

It is often asserted that the ranks of business and of the professions are over-crowded, that the competition amongst mercantile men is such that all sorts of devices are adopted for the purpose of disposing of goods, and that these latter depend upon the facilities and terms afforded by the banks for their existence, as, if discounts and renewals were more difficult to obtain, then renewals of notes received for goods sold would be less in vogue, and the purchases of the country would be more in unison with its requirements and its ability to pay for in cash.

Until our productions are materially increased, there is no room for the expansion of mercantile business; any attempt in the latter direction not preceded or accompanied by progress in the former, will simply mean an increased list of insolvents; it behooves our business men, therefore, to study the means whereby the products of our lands, forests, waters and mines, may be so increased in volume and value as to form a firm foundation for increase in volume, value and profit of the business of our financial, mercantile and manufacturing institutions.

Bewailing and booming are alike out of place in business councils. If our boards of trade will appoint committees and reliable experts, who will fully and carefully report upon mining and other enterprises, to the end that those who have not the necessary education or the facilities for such examinations may confidently rely upon them for facts, so that they may invest their moneys without the usual danger of loss, then we may expect an increase in the output and values of our natural productions, our factories, which will draw moneys from deposit, to the benefit of our merchants and the increase of the general prosperity of the country.

PRACTICAL SUGGESTIONS AS TO FIRE MATTERS.

Experiments have lately been made in Vienna to determine the efficiency of various building materials in resisting fire, and especially the protection afforded by these to iron work, now that iron is so much used in building. For this purpose an iron column was constructed, consisting of two channel bars $5\frac{1}{4} \times 2\frac{3}{4}$ inches, braced together by lattice work and having placed in the spaces between them various alloys melting at temperatures between 150 and 1,650 degrees F., this being surrounded by brickwork in mortar, forming a pier some eighteen inches square. This column was loaded with sufficient weight to cause a stress of three and a quarter tons per square inch on the iron work, and placed in a brick chamber 12×8 feet in plan and $11\frac{1}{2}$ feet high. Fuel was distributed over the floor of this chamber to a depth of three feet, fired for two and one-half hours and then extinguished. The next day, when the heat had sufficiently subsided to allow an examination, it was found that, although the edges of the brickwork were crumbled to the extent of one and a half inches, the iron column was uninjured, and only the test bar, fusing at 150 F., showed any signs of melting.

E. A. Gilman writes from St. Paul, Minnesota, to the *Insurance Press*, that chimney fires can be and should be prevented, as well as extinguished, by burning in the connecting stove, furnace or fireplace beneath, one or two pounds of zinc, the fumes from which chemically destroy the soot or smother any fire in flues or chimney. "Frequent cleaning of pipes and flues by this or other means, eliminates trouble and danger from sooty, smoking chimneys. Scrap zinc is obtainable at any hardware store, or from junk or metal dealers, at a cost of two to four cents a pound. Sheet zinc costs about seven cents a pound."

On the subject of watchman's services in large buildings, a paper was read the other day by C. F. Simonson, general inspector for the Hartford Fire Insurance Company. That gentleman gave numerous instances of sleeping watchmen, and expressed the very reasonable belief that human nature cannot stand the strain from 6 p.m. until 7 a.m., with disturbed sleep in the daytime, and that men of whom such service is required *will* sleep, and that the property they are employed to watch will burn, and sometimes burn the watchman with them. The remedy he proposed is to employ two watchmen instead of one, and divide the time at midnight.

The *Insurance Monitor* has a dozen or more instances of the spontaneous ignition of lampblack, and adds: "In a scrap-book before us, we find instances cited from the *Scientific American*, the *English Mechanic*, and other equally reliable sources, giving the history of cases

where lampblack, when dampened with oil, has taken fire, and *that* is just the very point of danger. Lampblack is used in paint shops where oil also is used, and the package is liable to be set down on an oily surface, or the open package is liable to be splashed with oil, and whenever and however lampblack comes in contact with a little oil we believe it will inflame. It is also used in thousands of mercantile establishments for marking and stenciling packages for shipment, where it may frequently be found in a wooden or tin receptacle with a bottle or can of turpentine or other liquid with which it is to be mixed. It is also used with oils in the manufacture of printers' ink, and in lithographing establishments, and there have been fires that have with much probability been attributed to the rapid drying and oxidation of these substances on wood-pulp paper. As remarked, dry lampblack is harmless; so is dry lime; so are many other substances."

SOME CONDITIONS IN BRITISH COLUMBIA.

We have received a letter describing what the writer considers to be the troubles under which some of the smaller agricultural settlements of British Columbia labor. For one thing, he urges, the difficulty and cost of transit to city and other consuming centres; for another, the depreciated values of farm products; for a third, the occupation of far too large and little cultivated areas of heavily mortgaged farm land. These, he contends, are rendering deplorable the position of a number of the smaller agricultural settlements up the Fraser River.

Meanwhile, however, he says, districts within easier reach of New Westminster and Vancouver are in better, and, on the whole, improving case, by reason of developing dairying and extensions of fruit-growing and hog-raising. "Some of the more energetic settlements up the Fraser River are moreover likely to benefit this year by co-operative effort in the supply of fruit and early vegetables to markets in the Territories and Manitoba."

"Speaking generally, the system of quarter-section holdings of farm lands in the forest is here proving a complete and disastrous failure. Not one southern British Columbia farmer in twenty is able, with advantage, to cultivate more than at most fifty acres of forest land very difficult to clear and keep in good order, especially where capital is lacking for needful labor and improvements. And unless such a farmer has a thrifty wife and active family, even the profitable culture of fifty acres will prove beyond his capacity. It may be safely asserted, as regards the wooded areas of southern, British Columbia, that had a system prevailed of forty-acre, instead of quarter-section farm land grants, there would at this present be living, and on the whole, thriving in the Fraser Valley, thrice the present agricultural population, whilst local farm product imports from other Provinces and the States, would be less than a third of their present excessive aggregate. Quarter-section farm land grants seem advantageous only in a practically prairie country, very different from that of the southern mainland of British Columbia. The day of smaller and better cultivated farms is here coming; but only as a result of untoward financial conditions, and by reason largely of forced sales, and of heavily encumbered and largely unimproved properties, which have in the past too often been rather 'squatted,' than farmed."

WOOD TRADE INFORMATION.

A noteworthy example of development in the course of a period of thirty years in Canada is afforded by the furniture making business of the Knechtel Company of Hanover, Ont. The business was established in a small way in 1866, and its growth is best shown by two illustrations in the *Canadian Furniture and Upholstery Journal*. One shows the original factory, a little, one-story frame building, perhaps 25 feet by 15; the other the present extensive range of three-story buildings, 330 feet front, with an average depth of 60 feet, and a new one 47 by 62 feet, which is four stories high. The company employs about 140 hands, and uses electricity for both light and power.

Sawing lumber at the Chaudiere mills, Ottawa, will, it is expected, begin a week or ten days later than last year, and the usual spring repairs are well advanced. The loggers have had a splendid winter for their work, the season opening much earlier than usual, and the snow remaining steadily until now, when it is rapidly thawing. No changes are to be made in the wages of millmen, the *Journal* says, after a careful enquiry. It was also learned that the shorter hour system will again be followed, as the mill owners found that in granting the men shorter hours they do not lose as materially as had been expected.

They have had abundance of snow along the river Miramichi, N.B., and a large quantity of logs are being cut and hauled to the bank. This year the cut estimated is about eighty millions, compared with not more than sixty millions last year. As there are twenty millions of last year's stock being carried over, there will, if all this winter's