

to do their fall plowing before threshing, in order to ensure, as far as possible, the success of next year's crop. To this cause is due the fact that so little of the wheat grown this year has yet found its way to market. The scarcity of the supply, coupled with the anxiety of millers to obtain sufficient to keep their mills in operation, has thus far been an important factor in making and maintaining prices.

THE second annual dinner of the Canadian Association of Stationary Engineers will be held at the Grand Pacific Hotel, Toronto, on Wednesday evening, 14th Nov. This is certain to be a very enjoyable affair, as it is under the management of a thoroughly efficient committee.

OUR esteemed contemporary, the *Toronto Labor Reformer*, recently printed an article on "The Danger of Enforced Ignorance." The writer takes the ground that social upheavals will result from the discontent of the working classes with their lot, unless the masses "are able in time to acquire the wisdom necessary to guide them into making wise choice of their course," and the question is asked, "where shall men whose whole lives are one unending agony for bread and leisure to acquire wisdom?" We agree with our contemporary in the belief that if the working classes were possessed of more wisdom, they would probably be more contented with their lot. That the "working man," any more than the business man, is the subject of "enforced ignorance," however, we do not believe. We can point our contemporary to many prominent men in this city and country, who ten, fifteen or twenty years ago, worked for their daily wage, but who nevertheless found time to acquire the knowledge which afterwards fitted them to discharge with ability and success the duties of a higher and wider sphere. Most "working-men" labor from eight to nine hours per day, and have their evenings for self-improvement, if they are inclined to spend them in that way. Men who hope to succeed in business, on the contrary, find it necessary to work early and late in order to hold their own against the keen competition of the present day. Not only do their bodies feel the strain of hard work, but their minds are often harassed by cares that the wage-worker knows nothing of. Even some of our most successful business men get through an amount of work which, if placed upon the shoulders of some of the self-styled workingmen would soon make them anxious to stand from under. Yet these busy men find time to keep themselves posted on the important issues of the times. The secret lies in the fact that they utilize all the time at their command to the best advantage. They do not squander time in idle gossip, either at home, on the street, or in the saloon. There are few workingmen in this country who might not find leisure to acquire wisdom if they would faithfully go to work along this line.

### FLOUR MILL EXPLOSIONS.

IT has long been in controversy among writers on milling topics whether or not flour-dust is explosive. This mooted question has been brought to the front again by the recent wreck of the National Mill at Cleveland Ohio, where the destructive violence of some mysterious force blew off the roof, shattered stout stone walls, overthrew heavy machines, tossed men and timbers about like feathers, fired the building and sacrificed life besides property. The increasing frequency of these disastrous explosions has greatly intensified the desire to discover their cause, as the first step to their prevention; but success in the investigation will depend on its thoroughness. Inquiries into causes are often procrastinated and sometimes thwarted by the narrow scope of their view, for it seems to be a tendency of the human mind to be satisfied with surface indications and to jump at conclusions. Flour-dust may be one factor in the explosions of flour-mills, but is it the only factor? Is it certainly known that there is no other agency at work to precipitate the catastrophe? It is asserted that there is not any record of a serious explosion in a burr-mill, and that the great increase in these disasters has been since the introduction of the roller process. Here may be a clue wisely to guide investigation. All late improvements in milling have tended to aggregate masses of machinery, connected by many belts, in huge structures, where the sum total of motion is vast, developing and maintaining friction and accumulating heat. These conditions produce electricity, the most powerful and marvellous, yet least understood, of nature's great forces. Why may not electricity be the bottom reason to account for the explosions? Why may not the quantity of this subtle force, created and stored up within the walls, become so large that, when the atmospheric situation outside is favorable, an outburst may take place seeking equilibrium

and the buildings with solid contents be badly wrecked? All persons know what a commotion between earth and sky is excited by a thunder-storm. Is it certain that inside and outside of a lofty merchant mill, with its whirling wheels and running belts and heated shafts, do not present on a small scale a similar problem of electricity out of equilibrium? In that case flour-dust might be a factor of the explosion, yet be to electricity what the assistant is to the principal. Causes fully known, remedies can be fully devised and surely applied.—*Chicago Industrial World*.

### PROCTOR'S POINTS.

HOW fast the world moves, in mechanical, as well as in other matters! The writer remembers a conversation, about ten years ago, with one of the leading, progressive, thinking wood working machine builders of Ontario, in which he remarked:—"I am of the opinion that in all the leading and important lines of machinery in my line, very little change will take place during the next ten years, either in outline or mechanical construction; there may be some slight alterations in minor matters but that will be all."

"Slight alterations in minor matters" that was what he said. But a five minutes glance at the catalogues of any of our machine builders as issued ten years ago and as issued to-day, will clearly prove that he was no prophet, not even a wise discerner of the future in his own special department. *Change, alteration and improvement*, have been the radical watchwords in wood-working machine construction during all this period, and to-day every important machine has been so much altered and improved in this interval as to be almost unrecognizable. Let me indicate a few of the important alterations.

*Longer frames*, and therefore longer belts; more room for working parts; better bearings, less strain on journals and therefore cooler bearings; cooler bearings and therefore higher speeds; higher speeds, and therefore greater production. Greater production! that's what counts. It takes about the same number of men to attend to a slow running machine that it does for a fast one. Probably ninety per cent. of the increased production is profit. Reader, if you have plenty of work in your planing mill; if time is of importance to you; if the prompt delivery of well-finished work will help you in your business; consider carefully whether it would not pay you to trade off that old style planer and matcher of yours, and put in a first-class lightning matcher. (N.B.—This isn't an advertising dodge).

One of the tendencies of wood-working machine building about ten years ago was to produce "combined machines" capable of being planer, matcher, moulder, jointer, dado-machine, rabbiter, saw table, boring machine, &c., &c. The "combinations" reached by some of the builders, however, were more of a success as a "complication" than as a combination. Many of them were entirely impracticable, and it is very pleasing to be able to note that the modern tendency seems to be toward simplicity, strength and convenience.

Another strong proof that machine construction is getting away from the mistaken directions of the past, is the building of special machines for special work. Take, for instance, box-making machinery, and including special saw tables, board-printing machines, nailing machines, &c. By the use of these special machines, in a large number of manufacturing lines the cost of production has been very materially lessened and increased. In fact, every new industry now-a-days seems to be anxious and willing that machines should be gotten up specially suitable for their particular business, until it requires a great deal of practical experience, skill and inventive genius to be a practical and successful machine builder at the present time. Eternal vigilance, alone, is the watchword in general lines, to enable any manufacturer to keep pace with the development of the necessities of the times, the skill of his neighbors, and the advance of mechanical industry.

N. B.—"Proctor" adds a foot-note to a few "Points" to say that his note of warning on "fakirs" in connection with the Industrial Exhibition was none too soon, apparently. Like the small-pox, it seems to be "catching." 'Tis in the air, now look out for it. (*Psst!* advertisement of an aspirant for business or dignity in the machine line of "Hungarian Gipsy Band.") They seem to have gone into the thing "Permanent"-ly.

PROCTOR.

### Western Letter.

THIS has been a remarkable season for crop speculation,—perhaps the most remarkable of any year in the recent history of Manitoba. Although there is always a disposition to exaggerate crop reports here, yet this year seemed to excel all others in exaggerated reports concerning the crops. For this state of things, western people are not alone to blame. A great many of the most remarkable reports sent out concerning crops in the west during the past season, were made public by "prominent" visitors from the east. These parties would make a brief trip to the west, perhaps not going beyond Winnipeg, and on their return east they would be prepared to give estimates of the probable wheat crop of Manitoba. Such reports were usually far in excess of the opinions of conservative parties here, hence it is that long before the wheat here was ready to cut, it was published abroad that Manitoba would have all the way from 17,000,000 to 20,000,000 bushels of wheat for export. Parties here who know the exaggeration which has invariably been associated even with "official" reports of our wheat crop, knew about how much dependence to place on these estimates, especially when made before the crop was garnered, and they accordingly are not disappointed in the result.

To begin with, it was apparent early in July that the crop would not overcome the disadvantages of the very late spring which this year fell to the lot of the eastern portion of the Canadian prairie region. The harvest was certain to be very late, and this was in itself sufficient reason to accept all crop estimates with distrust. Late crops are always very uncertain crops in all countries, and this is specially true of this country. Though the crop promised well, there is always great risk from bad harvest weather in backward seasons, and here there is the additional risk from frost. In addition to the prospect of a late harvest, it was known here early in the season that though the straw looked heavy on the ground, the ears were not as large and heavy as last year, and consequently as heavy a yield could not be expected. There was consequently no good reason for publishing the boom estimates of the crop, which were made before harvest.

Even now, with the harvest over, it is a very difficult matter to make even an approximate estimate of the wheat crop of the west for the present season, owing to the frost, which damaged the crop to an unknown extent. Without the frost, it is now known that the average yield per acre would not be nearly so great as last year, but any shortage in the yield would be fully made up by the increased area sown. Had the harvest been secured without damage from frost, it is likely that the total wheat crop of Manitoba alone would have been about the same as last year, or say 12,000,000 bushels. (I have always regarded the most generally accepted estimates of last year's wheat crop, of from 13,000,000 to 14,000,000 as too high). How much this estimated yield has been reduced by the frost is a matter of as great uncertainty as were the estimates made in July last of the probable wheat crop for the season. There is practically no way of arriving at a reliable estimate of the damage done, especially as up to date very little wheat has been marketed, for the reason that the farmers are giving their attention to fall plowing, instead of marketing their wheat. The bulk of the crop will have to be marketed before any safe estimate can be given. It is certain, however, that a great deal of the wheat crop has been injured, and a portion of this so badly damaged that it will not be fit for milling. In some districts, where the frost was most severe, some wheat fields were not cut at all. Happily, however, several of the most extensive districts escaped entirely, and in other sections any damage done was trifling. The frost seems to have gone in streaks, very severely affecting some localities, whilst missing others. Another feature learned is, that no reliance can be placed on the statements that some localities are more liable to frosts than others. This has been demonstrated here. Localities which escaped one year are caught another, whilst some localities which suffered the most severely in former years, have entirely escaped this year. The southwestern portion of Manitoba suffered the most severely this year, the damage in the eastern part of the province being slight. Further west in the territory of Assiniboia, which suffered considerably in past years, there was no damage done, whilst in the far northern settlements, along the Saskatchewan river, the crops have been all gathered in good shape and free from frost. This seems remarkable, that hundreds of miles north of the settled portion of Manitoba, and away north of the C. P. railway, the country should be free from frost, whilst the southern part of