

# THE DOMINION MECHANICAL & MILLING NEWS

DEVOTED ESPECIALLY TO THE INTERESTS OF OWNERS AND OPERATORS OF

Flour Mills, Saw Mills, Planing Mills and Iron-Working Establishments.

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Price, 10 Cents  
\$1.00 PER YEAR.

## THE TORONTO WHEAT CLEANER.

THE machine illustrated herewith is designed to do all the cleaning required in a mill of medium-size. There is combined in this machine, separator, smutter and brush, each distinct from the other.

The grain is fed into the shoe at the top of the machine, and after passing through the sieves, is caught by a current of air before entering the scouring cylinder. After leaving the scouring case, it is subjected to another current of air, passing from thence to a second pair of sieves, from which it discharges into a hopper, feeding directly to a horizontal brush. The brush is partially encased by a corrugated adjustable concave, arranged so that it may be set to or from the brush when running. The concave is corrugated parallel lengthwise with the brush, thereby insuring the frequent turning over of the grain in every possible way before it enters the other air trunk, where another current of air acts upon it.

The manufacturers claim for this machine over all others the advantages of extreme simplicity, ability to accomplish in a small space, and with one belt drive a large amount of work. It dispenses with the cost of setting up two or more machines, besides saving the space which such machines usually occupy. These are advantages of no small importance to millers. In no other way than by the method of arrangement shown in this machine, can a brush be made to wear as evenly and work as evenly on the grain. The manufacturers do not hesitate to say that this machine driven by a three-inch belt will clean at least thirty bushels per hour. Machines will be made in three sizes, adapted for any capacity.

This machine is manufactured by Messrs. A. Laidlaw & Co., Toronto, who will cheerfully answer all inquiries concerning it.

## MELTING ZINC.

ZINC is troublesome to cast, and more troublesome when small thin molds are to be cast. Lining the mold with whiting and water which must be allowed to thoroughly dry, will often cause the metal to fill the mold well. Burning of the zinc (oxidizing) may be prevented by covering the metal white in crucible or ladle, with a layer of common salt, a little muriatic acid, which amounts to the same, as a coat of zinc oxide is immediately formed on the surface of the melted metal, which effectually prevents further oxidation from action of oxygen in the atmosphere.

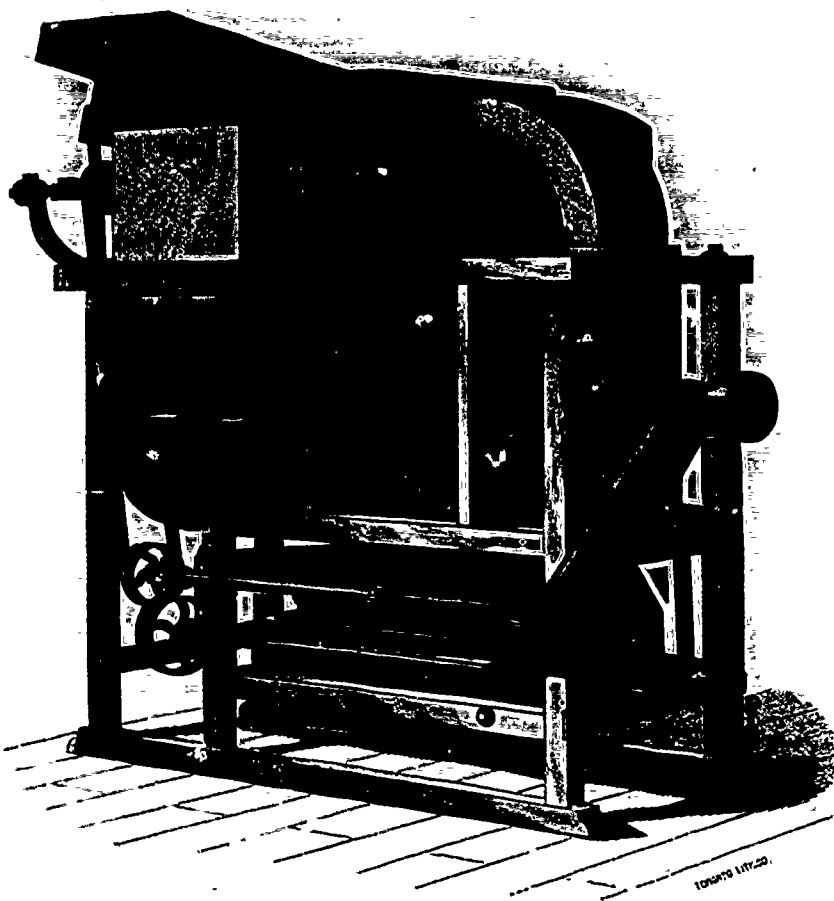
It is an improvement to keep a layer of charcoal on top of the zinc, or any other soft metal which can be melted in a ladle. The coating of oxide forms a protection against oxidation to only a certain degree, while the layer of charcoal tends to reduce the oxide again to its metallic form. Indeed, it is possible to recover lead, tin, zinc and antimony from the "dross" or oxide which gathers in the ladle. It is only necessary to melt the oxide with charcoal, salt, and soda to get it again into useful shape.

The dross should be powdered, likewise the salt, charcoal, and soda. Mix them together and melt. The soda and salt melt into a pasty mass and the carbon unites with the oxygen of the dross, leaving the metal free but burning off the charcoal. The salt and soda act simply as flux in reducing the oxides.

## BRITISH COLUMBIA LETTER.

By R. E. GOSNELL.

IT is within the memory of the present generation when the same peaceful, prosperous condition of things did not exist in the sunset province of British Columbia that now characterizes its welfare. It will be remembered that Lord Dufferin, in his diplomatic mission to the province some years ago, refused to pass under arches in the streets of Victoria, the mottoes on which were too suggestive of disloyalty. The feelings that actuated the citizens of the Island City was not then inspired by malevolency of disposition or lack of love for the empire, because British Columbians of that day, and some of them are to this day, more British than



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the people of Great Britain, but the greater force of strong self-interest. Their cause was stronger even than what is implied in that term; it was one of self-preservation. Isolated from the other provinces not only by a range of mountains practically unsurmountable, but by a stretch of 2,000 miles of prairie and desolate expanse of rock, muskeg and forest, with no other intercourse than with a foreign nation accessible only after a week or two's sail, at San Francisco, or with far-away England, by a six months' voyage around Cape Horn. Not only that, but they had allied themselves politically with other provinces to form part of a confederation, the success of which at that time was quite as problematical as that greater expansion of political alliance now discussed under the name of Imperial Federation, the condition of which was union by railroad connection, and consummated in the completion of the C. P. R., but which, at that time, was a problem so great that some Canadian statesmen did not hesitate to denounce British Columbia as the white elephant of Canadian affairs. Under these circumstances, isolated from the country with which she was connected by what appeared an unnatural union, buffeted by the burdens which she imposed on the re-

sources of the confederation, and at the same time seeing no hopeful signs of the conditions of the union being fulfilled, it is little wonder that her people should take the utterances of such men as Mr. Mills—that it would be better to let British Columbia cut adrift and sink quietly into the arms of Uncle Sam and become a prospecting ground for Yankee speculators, than that the Dominion of Canada should be bankrupted in order to make good the terms of a bad bargain—as the expression of the general Canadian sentiment and act upon it in good faith. The invaluable services of Lord Dufferin in restoring confidence in the pledges of 1871 can never be truly estimated. The wonderful success of the syndicate in completing the union by rail five years before

the most sanguine had predicted, and the consequent prosperity to British Columbia, and the great impetus it has given to the development of wonderful latent resources demonstrate at once two things: The shortsightedness of those who opposed a policy that has opened up hopes and aspirations for Canada, once undreamed of, and the wisdom of those men who gave this country a constitution. The latter were either wise as statesmen or builded better than they knew. The niche in the Canadian arch which the province of British Columbia will inevitably fill, will be an honorable one, more especially when it is considered that in addition to her vast riches of yet undeveloped mines, fisheries, timber and agriculture, her geographical position makes Vancouver described by Mr. Van Horne, at the Toronto Board of Trade dinner, as "The Tyre of the Pacific," the converging point for the future steamship lines from China and Japan, India, Australia, New Zealand, South America, San Francisco and Alaska, as well as the export port for the same. Does it not once more in the history of human affairs demonstrate that the stone that was rejected by some of the nation builders has become the head of the corner?

As the object of your excellent journal is not in the line of all the resources which constitute the national wealth of British Columbia, I shall not refer to the agriculture phases of the Province, although agriculture is not regarded as particularly a prominent feature in what we are capable of. It may be surprising to many to be told that comparatively limited as is its agricultural area, British Columbia is capable of producing more and better fruit than the present entire product of Canada and the United States. From a horticulturist point of view it represents the *summum bonum* of the world. It has also extensive wheat and grazing areas, of the richest possible character in the Spallumcheen, Okanagan, Shuswap valleys, and away north as far as Fort Simpson. I shall not take up the time of your readers in discussing the fisheries wealth of the province that is already recognized as the salmon grounds of the world, with an undeveloped sea coast extensive as that of the Atlantic, and Japan currents to convey fish food in the place of Arctic currents in the eastern side of Canada. Her fisheries will yet support a population of not less than 50,000. It would not be a part of the objects of this correspondence to speak of our mines, the treasures of which in gold, silver, lead, copper, iron and coal it would only be the veriest guess work to estimate. Any one of these elements is sufficiently fertile in itself to make this a great and a rich province, if it possessed no other, but what is more particularly interesting in this connec-