

great advantages, is what is known as the Lake Superior country. Immense deposits of gold, silver, copper, coal and iron, are daily opened, and a tide of investment is flowing in that direction, with increasing volume, which will bear in the reliable elements of a substantial and permanent development.

### Fire Protection.

Experience, says *Wood and Iron*, has demonstrated that the most effective apparatus for extinguishing fire in manufactories is a conveniently arranged and well cared for number of pails of water. Their importance is shown by the fact that it is a matter of record that of the losses in mills paid by the insurance companies, twice as many fires are put out by pails as by any other means. These pails must be kept full, and used for no other purpose whatever. The best fire pails are made of strong galvanized iron without covers, and they will last much longer if painted with hot coal tar, asphaltum, or some of the roofing compounds. This also helps to reserve the pails, as their black color makes them easily distinguished from other pails used for washing or drinking water. It should be the duty of some individual to keep the pails full, examining them at least once each week, and replenishing the whole of the water before it becomes foul. A further reserve is furnished by casks of water kept in porches or corners of rooms.

### India as a Wheat Producing Country.

It is only within the past few years that the native population of British India have turned their attention to the cultivation of wheat for export. Up to within a very recent period rice was almost the only, as it is still, the staple agricultural product of the country. The natives live almost exclusively on rice seasoned by a limited variety of condiments indigenous to the country. They are eminently frugal in their mode of life, and are content to lead the simplest kind of existence. Generations live and die and occupy the same locations that their forefathers have done for untold ages. Their agricultural appliances are of the most primitive description and the area of land occupied by each family is extremely limited; yet such is the abundance of labor, and so prolific is the soil that the gross product of the country is enormous in amount. Since the exportation of Indian wheat to England first commenced, the increase in the production of that grain has been very great, and it is estimated that last year the total production of India amounted to nearly 300,000,000 centals. Of this vast amount only 19,863,520 centals were exported to Great Britain, but this was an enormous increase over the exports of former years. It is stated that over vast districts within 400 miles in a straight line from Calcutta the usual price of wheat is about five or six shillings per quarter, or less than 20 cents a bushel. The cost of transportation from a export to Liverpool is about half as much again as from New York to Liverpool, or not so much as from San Francisco to that port. The cost of transport from the interior to the seaboard is, however excessive, and exerts a deterrent influence on exportation. This

is, however, a difficulty which will doubtless be, in the course of time, surmounted. The inducements for interest in this direction are so powerful that it would be strange if advantage were not taken of the opportunity of establishing a direct and inexpensive line by which the abundant products of central India and the Punjab could be cheaply conveyed to the coast. The wheat of India is so dry when harvested, and the voyage home through warm climates so well calculated to preserve it in condition that it is sure to arrive at its destination in good order. There is thus every probability that India will shortly prove a powerful competitor with America for the grain trade of Britain and perhaps of other European countries.

### Tendency to Concentration.

The tendency of the times is to concentrate every class and description of business under one roof. The popular store in many cases is the one that runs dry goods, notions, hardware, carpets, boots and shoes, books and stationery and a little of everything under the sun. It looks, says a leading American trade journal, as if almost every kind of business was going to be swallowed up by these mammoth bazaars, where an immense quantity of goods is sold at a very close profit. In the larger cities, New York, Chicago, Philadelphia, there is to-day a hard struggle for existence among many business men engaged in what is known as a class business. Books alone no longer pay; stationery no longer pays; paper alone no longer pays, unless an "almighty" lot of it is sold. So we might go through other classes of business and point out the fact that as a separate and special business, they can no longer compete with a concern which gathers dry goods and groceries, hardware and notions, drugs and chemicals, all under one roof. The fact that stares the business man in the face to-day is that if this thing keeps on he has to go out of his business, or fall into line and lay in a stock of everything. The lines are being drawn closer every month and year. It is no use to find fault. It is the tendency of the times, be it right or wrong. The only thing to do is to be prepared. And how? Not by trying to compete in prices; this is speedy death. Get your business in such shape that these hydra-headed demons can't swallow it up. Get a specialty of your own. Do less business, if necessary, but a safer one.

### A Profitable Road.

According to the *Pioneer Press*, which claims to speak officially, the forthcoming annual report of the St. Paul, Minneapolis & Manitoba Railway for the year ending, June 30th, will show gross earnings of over \$9,000,000, being an increase of \$2,500,000 over last year. The net earnings will show a surplus of \$1,500,000 after paying all expenses, interest, and a dividend of 8 per cent. per annum on capital stock. There was weekly a steady and large increase of earnings up to the middle of May, when the figures for the corresponding period of last year were abnormally increased by the large accumulation of business following the blockade caused by the spring floods at St. Vincent and Emerson, which suspended freight traffic for

about three weeks. Present indications give promise that the exceptionally large earnings which have characterized this road for years past will be maintained and increased during the coming year. The railway now has 1,300 miles of track running through a country fast filling up.

### The Brooklyn Bridge.

The great bridge between Brooklyn and New York is by far the greatest engineering feat of its kind yet attempted. It was begun on the 3rd January, 1870, and completed in 1883. The length of its river span is 1595 feet 6 inches. The length of each land span is 930 and 1850 feet. The total length of the bridge is 5980 ft., and its width 85 feet. The number of cables is four, and the diameter of each cable is 15½ inches. The first wire was run out May 20th, 1877. The length of wire in four cables, inclusive of wrapping, is 14,361 miles. Weight of four cables, 35,882 tons. The depth of tower foundation below high water mark on the Brooklyn side is 45 feet; on the New York side 78 feet. The height of towers above high water is 278. Clear height of bridge in centre of river span above high water at 90° Fahr. 135 feet. Height of towers above roadway is 159 feet. The cost was estimated at three millions, the actual is about fifteen millions.

#### COMPARISON WITH OTHER BRIDGES.

|   |       |
|---|-------|
| Chelsea, suspended.....   | 700   |
| Cincinnati and Covington (over the Ohio),<br>suspended, built 1867..... | 1,067 |
| Clifton. (over Niagara river), suspended..                              | 1,268 |
| Friborg, built 1832, suspended.....                                     | 870   |
| Hungerford, suspended.....  | 1,350 |
| Keiff, suspended.....   | 2,562 |
| Menai, built 1819-25, suspended.....                                    | 1,050 |
| Niagara, built 1855, suspended...                                       | 2,220 |
| Pesth, built 1840-49, suspended.....                                    | 1,262 |

### United States Industries.

According to the last United States census the total number of hands employed in all the industries in that country in the census year amounted to 2,738,895; the aggregate of wages paid was \$947,593,795, and the number of establishments 253,852. There are fifteen leading industries, which represents a total of 182,935, establishment, employing 1,844,102 hands, to whom wages are paid annually amounting to \$627,708,634. Below we give a list of the leading industries, showing the number of hands and aggregate of wages in each.

| Industries.                     | No hands employed. | Total amt wages paid. |
|---------------------------------|--------------------|-----------------------|
| Iron and steel.....             | 306,908            | \$128,781,324         |
| Lumber and wood.....            | 244,920            | 79,843,887            |
| Cotton and mixed textiles.....  | 228,845            | 58,931,172            |
| Men's and women's clothing..... | 185,945            | 52,641,358            |
| Wollen goods.....               | 169,897            | 49,259,324            |
| Boots and shoes.....            | 137,635            | 52,352,126            |
| Carnages and smithing ..        | 104,718            | 38,185,271            |
| Tobacco, &c.....                | 87,587             | 23,054,457            |
| Brick, tile, &c.....            | 67,203             | 13,764,723            |
| Furniture and upholstery ..     | 64,127             | 25,371,831            |
| Leather, harness, &c.....       | 63,136             | 25,081,913            |
| Printing, publishing, &c.,      | 62,800             | 32,838,939            |
| Flour and grain mill prod.,     | 58,401             | 17,422,316            |
| Agricultural implements.        | 39,580             | 15,359,010            |
| Shipbuilding ..                 | 21,345             | 12,713,813            |