

Large quantities of beets are being received from the surrounding country, which are being pitted until the storehouses are completed. Twenty-five carloads have been received in one day.

The new mill of the Merchants Cotton Company at Montreal is likely to be in operation by the 15th December. The motive power for it is to be a mammoth Corliss engine of 450 nominal horse power, but capable of working up to 700 horse power. The cylinder is 36 inches in diameter, with a 6 foot stroke, made in Providence, Rhode Island.

—This is one of the seasons of the year when banks, express companies, the post office and the telegraph feel most sensibly the stress of business. At the close of navigation, which is now approaching, the telegraph offices in particular have a great strain put upon them. The volume of business done over the wires is at present very great; and at central points like Montreal and Toronto, the operators have, it is said, to work late and early to dispose of the communications rolled in upon them. Out of the several hundred points in Canada, or near the lines where formerly there were offices both of the Dominion and Montreal Telegraph Co.'s about two hundred and ten of the extra offices have been closed as unnecessary. Of these, some fifty were in Quebec or the States, the remainder in Ontario. In about forty cases the Dominion Company's offices have been retained. The poles and lines of that company, by the way, have been found to be in many cases in very bad repair. In some cities and larger towns, the offices of both companies are kept open, where the business justifies it. And in the meantime there are two open at Almonte, Blair, Preston, &c., in Ontario, and at Etchemin, Que.

—The schooner "Guelph" is loading lumber at the N. R. R. wharf in this city, for the West Indies, where she will obtain return freights of sugar and molasses for Halifax or St. Lawrence ports during the winter. The shippers of the lumber, Messrs. Musson & Morrow, of this city, hope that by next Summer she may return to Canadian lake ports with West Indian products. This experimental cargo of say 220,000 feet to Porto Rico is a venture whose result will be looked for with interest. It exhibits enterprise, at least, and much may depend upon the successful or unsuccessful issue of this effort to introduce the islands of the Gulf of Mexico to the islands of the Western lakes direct, through the medium of their products.

—The directors of the Credit Valley railway are making creditable efforts to popularize their line. A few weeks ago, the principal citizens of St. Thomas were invited by the company to visit this City. On Saturday last an invitation to make a trip to St. Thomas was given to the leading merchants of Toronto. This, owing to bad weather was only accepted by about seventy or eighty persons, who were much pleased with the road and the appearance of the country

through which it passes. The connection is a valuable one to both cities. Already London is becoming envious of her young rival, St. Thomas, and is talking of constructing a branch from Belmont station. Guelph, too, appears to be alive to the advantages of connection with the Credit Valley, and a deputation of the Board of Trade and the City Council will wait upon the directors and ascertain upon what terms a branch can be built.

—The Dominion Fire Insurance Company has re-insured all its outstanding risks from the 1st instant, in the Fire Insurance Association. We believe the arrangement will prove a good one for all parties interested. The policy-holders will now be secured by an English company, and we expect that the shareholders will realize about half of their paid capital. The career of the Dominion seems to have been unfortunate. In many instances, what were apparently its best risks burned.

THE LIGHTING OF INDUSTRIAL ESTABLISHMENTS.

The mode of lighting factories and shops has a very direct bearing upon the fire hazard of an immense deal of insured property. In the middle and north-eastern United States, Great Britain, and part of Europe, for not less than five months in the year, illumination is needful, varying from three to four hours per day; and some portions of works require lights to be burned in them during the whole day in the autumn and winter months. In the extra hazard of extra night work the mode of illumination has a good share. While the use of gas of late years has tended to diminish ignition in mills from the mode of lighting them, this has been to some extent offset by peculiar explosive and combustive danger.

Thirty years ago except in cities, most of the small and medium industrial works were lighted by sperm oil and lard oil—a few only of the larger companies having their own coal-gas works. The lighting by sperm and lard oil has now entirely ceased, and even in the smallest country mills has been replaced by some kind of petroleum, and this mode of lighting is also still used in some large mills remote from cities. The light from petroleum so much exceeds sperm or lard oil in brilliancy, and is so much cheaper, that its extended use is not surprising. The advantage of ample light for work in producing quantity and regularity cannot be over estimated in times when, as at present, competition and concentration are so needful to be considered, as affecting business. In a cotton mill, on white goods, if gas be used, one burner is generally allowed to two looms, and on dark narrow goods, cotton or woollen, one burner to each loom. For wide looms, weaving dark colors, two gas lights are allowed to each loom, and sometimes one or more below the warp to assist in mending it. The latter light is far more dangerous than those above the warp. In most mills the lights, of whatever kind, are generally open; but the proper mode is, that all, except those for looms, be enclosed in glass cases, the enclosures, where placed against the walls, having strong reflectors at the back.

Although many mills have become ignited through some of the stock coming in contact with the open lights during regular burning, or by lamps falling down, and explosion of petroleum, many more have been burned by hand lamps used to start illumination. These should never be carried about uncovered, but should

have a metal perforated chimney, or wire gauze, for protection. If gas be used as an illuminant, these protectors need never be removed when lighting. The first great improvement in lighting small and medium mills, as already stated, was the use of kerosene oil, which gives a light of about eight candles. The gain thereby has immensely more than compensated for the extra fire cost. The time, however, required for cleaning, filling and lighting, is very great. Besides this, there is the necessity of removing glass chimneys when lighting—also the necessity of cleaning them if a good light is desired. Most insurance companies add fifteen to twenty cents of premium per hundred dollars insured on factories lighted by petroleum, and insist that any hanging lamps must be suspended by iron rods or wires, and the oil not to flash at a temperature of less than 112° F. There is danger that the proprietors, however careful, may be deceived as to the test of such oil, and the lamps may explode, or they may fall by the unperceived wearing away of wires at point of suspension, caused by the trembling of floors or jarring of looms or other machinery.

The flame of petroleum gas, though giving more light, is relatively much smaller than the flame of coal gas. It is very important that the burners be properly made, and that the utmost strictness be observed in mills to prevent their being tampered with and the orifices enlarged. As soon as found worn out or defective such burners should be thrown away. Twelve principal cotton and woollen mills of New England now use oil gas and report in its favor, while the U.S. National Association of Woollen Manufacturers, which experimented upon the matter report thus: we find that a superior light can be obtained from oil gas at a cost equivalent to paying from 50 cents to 75 cents for 1000 feet of coal gas.

[In an article on the insurance risk on flouring mills the same paper has the following:—The use of petroleum and gas lights, if open, is a standing menace. No unprotected movable lamps should be carried in the mill, and those needful in picking stones should be placed in some kind of lantern with reflectors, and have wire gauge over entrance, and exit air holes. Night-work, so much practiced in flour mills, is a heavy addition to the fire risk. The method of illumination has a full share in the destruction.]

If coal-gas can be obtained from town or city companies at a reasonable price, there is no other gas and no plan so safe, with care to prevent leakage from pipes and joints, which, mingling with air may make an explosive mixture. Many industrial establishments have been burned from this cause. A plan which might be very suitable for places where inflammable material is used, and where hands might be tempted to tamper with lights, would be to have small but numerous burners in rows of large gas pipes running about nine feet above the floor. Reflectors could be placed above, and though not surrounded by glass, these lights would be well removed from contact with materials and from interference of employees, while the light would be more evenly distributed through the rooms than by the usual method. In a mill where gas-lights are all lighted at once by means of electricity, the danger of fire from illumination is much diminished; but even here care must be used, because, as the gas is turned on to every burner at once, should the electric arrangement not work properly, there would be danger of a quantity of gas escaping into the rooms. There should also be outside of every mill or works using a gas valve, easily accessible, to close the main pipe, as many fires have been aggravated by the burning of gas from large pipes broken in the fire.

The lighting of industrial establishments, railroad stations, etc., by the electric light has great