

A BIG LUMBER ENTERPRISE.

Messrs. Gilmour & Co., Trenton, have extensive lumber limits on the Muskoka waters, and the problem of getting their cut of logs to their great mills in Trenton, on Lake Ontario, where they may be manufactured, is one whose solution has cost a great deal of thought and money, as there are two land obstructions to the running of the logs by water to the point desired. The first of these is "The Height of Land" separating the Muskoka and Trent waters. This height of land, presenting a rocky barrier of 140 feet in height, lies between Trading Lake or Lake of Bays which empties through the south Muskoka branch on the Muskoka side and Raven Lake, on the Trent river waters. The problem has been solved by the erection of a system of log jacks, combined with a sluice way. One jack will be 210 feet in length with a lift of 60 feet to a level sluice. This is 3,000 feet long, and at its terminus is another system of jack chains, eight in number, with the necessary gearing, sprockets, chains, etc. These have a lift of eighty feet and a length of 2,640 feet; therefore, the entire length of chain necessary to bring the jacks into action is 5,780 feet, or nearly a mile and a quarter of heavy chain. The system has a capacity of 10,000 logs per day.—*Bellefonte Intelligencer*.

A NEW YORK EIFFEL TOWER.

Several novel features of construction will appear in the new building of the Manhattan Life Insurance Company, in the course of erection in Lower Broadway, New York. The great structure, as described in the *Scientific American*, will have a steel skeleton frame, and will tower aloft to an elevation of 300ft. above the curb line. The supporting piers of the building are to be sunk to bedrock by what is known as the pneumatic process. The reason for the employment of this plan is that the soil is a fine sand for a depth of about 50ft. overlying the rock. It would be a great risk to build so heavy a structure on the sand, and to excavate to such a depth would very likely result in undermining neighboring buildings, especially as the soil is very wet. The difficulty is to be overcome by sinking pneumatic steel caissons, fifteen in number, by the same means that are often employed in laying the foundation for bridges, and which was used in connection with both towers of Brooklyn Bridge. When the caissons reach bedrock, the workmen inside level the rock, so as to give a firm bearing, and then fill in with concrete, so that the space from the top to the bottom of the caissons is solidly filled, and upon these piers in turn will be placed huge cantilevers, from which will be built up the skeleton steel structure of the building.

DRINKING WATER AND CHOLERA.

In an address recently delivered before the American Climatological Association at Philadelphia, by Dr. Abbott, and published in the *Sanitation*, special stress was laid on an important element of cholera dissemination. Much is said and heard about the dangers of infected drinking-water. As a matter of fact, the chief peril does not lie in drinking the water, but in its use in connection with the preparation of food and cleaning of dishes. He says: A relatively small amount of water used in the average household goes for drinking purposes, the most being used for kitchen and bath purposes, and of that employed in the kitchen a large amount is subjected to the disinfecting influence of heat. A certain proportion, however, greater than that used as drink, is not heated, but is employed for rinsing, diluting, etc., and in one way or another comes in contact with food-stuffs, some of which are rendered free from danger through cooking, while others come to the table in a raw state. The food-stuffs from which the greatest danger in this connection is to be feared are milk and salads that are used in an uncooked condition. The rinsing of a milk-jug with water consumes ordinarily far more water than the average individual takes at a draught, and if the water be but very slightly polluted with disease-producing organisms the amount taken as drink may not be sufficient for the production of disease: but if a single pathogenic germ adheres to the sides of the vessel that has been cleansed for the reception of the milk, it rapidly multiplies into thousands after the milk has been received.

THE KRUPP STEEL WORKS AT ESSEN.

These celebrated European works cover an area of about 1,400 acres, employ about 25,000 men, have the most approved plant, and stand unique from the fact that they have their own ore and coal mines, blast furnaces, etc., and that every stage of manufacture is under their own supervision. This, with seventy-five years' experience, enables them to turn out a product of a very superior quality, second to none. These works produce locomotive tires, axles, crank pins, steel-tired wheels, steel forgings up to 100 tons. And in these steel of every description is forged, rolled, etc., into any form or article desired.

AN ADDRESS TO MONEYED MEN.

That magnificent opportunities for investment in the West await our capitalists is evident from the following in the *Regina Leader* under the heading "Manufactures for Regina." Says the editor of that journal: "We beg to call the attention of moneyed men to the fact that there is a great opening here in Regina for (1) pork packing, (2) for the manufacture of linen, of rope and twine, (3) for beer, (Mr. G. W. Knight is taking hold of this); (4) a distributing depot for butter and eggs.

"It is a disgrace to our farmers the amount of pork and bacon that is imported here. We can grow flax cheaper than it can be grown in any other part of the world. We should make binder twine for the whole North-West here. There is a great market for our eggs and butter in British Columbia."

THE USE OF SOAP IN OCEAN STORMS.

In the annals of hydrography and marine meteorology published in Hamburg, Dr. Koppen gives an account of some interesting experiments he has made in calming boisterous waters. Petroleum was found to produce no effect, but various descriptions of other oils were effectual, though soap water, even when greatly diluted, was more so. Dr. Koppen has satisfied himself that soap, for these purposes, will supersede the use of oil. Ordinary soft soap is the best for use. A solution of one part of soap to a thousand parts of water is sufficient. Stronger solutions are scarcely any more efficient. The quantity of the soap solution required is about the same with that of oil, but as the soap solution mingles with the sea water a somewhat larger quantity is better.

SINGULAR CAUSES OF FIRES.

A list of singular causes of fires is published by the *Standard*. We copy the following. Anything more unlikely than some of them could not be imagined:—

Moistened tin turnings and chips have been known to take fire.

A rat gnawing at a box of greased dipped friction matches ignited the lot.

A running belt which sagged into a mass of greasy waste set fire to the heap of waste by friction.

A cockroach crawled from an oil receptacle to a gas jet, where the creature's oily body took fire, and falling, spread the flames.

A stream from a fireman's hose started a second fire while putting out the first, the water having penetrated an adjoining building containing quicklime.

A nail glanced from a carpenter's hammer into the conveyer of raw materials in a jute factory, rubbed against the drum and produced a spark which set fire to the place.

THE IRON HALL ASSESSMENT CONCERN.

This so-called life insurance society, which has had such a time of trouble with some of its head men, "Supreme" this, that, and the other, who were scheming for control, is now fighting for a new lease of life. Iron Hall cranks continue to hold meetings in Philadelphia, according to the *Review*, at which the supreme president, F. D. Somerby, in enthusiastic addresses, urges the members to organize and enroll in the new Iron Hall, with a view to bring back the assets of the old order. He said that the members of the new order are the only ones who will have a show to get their money back, and if the members would

follow out his lines they would gradually work out of the present position to one where they could find no fault. At these meetings the receiver and others connected with winding up the old order are freely scored, those who attack them claiming a reckless expenditure. Experience is the best teacher, and as the members of the old order have paid for theirs in cash, Somerby finds it hard work to lure them back again in spite of the attempted enthusiasm.

CREFELD'S TRADE IN 1892.

The annual report of the Crefeld Chamber of Commerce has the following review of last year's business: The unsatisfactory results obtained in 1891 by the velvet and silk industry continued also in 1892, which, with a total production of 70,981,885 marks, makes the most unfavorable showing of any year since 1880. The decrease of over 5½ million marks compared with 1891 affects the velvet and silk industries both, the decrease being noticeable in the home trade and in the exports to England, France and transatlantic countries, while the increase in the exports to some of the other countries is insignificant.

In velvets, notwithstanding the improvement in the last quarter, there was a decrease from 28,020,860 marks in 1891 to 26,328,259 marks in 1892. The number of hand-loom engaged on velvets and other pile fabrics decreased by about 500, while the number of active power-loom was 400 smaller than in 1891. As regards the raw material used by the velvet industry, it is noticeable that while the quantities of chappe and cotton used decreased, velvet manufacturers used in 1892 more raw silk than in 1891. This is due to the fact that fashion was more favorable to the better qualities with silk pile.

The production of all-silk and half-silk fabrics in 1892 was of the value of 44,653,626 marks, against 48,608,174 marks in 1891, but it is not easy to determine how much of the decrease is due to reduced production or to a decline in the value of the product. The decrease in the number of active looms was 1,000 hand and 100 power-loom. In silk goods also an increase in the consumption of raw silk leads to the conclusion that all-silk goods have been relatively better patronized than half-silk fabrics.

Crefeld is a great depot of the German silk and velvet trade. It is a place of 70,000 inhabitants, in Rhenish Prussia, near Dusseldorf, a very solid lybuilt and prosperous town.

—A cable of last Friday from Glasgow said that the granaries there were choked with American grain and unable to receive incoming cargoes. Importers were therefore seeking storage facilities outside of Glasgow. The grain market was glutted by the over-abundant supply. Merchants have taken advantage of the situation to buy heavily before bottom prices were reached.

—As evidence of the practical benefit of a canning factory, the following is given by a Western paper: A J. McTavish raised from one peck of corn, planted on one acre of ground, and sold to the Ridgeway Canning and Preserving Co., \$37.59 worth, keeping one ton for seed, making a total of \$44.59, besides which he has the corn stalks, valued at \$20. Total value of product of one acre \$64.59. How does that compare with wheat or beans?

—John W. Sullivan tells a reporter of the *St. Louis Republic*: "A person will lie, and rob and steal from an insurance company and think no more about it than if he had done exactly right. Not long ago my company had a policy on a house in Indianapolis that burned. The loser sent in his claim, placing it at \$1,000. Well, I knew the man didn't have the worth of that sum and never had. I wrote him that I must have an itemized and sworn statement of everything he had lost—where he got them, etc. He sent the list of losses back. Among the articles mentioned was one Bible, a gift, value, \$50; one Bible, a gift value \$40; one Bible, a gift, value \$30; one Bible, a gift, value \$20; one Bible, a gift, value \$10. Well, I like to have fainted when I read it. What did I do? Why, I wrote him in reply that it was a pity that while he had that number of good books in his house he had not read and committed to memory that lying was one of the greatest sins against the Lord?" "Well, did he get his insurance?" "Did he get it?" replied Sullivan. "Not on your life."