted in the neighborhood, where they grow hearty and fat. The Blue Point oysters is next best, and hardly inferior to the Saddle Rock. The locality from which these oysters are obtained is on the south coast of Long Island, and the trade is conducted by a fleet of thirty or more vessels. The Shrewsbury oyster is caught in Newark Bay, and transplanted in Shrewsbury River. There are very few natural growth oysters found now in that river, although the water is admirably adapted to the health of the bivalves. Then there is the Mill Pond, the Oyster Bay, and Lloyd's Harbor, the Norfolk, and Cold Springs, and an endless variety of other oysters daily brought to the market in this city. The trade in the Virginia business is constantly increasing, some seventy-five to one hundred vessels being employed in it. These vessels carry from 2,000 to 5,000 baskets, each containing 200 oysters. Unless the State of Virginia does something to prohibit people living

outside of that from gathering oysters, the business the coming season will be large, and prices materially cheapened.\* The Virginia oysters are brought to this city of various growths, and sold without transplanting. They are generally fresh oysters, and not to be compared in richness of flavor to those gathered and planted in this locality. The sea star, a fish in the shape of a star, gets its entire living by destroying the oyster, setting on the shell and sucking out the life. Latterly there have been attempts to ship oysters to Europe, and the plan is feasible, if oysters are carefully packed, say in November.

The business in this city is very profitable, both to the dealers, and their employes, the latter receiving from \$15 to \$30 per week for their labor. The price of oysters has been increasing for many months past, but if the supplies coming to hand do not fall off prices must decline.

#### SHIPOWNERS' CONVENTION—MEMORIAL TO SECRETARY McCULLOCH.

At a meeting of the Shipowners' Association of this city, Wednesday, Oct. 19th, among other business which came up was the question of the collection of freights upon goods in bond. The following memorial to the Secretary of the Treasury upon this subject was unanimously adopted :

To Hon. Hugh McCulloch, Secretary of the Treasury of the United States :

The memorial of the Shipowners' Association of New York respectfully shows : That your memorialists represent to a very large extent the shipowners of the port of New York, in reference to all matters affecting the general interests of commerce, and in their behalf respectfully solicit the aid of the Secretary of the Treasury in securing relief from the hardship caused by the operation of the existing revenue law and regulations, whereby the lien of the shipowners for freight upon goods imported into port is rendered ineffectual, and in many instances, is practically destroyed. The facts to which we invite the Secretary's attention are as follows : The lien of the shipowners for the freight carried on the voyage of importation—a lien recognized in every civilized community—necessarily depends for its validity upon his retaining possession of the goods. This he has a right to do until the lien is discharged by the payment of the freight. But the United States Government, through its revenue officers, for the purpose of securing the payment of duties on the same goods, sends them under "general orders" to the bonded warehouse, where they are held and delivered up to consignees on payment of duties and storage, irrespective of any question of freight. The goods are thus taken out of the possession of the shipowner by the supreme power before his lien is satisfied, and placed entirely beyond his control, and the possession being lost, the lien is also lost. It is true that the great majority of the consignees promptly pay their freight, without reference to the lien ; but it is also true that in many instances irresponsible consignees avail themselves of the opportunity afforded by the law of getting their goods out of the public stores on payment of duties and charges only, and thereby evade paying the freight, which is thus wholly lost to the shipowner. The fact that the time when the goods may be withdrawn is uncertain, and the rapidity with which business is transacted, make it impracticable for shipowners to watch the delivery at the Bonded Warehouse, so as to intercept the goods, even if the lien could legally be reinstated by such a process.

Your memorialists submit that, inasmuch as the actual carriage from foreign countries to our own ports is the first step toward the raising of revenue by duties or imports, it is manifestly just and equitable that the carrier's lien for his freight, instead of being embarrassed and defeated by the Government, should rather receive its protection and aid.

In this view, and relying upon the justice and liberality which characterize the present administration of the Treasury Department, your memorialists request that the Hon. Secretary will, either by regulation, or by such recommendation or representation as may properly be made by him to Congress in aid of the passage of a law for this purpose, extend to the shipowners the much-needed relief which they require

as above set forth. An effectual remedy would be afforded if the freight due could be paid by the storekeeper on receipt of the goods in store, and added to his charges on the goods, to be collected before or on delivery. Or if notice were required to be given to the shipowner before the withdrawal of the goods by the consignee, so that his claim could be enforced, it being understood and declared that the act of Government in placing goods in store is not to affect the lien for freight. The object, in either case, being simply as a check upon dishonest or irresponsible consignees, and not an interruption to the ordinary course of trade, your memorialists believe that a Treasury regulation or act of Congress securing this result would be cheerfully acquiesced in by the entire commercial community.

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#### NATIONAL LIFE AND TRAVELERS' INSURANCE COMPANY.

The business of insuring against accident has rapidly grown in favor the past few months. Many companies have sprung up during that time, making this kind of insurance a speciality; and if disasters on railroads and steamboats continue to increase, as during the year, there will, we doubt not, be enough for all of them to do. The National Life and Travelers' Insurance Company, of 243 Broadway, is one of these new organizations uniting, however, the ordinary life business. Its officers and board of directors are among our best men, and a sure guarantee of its thorough reliability. We see it issues general accident policies covering accidents of all description, as well as travelers insurance tickets, special marine risks, etc.

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### THE BOOK TRADE.

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*Report of the Council of Hygiene and Public Health of the Citizens' Association of New York, upon the Sanitary Condition of the City.* Published with an Introductory Statement by order of the Council of the Citizens' Association. New York: D. APPLETON & Co., 443 and 445 Broadway, 1865. p. p. 504.

THIS volume has received from the sanitary authorities of England and France, the most flattering notice. At the present moment, when the great pestilence of India, which for four years has been steadily advancing from the East to the western shores of Europe with more than former severity, threatens us with its visitation, a document purporting to give information of the unwholesome condition of large precincts in our largest city, must attract more than a cursory notice.

The Council of Hygiene, whose report is embraced in the volume before us, is constituted of sixteen regular allopathic physicians of acknowledged responsibility. It was organized in April, 1864, and in July instituted a rigid inspection of the sanitary condition of the city of New York. The island was divided into twenty-nine districts, and a physician employed to each to examine the drainage, cleanliness of the streets, character of the houses, and their wholesomeness. On the 1st of December these inspectors presented a report of their observations, which is here given. We are not prepared to accept the conclusions of the Council that the rate of mortality in New York exceeds that of other great cities in this country and Europe; nor do we believe that it can be substantiated. But we know that there exists in many districts an extraordinary density of population, hundreds of persons inhabiting a single house, where "there exists an almost universal neglect of sanitary regulations; the streets, courts, and alleys

generally filthy, the gutters obstructed, and the sewerage faulty; while in the tenant houses of such localities we found numerous cases of typhus, small-pox, and all varieties of pulmonary and infantile maladies, which can be perpetuated and rendered fatal by overcrowding, domestic uncleanness, and lack of ventilation. In such localities, however great the advantages of natural salubrity may have been, sickness is always very prevalent and diseases very fatal."

At the time that this report was made, small pox existed as an epidemic, and over 1,500 cases were discovered in a few days. Yet the city authorities took little notice of the fact; although it was made the subject of legislative inquiry. It has since almost disappeared.

The districts abounding with tenant-houses are noticed in detail. In December, 1864, there were 495,592 persons in New York residing in tenant-houses and cellars; the total number of tenant-houses was 15,309, and the average number of families to each of these houses exceeded seven, including the poor families that take boarders, keep lodgers, etc. These places are the chosen abodes of poverty and disease; and here, should the epidemic come, the population would be swept away as by a conflagration, leaving their corpses and disease as a heritage for their less impoverished fellow citizens. These houses have been built upon about 850 acres of land, making no account of streets; and including these, the total area allotted to these 15,309 tenant-houses, 111,000 families, and 480,368 persons composing them, is about two square miles. This is herding human beings together with a vengeance.

Many localities are witnessed where the drainage is fearfully defective, the filthiness indescribable, and the general wretchedness almost surpassing belief. What remedy our civilization possesses adequate to these evils, what power or dispensation of reform exists with our municipal and other authorities, what hope there is that any attempt at amelioration will be made worthy of acknowledgement, we do not perceive. The Citizens' Association has labored efficiently to disclose the frightful state of facts; and for that should be gratefully regarded. Fortunately the human constitution is facile to accommodate itself to depressing conditions, and the breezes of the ocean quickly remove noxious emanations. But an examination of General Viele's map accompanying this report, and a perusal of its exciting statements, show beyond a quibble, that in the event of a visitation, the path of the cholera up and down the city of New York is indicated beyond the chance of mistake.

*The Oil Regions of Pennsylvania. Showing where Petroleum is found; How it is obtained, and at what cost. With hints for whom it may concern.* By WILLIAM WRIGHT. New York; HARPER & BROTHERS, 1865.

AN excursion to the Oil Regions of Pennsylvania will be taken next week by about two hundred capitalists and leading men of business from all the principal Northern cities. The party rendezvous at Meadville on Tuesday evening, the 17th inst., and the next morning begin their visit at the principal cities and towns now "flowing with rivers of oil,"—Corry, Titusville, Shafton, Pit Hole City, Oil City, Reno, and Franklin, employing Wednesday and Thursday in the survey. The Committee of Arrangements are Messrs. Charles Vernon Culvert, of Franklin, J. T. Briggs, of Titusville, Joshua Douglas, of Meadville, J. J. Woodworth, of Plomer, J. J. Vandergrift, of Oil City. They promise to arrange everything

to afford a full and thorough view of the wonderful phenomena of the oil regions.

In connection with this excursion the book of Mr. Wright will be found valuable, proposing as it modestly does, to have given "Petrolia" a searching examination and a scathing review. The following are the contents of the work.

Chapter I. Physical Features of Geology of the Country.

- " II. Appearance of the Country, the Character, Characteristics of the People.
- " III. Hoisting and Sinking the Wells.
- " IV. "Struck Oil,"—The Law of Lawlessness.
- " V. Obstacles in the way—the Means used to overcome them.
- " VI. Statistics of Production.
- " VII. Oil Refining and Refineries.
- " VIII. How Strangers are Taken In.
- " IX. Ought I to invest in Petroleum, and How?
- " X. Practical Considerations.

From this table it will be seen that the author has essayed to "do up" oil as it was never "done" before. Coming from several weeks of explorations amid the unctuous mud of Oil Creek he assures us with a somewhat unfortunate mode of using the English vernacular that "underneath a system of falsehood and fraud that might almost be termed *magnificent*, there is a great basis of fact, which needs to be presented in its true light, needs to be protected from the misrepresentations of its own pretended friends who would have ruined it long since, if it had not possessed genuine worth of a high order."

The oil region of Pennsylvania covers an area of about twenty miles square; being limited almost exclusively to the valley of the Alleghany river, and on a section of its northwestern slope. Mr. Wright is very full in his descriptions and explorations, giving an outline of the oil business, how it is carried on, its deceptiveness, etc., occasionally stating matters which excite some doubt. For example he remarks that the gas that is discharged at the well, which he calls "carbonetted hydrogen," upon being passed through a tube of paper surrounded with ice, has condensed into paraffine.

Again, after giving extensive statistics of production he sums them up in a recapitulation, of which the following is the aggregate: Number of wells in operation 322, average yield per day  $27\frac{1}{2}$  barrels; annual yield 3,900,000 barrels and over. This may be so, but if it is, the consumption in the country must be greater than we supposed. For instance, the total amount taken for consumption at New York, and exported from New York, Boston, etc., during 1863 and 1864 was as follows:

	1863.	1864.
Exported from New York, .....	488,690	533,394
"    "    Boston, .....	51,285	42,307
"    "    Philadelphia, .....	184,893	194,003
"    "    Baltimore, .....	22,896	23,248
"    "    Portland, .....	8,552	1,769
	<hr/>	<hr/>
Total exported bbls. ....	706,266	794,722
Taken for consumption at New York, .....	314,481	242,189
	<hr/>	<hr/>
Total, .....	1,020,747	1,036,909

Thus we see that if the production is over four million bbls., as Mr. Wright has it, there are three million bbls. unaccounted for.

The modes of "taking in" strangers are pretty fully explained, but many of our readers, we apprehend, are already familiar with them. Our author advises

those proposing to invest, that they first obtain full and accurate information, that their investments be divided between several interests, and the stock be associated rather than "watered." This advice cannot be followed too closely.

*Charter of the Northern Pacific Railroad Company.* Organization Proceedings, By-Laws and Appendix, 1865.

The charter of the Northern Pacific Railroad, Public Act No. 186, was approved by President Lincoln, July 2d, 1864. It empowered the corporation to construct and maintain a continuous railroad and telegraph from Lake Superior to Puget Sound in the territory of Washington, with a branch to Portland in the State of Oregon; and granted for the purpose the right of way to a hundred feet on each side, and patents of land on the route to the amount of twenty sections per mile in the territories, and ten sections per mile in the states,—an aggregate of 47,360,000 acres.

The proposed line is known as General Stevens' Route, having been first suggested by the late General Isaac L. Stevens, when Governor of the territory of Washington. It possesses the advantage of being the shortest and the most central line for a Pacific Railroad. From the head of Lake Superior to Puget Sound its distance is about 1,760 miles. The mountain ranges are depressed and easily overcome. But little heavy grading or tunnelling, or trestle-work, is required: water, timber and stone are in ample quantities. The soil is fertile, and the mineral wealth,—gold, silver, platinum, quicksilver, copper and lead,—abundant. The country of the Red and Saskatchewan rivers, British Columbia and the Hudson Bay Company would find in this Road the outlet of their trade. The cost of construction is estimated at \$120,000,000.

The Northern Pacific Railroad Company, organized in Boston, in September, 1864, and its directors are promoting the necessary work of obtaining subscriptions; two years being the limit specified for this purpose. The pamphlet before us contains the transactions; also, in the appendix, the report made by Hon. Mr. Aldrich of Minnesota to the House of Representatives in April 1860, in favor of this route. This document shows this line to be the shortest of any proposed to the Pacific coast; affording at once "greater proximity to Asia, shortest distance between water lines, greater proximity to Europe, it is the shortest and most direct route between Asia and Europe." It has the easiest gradients. "The sum of ascents and descents from St. Paul to Seattle (or Vancouver) is 21,787 feet against 29,387 on the Central, 48,791 on the 35th parallel, and 38,350 on the 32d parallel route." It touches Missouri river at the mouth of the Yellowstone, and near the Great Falls; and the Columbia at the head of steamboat navigation.

The objections on account of the severity of the climate, and the depth of the snow are utterly untenable. It is much colder on the Russian and Canada roads. The report says: "The snow is absolutely less on the northern than on the central route. It is notorious that it is small through the prairie region from Minnesota to the base of the Rocky Mountains; and the explorations (of Governor Stevens and others) have furnished significant and reliable information, removing entirely all doubt as to it being a serious difficulty in crossing either of the mountain ranges. In the Flathead country, and on the great plain of the Columbia there is less snow than in the prairie region east of the Rocky Mountains.

Indeed throughout the entire extent of the route, cattle and stock keep in good condition without fodder. The quantity of stock in the interior of Washington and Oregon, and east of the mountains which thrive and live solely upon the winter grass is very large."

The importance of this route for commercial purposes is argued with great force and cogency. It is not probable that a continental communication will be established through British America for a long series of years, if the United States provide for a railroad on this line. On the Pacific side, Oregon, Washington, Vancouver's Island and British Columbia are tributary to this route; and on the eastern side of the Rocky mountains, the basins of the St Lawrence, the upper Mississippi, upper Missouri, and the Red River of the North. More than half of the railroad capital of the country is directly concerned in its recognition.

The effect of this route on the commerce of the Pacific can hardly be exaggerated. Puget Sound is marked out by nature for a great commercial entrepot, and is the only point ever likely to rival San Francisco. This route will give it to the United States with all its grand elements of naval strength. Otherwise it will be occupied by Great Britain, which has a rapidly increasing commerce and a large naval station in those waters.

This route is the shortest between Asia and our interior, our Atlantic ports and Europe. This is shown by the following table on page 42d :

	To Seattle.	To S. Franc'o.	Diff'nce.
From Amoo.....	3,850	4,110	260
From Shanghae.....	5,140	5,480	300
From Canton.....	5,900	6,140	240
From Calcutta.....	8,730	8,970	240

The distance from St. Paul to Seattle, on Puget Sound, is 1,764 miles; whereas from St. Louis to Benicia it is 2,482 miles, and Memphis to San Francisco 2,356 miles. This is all important in the matter of securing the East India commerce.

The reader must determine for himself to what extent these arguments for the northern route are conclusive. They certainly assure the importance of securing the Asiatic commerce, amounting to hundreds of millions of dollars, to this country, whether we make Seattle, San Francisco, or even Panama our western entrepot for that purpose. Our own steamship lines ought to perform the carrying trade of the Pacific, and our railroads do the business of the continent.

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