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# CANADIAN MILLER

AIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

Old Series, Vol. X, Number 4  
New Series, Vol. II, Number 4

TORONTO, ONT., APRIL, 1892

TERMS, \$1.00 PER YEAR  
(SINGLE COPIES, 10 CENTS)



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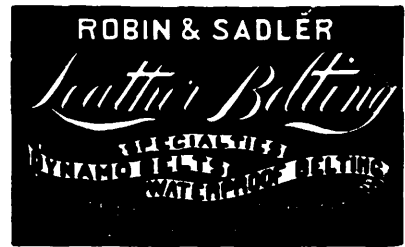
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Yours truly,  
H. G. TORREY

Note: Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 30 years.

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# THE CANADIAN MILLER

OLD SERIES, VOL. X. NUMBER 4.  
NEW SERIES, VOL. II.

TORONTO, ONT., APRIL, 1892

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## CHARACTER SKETCH.

MR. J. D. SAUNBY.

"Blest work" if ever thou wert curse of God,  
What must His blessing be?

A MODEST man is Mr. J. D. Saunby, of London, Ont. One might be a delegate to millers' conventions for a decade of years, or, for that matter, of any organization with which he is identified, and so far as knowing Mr. Saunby for his much speaking, he would not be known at all. The Dominion Millers' Association has members who could hold the floor for an hour where Mr. Saunby would be satisfied with ten minutes. He is a silent member as far as words are concerned, but in the councils of the Millers' Association his opinion is one that makes opinion and ever wisely influences milling legislation. "There is little to see," some one has said, "and little to do, 'tis only to do it," and this, we would suppose, is a guiding principle with Mr. Saunby in all his conduct and acts, public and private. He believes in the qualities of doing.

Mr. J. D. Saunby is of English parentage, his father and mother hailing from the county of Lincolnshire. He himself was born at Lachine Rapids, Que., in 1837. His father ran a flour mill at Laprairie and Caughnawaga for a number of years, so that of the younger Saunby it can be said, as of the Goldies and others prominent today in milling ranks in Canada, he was to the manner born. When nine years of age Mr. Saunby's father removed to the upper province, settling in Omamee, in Victoria county, where he conducted a flour mill until 1854, when the family again changed their place of abode, coming further westward to the city of London, where Mr. Saunby has remained a resident from that day to the present. From 1854 to 1860 the senior Saunby ran a mill at St. John, seven miles from London.

In 1860 Mr. J. D. Saunby entered into business on his own account with his brother-in-law, Mr. Hilliard, the co-partnership existing until 1872, when Mr. Saunby bought out his partner's interest in the firm. At that time the North Branch Mills on the river Thames were being operated. Five years later Mr. Saunby purchased the Blackfriars Mills on the opposite side of the river. In 1881 the latter mill was changed to a roller process mill of the most modern class; the North Branch Mills continued to be operated as a stone mill. The capacity of the roller process mill is 300 barrels per day, which is sometimes extended to 325 barrels. Both mills are possessed of steam and water power.

It is not necessary to suggest that Mr. Saunby's extended experience in milling, reaching back practically from childhood, reflects itself in the high character of the various grades of flour manufactured at his two mills. Their reputation is in no sense local, a large business for years being carried on in the Maritime provinces, and especially in Nova Scotia and Prince Edward Island. To Glasgow and Liverpool considerable quantities of the Saunby flours are shipped, not less than 20,000 sacks being exported this season.

An American Archbishop used to say: "The human heart is like a millstone; if you put wheat under it, it grinds the wheat into flour; if you put no wheat, it grinds on, but then 'tis itself it wears away." The healthy man must be active; he must labor; the remark is true in all human experience that more men rust out than wear out. Charles Lamb, after having spent a lifetime in the wearisome drudgery of the India Office, and had well earned his retirement, gave it as his experience that "no work is worse than overwork." Mr. Saunby is one of the men who finds his enjoyment in constant and thorough-going work. He has had the satisfaction during these years of pleasurable toil to enjoy a reasonable share of its successes; for it can be

said, with the history of the business standing as its own monument, that his is one of the successful milling properties of this country.

The labors of the day closed, Mr. Saunby finds complete enjoyment in the bosom of his family. We feel safe in saying that if Prof. Fowler were to have an opportunity of making a phrenological diagnosis of Mr. Saunby's head he would mark the domestic faculties large, with a cross opposite these to give extra emphasis to this phase of the delineation. His family had consisted of three children, one daughter and two sons, but of these only one son remains, 26 years of age, who is actively associated with his father in the milling business.

Mr. Saunby is one of London's most respected citizens; a prominent member of the Methodist Church, serving as regular steward for a number of years; an active member of the Board of Trade of the Forest City; in politics a Liberal; and always ready to assume his full share of the responsibilities of citizenship, and, having done so, to do the work undertaken.

He was for three years reeve of London West, and



MR. J. D. SAUNBY.

much of the prosperity of this section of the municipality is due to the capable business management of Mr. Saunby while holding that important position.

### ROLLER MILL DRIVES.

IT is curious how certain types of milling machinery seem to keep their distinctive character in different countries. To the expert miller or milling engineer these differences are very apparent, and in no case is this more apparent than in roller mill drives.

It would seem as though by tacit consent that roller mills in America are for the most part belt driven, while in the United Kingdom gear driving is the rule. The battle that once raged over the rival systems has now in a great measure died away, with the result indicated above. Both systems have their merits, both their defects. In the case of belt drive its merits are the obvious ones of silence in working, and more ready adjustment without disturbing the force of the drive. Its defects, on the other hand, are liability to slip (and, therefore, irregularity of differential speed), and greater frictional power consumed for a given work. Gear drives, on the other hand, are positive in their action, and consume

less frictional power to work them. They are, however, liable to noise unless well pitched, and even then are affected by the relative adjustment between the rolls. In this country, however, the advantages of gear-driven rolls seem to have been demonstrated to the satisfaction of millers and milling engineers, who therefore adopt them for the most part in their usual practice.

Amid the variety of methods for driving roller mills there are three that we cannot call to mind as ever having been heard of, viz., (1) friction drive, (2) rope drive. The first is obviously unsuitable, but as regards the second there is no reason why, under certain conditions, a rope drive might not be useful. The "grip" of a rope on a grooved pulley, where the groove is not rounded, makes it more certain than any belt drive, while partaking of its advantages as well as that of the gear drive. With a swinging level pulley above or below to tighten or slacken the rope the pressure could always be regulated to a nicety without the tension so often needed with the belt, the V-groove rendering this unnecessary.

Rope driving direct from the engine to the various shafts of a mill is now a common feature in many new mills, so that its extension to the detail (if it may be so called) of inside drives does not seem an impossible development in future.

With regard to gear driving, it might be possible to insure an always positive relation between geared wheels (whatever the distance between the rolls), by the use of the now obsolete and well-nigh forgotten "sun and planet motion," which was so favorite a device in the early days of engineering.

This would, however, be too cumbersome, and involve too much power ever to be adopted in roller milling.

### WORKING WITH BUHRS.

THOSE who are yet trying to make a marketable flour with buhrs, says a writer in the Mechanical News, and there are still many of them, do it with buhrs that would formerly have been considered scarcely in good enough condition to make feed. If it was then of such great importance to have the buhrs in the best condition, it is certainly more so now; because it was then a race with buhrs, while now it is buhrs against a superior method of milling. The faces of buhrs for making flour should be close and dressed as true as is possible. They should also be smooth, or very lightly touched and finely cut. The furrows should be wide, comparatively shallow, and dressed as smoothly and as straight as the face, and drawn out to a fine feather edge. For the best milling there should be no more face than furrow; in fact, for grinding hard wheat there should be rather more furrow than face. The motion should be slow and the grinding not forced, then with the runners in good balance, and with other necessary machinery for clearing and separating, both before and after grinding, the buhr mill can hope to still make a fairly respectable flour.

### FAREWELL TO THE MILLSTONE.

FAREWELL to the millstone, its course it has run,  
Like a time-worn old servant, its work is nigh done;  
No longer the stowman with sharp bill shall trace  
Those parallel lines on its ruddy old face,  
No longer the furrows with care shall mark out,  
Nor handle the meal rushing down thro' its spout.  
From the earliest ages that record can trace,  
For grinding the grain the millstone held first place;  
From the time of the Briton, whose slaves worked the quern,  
To the modern mill company's mammoth concern,  
Thou' now it is banished for rollers of steel,  
Fond regard for the millstone we ever shall feel.  
Our old friend's supplanted by rollers, but yet  
For things that must be it is vain regret;  
Of this new milling system let's study the plan,  
And its ways and its secrets find out if we can;  
Till our flour, as of yore, ever be in demand,  
And the bakers still cry for the strong and white bread.

## BRITISH "CONDITIONING" METHODS.

BY G. M. FARRINGTON, BOSTON, ENG.

I WILL try to tell you how, at a small inland country mill, situated in a purely agricultural district, the wheats of Europe, Asia, Africa and America meet, and are cleaned, and blended, and conditioned and acclimatized till the golden grain of California need count it no dishonor to meet death side by side with the darkest-skinned, and once despised, product of our Indian empire; and the sweet, plump berry of old England need fear no contamination of its virtues from contact with the ill-reputed wheat from the land of the Pharaohs, as they lie side by side awaiting a common doom. It is scarcely necessary to refer to the fact that the first operation is performed on a warehouse separator, which removes the larger rubbish, such as sticks, straws, big clots, etc. And now man calls in water to his aid, and of all the means and processes employed to clean wheat there is not one so sensible, so natural, so effective and so cheap as that of washing. It is sensible and natural, because it is precisely the course that common-sense points out to any man as the proper way to clean almost anything and everything. We shall clean our hands before we dine to-day. Shall we get a dry brush and scrub them? If so, I am afraid dinner will spoil before we shall be presentable at the table. No, we shall immerse them in water, and with a little friction the thing is done. Just so with wheat, a plunge into pure cold water and the dirt begins to capitate at once, and when the wheat arrives in the sack there is as much improvement in its appearance as in that of a captured street Arab after a bath. And when I am told that there are mills using foreign wheats which to-day have no washers in them, I simply say, "I cannot believe it."

It is quite unnecessary to describe a washer; suffice it to say that there need not be the slightest difficulty in choosing a good one. I might almost say there would be more difficulty in finding a bad one. Mind, I say a washer; one that removes all the loose, and the comparatively loose, dirt, and of course the stones, not merely a damper for this, though doubtless at times a useful little machine, has no place in the system I am advocating to-day, but, whatever machine is adopted, remember this, that an abundant supply of pure fresh water is absolutely necessary for success. The process of washing is completed and discrimination and skill begin to play a foremost part. The softer and more delicate kinds of wheat, such as Californian, soft Chilean, American and Russian should at once proceed to the heater, but the coarser and flintier descriptions, such as Indians, Egyptians, Syrian and hard Chileans, are improved by a few hours interval to permit the water to penetrate into the interior, in the former kinds this is sufficiently well done in the continuous process. The object of the heater is not to dry the wheat, but to drive the moisture of the berry, whether it be natural to it as in the case of English, or artificially introduced as one of the results of the washing process, from the centre to the outside, thereby loosening not only any remaining dirt that the first washing may have failed to remove, but also the fine outer skin of the berry itself; in this condition hot, moist, in fact, perspiring profusely, it is introduced to the scourer, where anything from simply removing the dirt to almost skinning the wheat can be performed; it is then passed through a powerful exhaust, to clear it of the offal the scourer has detached, to the cooler, the real drier of the process, which is a most effective purifier, also where every trace of sweat or moisture is removed. All the loose particles of offal which may still be found adhering to the wheat berry are here effectually detached by the peculiar motion of the grain as it descends its zigzag course and effectually removed, and the wheat, as far as its condition is concerned, leaves this machine absolutely ready for the first break-roll, it is also equally ready for storage in silos till wanted. For our own part we recommend, and, as far as possible, practice, the continuous process, that is, to mill the wheat as it leaves the cooler, with as little interval as possible, for it undoubtedly is a fact that the wheat is never again in such perfectly mild and kind temper and condition as it is at this stage, breaking freely, yielding clean, broad bran, and consequently allowing only a minimum quantity of offal to get through the rotary scalpels and into the general system

Having briefly described the process, let us have a look at the machines engaged in it. Now we will descend from the didactic to the descriptive, and begin with the heater, a machine which, though of very early origin in the wheat conditioning epoch, of entirely home design and home manufacture, is still doing work to-day which we in our own experience have never seen surpassed. What is our principle? Simply that of the Turkish bath. Our heater consists of a series of steam-jacketed inclined plates or trays, arranged over one another in zigzag form, and suspended between hollow columns which serve both as supports to the plates and conduits for the steam. Each plate is furnished on its upper side with adjustable striking bars or louvres for regulating the thickness of the stream of grain. A hopper is placed at the top of the machine, into which the grain, after being washed, is fed, and thence travels at a pace regulated to the greatest nicety by a valve at the outlet, and in a thin sheet of from three quarters of an inch to an inch-and-a-half in thickness, down the upper surface of the plates, and under the striking bars or louvres, being turned completely over in its passage from plate to plate, being precisely the action of the old-fashioned kiln, excepting that in this case the manual labor required to turn the grain over is supplanted by automatic means. Discharged from this machine, the wheat is then handed over to the care of the scourer, but before describing the operation and effect of this most useful and essential machine, which for our purpose requires to be in some respects of special design and construction, let us see what has happened to the wheat in the heater. We have likened our process to that of a Turkish bath. Are we adhering to the conditions of this humanly healthy and physically invigorating process? Let us see. The wheat has been well saturated in the washer, and the loose and extraneous dirt dispersed and dissipated, and what is supposed to be the comparatively clean berry introduced to the series of hot rooms represented by the zigzag heater. Each plate of this forms a hot room, and as the wheat is introduced to each room successively, it perspires more and more freely and when it reaches the outlet is not only hot and moist and clammy, but has an amount of dirt upon its skin, which, if not removed, would make a clear, bright flour from patent to low-grade absolutely impossible, and that this desideratum is attained we can prove to the stoutest skeptic that ever handled a spatula.

Let us return to the wheat, for to keep it waiting in its present prime condition would be to lose the golden opportunity of the whole process. We have got to the end of the hot-room stage, and the patient is waiting for the vigorous attentions of the attendant rubber, and in the meantime is jealously guarded from draughts or breath of air, which, whether hot or cold, would tend to dry the skin and close the pores, and make the value of the attendant's services comparatively nil. We do not mind the upper surfaces of the heater trays being open and exposed to the surrounding air, so that some of the vapor may of itself rise and disperse, and perhaps a slight suction here might simply carry this vapor away without militating against the good effects, but we strongly object to any means for drawing the heat through the grain; the heat must rise of itself and find its own way through, as in the old kilns, to produce the necessary sweat. Now for the rubber. Well, that is our scourer, and with a patient in such prime condition the work is easy, and the results to any but an actual eyewitness almost beyond belief. The wheat comes out of this machine still warm, but beautifully bright and clean and healthy, the separated dirt and fluff, the outer skin having gone directly from the scourer to a conveyor, which takes it into the mill to be automatically mixed with the bran or pollard most suitable for its company and complexion. The wheat must now be finally dried and purified, and the gentle action of the cooler effects this purpose and attains this end. The general construction of this machine is similar to that of the heater, but the plates or trays, instead of being hollow and filled with steam, are perforated, and a powerful fan draws a gentle but abundant current of air through these perforated plates, and through the thin stream of wheat which is gently travelling down them. The wheat here, as in the previous machine, is turned completely over as it passes from plate to plate, and its upper side is free

and unimpeded, and open to the fan, so that any of the particles of the dirt or skin, loosened by the preceding treatment, which may still be found adhering to the berry must inevitably now, by the regular and complete turn over of the stream of wheat, be brought into a position favorable for the fan to act upon them and carry them away. This machine, then, is not only a cooler and a drier, but, and mark this as one of its best qualifications, it is a purifier also.

Having now briefly described the principles of our system and the practical means by which we carry out those principles, let us consider some of the advantages to be gained by their adoption. First and foremost, a practically unlimited choice of the wheats of the world. Hard wheats can be made mellow, flints turned into flour, soft wheats can have their superabundant moisture eliminated and be brought to any degree of dryness, and all wheats, hard, medium or soft, can, so long as they are inherently sound, be rendered absolutely clean and fresh and pure. Further, by this preparatory process the work inside the mill can be simplified throughout by reason of the fact that the most baffling offal a miller has to deal with, the fluff and beeswing scraped off the brassy side of the wheat berry by the break-rolls, does not get into the system at all. The power required is reduced, the resulting products incalculably improved, the flour being stronger, brighter and purer, and the offals are offals indeed. Then again, this process enables the miller to attain to what, doubtless, as a miller, is the height of his ambition, the reputation for reliability and regularity in the quality of his flour. He needs no longer be the victim of such circumstances as the varying supplies of an erratic market or the constant changes of our uncertain climate. Does Russia prohibit, then America fills the gap. Does America fall short, then India comes to the front. Is India famestricken, then from some unexpected quarter of the globe supplies pour in. All the miller need want is wheat, sound wheat, and given conditions and means, such in principle, but not necessarily in detail, as we have described, and be the weather wet or dry, warm or cold, his wheat from eastern hemisphere or west, the resulting flour should be such as would produce a loaf as fine in flavor as the fastidious palate of the workman can demand, and there is not a more fastidious critic, or a finer judge of the quality of the staff of life than the toiling millions with whom bread is the staple food, and the flour should always yield as many of such sweet, nutritious loaves as the most anxious baker, whose laudable ambition is to pay his way, and make a provision for his old age besides, has any unquestionable right to expect. Further still, this system insures an enormous saving of power, and who does not desire this?

## HANDY TO HAVE AROUND.

DID it ever occur to our miller friends, says The Millstone, what a handy little tool a muffed mallet is? Every miller should be the owner of one, and it should be his constant companion when making the rounds of the mill, and with it give every chop or meal-sput a tap on the under side as he passes it. It will make no noise, nor will it in any way injure the spout, but what a lot of trouble and loss of time it may save! Spouts so frequently reminded of this duty in that gentle but somewhat forcible way, are not very apt to choke; in fact, never, unless suddenly overcrowded. If the millers will provide themselves with such mallets, and diligently use them a while, it will soon become a habit which will cling to them and make them feel lonesome without their companion, should they happen to forget it.

## A NEW FLOUR PROCESS.

A GERMAN scientist has patented a process whereby a flour containing 90 per cent. albumen is produced from wheat. It is claimed that it is easily digested, and can be kept any length of time without spoiling; that it is as nourishing as dried white of egg, and will take the place of the albumen now obtained from meat and eggs, and can be supplied at less cost. If the civilized people of the world will now depend upon ordinary bread for starch, whole-meal bread for phosphates, and the new patented process for their albumen, three constituents necessary as human food, can be supplied by millers, to which they will not object.

## DOMINION MILLERS' CONVENTION

A SPECIAL general meeting of the Dominion Millers' Association was held in the Board of Trade building, Toronto, Wednesday, March 30. The chair was occupied by President Edward Peplow, who called the meeting to order at 2 p.m. On the right and left, respectively, of the president were C. B. Watts, secretary, and William Galbraith, treasurer. A large representation of members was present from different parts of the country; among these were: E. L. Green, Greenwood; E. S. Edmonson, Oshawa; H. B. Schmidt, Thornhill; A. Wolverton, Wolverton; D. G. Goldie, Ayr; J. H. Dracot, Streetsville; John Brown, Toronto; Charles A. Smart, Montreal; K. Thompson, Lynden; G. S. Baldwin, Aurora; S. R. Stuart, Mitchell; P. R. Hoover, Green River; R. C. Scott, Highgate; James Mills, Plattsville; J. L. Spink, Toronto; George H. Harper, Dundas; J. E. Pearen, Brampton. Alex. Wood, Smith's Falls; A. Plewes, Markdale; J. O. Flavell, Lindsay; David Elder, Elder's Mills; H. A. Mulhern, Peterboro; F. Rollings, Madoc; J. F. Dafoe, Napanee; S. P. Stuart, Mitchell; J. C. Vanstone, Bowmanville; Robert Shirra, Caledonia; Thomas Bell, Erin; J. A. Breckenridge, Mattawa; T. O. Kemp, Seaforth; A. W. Carveth, Laskard; G. G. Bechtel, Burford; R. Noble, Norval; H. Shaw, Cainsville. Other large firms were represented as follows: Foulds & Co., Onandaga; Shaw & Co., Port Dover; Wright & Son, Owen Sound; Wanzer Bros., Aytton; Dobson & Campbell, Beaverton; Moyer & Co., Listowel; J. Hamilton & Son, Glen Huron; and Plewes & Spence, Creemore.

## REPORT EXECUTIVE COMMITTEE.

Secretary Watts read a report of the Executive Committee, setting forth the work accomplished at its recent meetings, more especially the meetings of February 25 and March 9. These were reported in the March number of the MILLER and dealt with the question of incorporation and the draft bill that had been prepared by the executive; certain action taken re the Newfoundland troubles, with a report of the visit of delegates to Ottawa; also an account of an interview with Mr. Mial, Commissioner, of the Department of Inland Revenue. The report was received and adopted.

## INCORPORATION.

The particular purpose for which the Association was called together was to consider a draft bill of incorporation that had been prepared by the solicitor, acting in conjunction with a special committee appointed from the executive. The major portion of both the afternoon and evening sessions was taken up in a discussion of the terms of the bill itself, and afterwards of the by-laws in connection therewith. The bill is modelled to some extent after that of the Toronto Board of Trade, including important clauses, that were enlarged and improved in convention, touching the scope and uses of arbitration in settling difficulties between the members. The document is simple and yet comprehensive, and when each clause was thoroughly explained and threshed out by the members, the bill as a whole received their unanimous and hearty approval. It will give to the Association a *locus standi* in important trade matters that would always have been unobtainable so long as it remained simply an open, or, paradoxical though it may seem, an unorganized organization. The bill received the necessary signatures before the convention closed, and was forwarded to Ottawa the following morning in order that it may, if possible, be pushed through this session of Parliament.

## SEED WHEAT.

No inconsiderable discussion arose out of a letter written by J. C. Vanstone, of Bowmanville, Ont., condemning in vigorous terms the growing of Colorado spring wheat. The letter was supplemented by a series of communications from the pen of Mr. Vanstone that had appeared in the local press of the town. T. O. Kemp, of Seaforth, expressed the opinion that there were two kinds of wheat going under the same name. He had seen a Colorado wheat that when placed in the mouth had, in an eminent degree, the gumming qualities of the best nulling wheats. This was admitted by others to be the case, and apparently was a peculiarity of Colorado wheat. All, however, who had actually put it to a milling test were unanimous in their condemnation of it.

Mulhern, of Peterboro, said that Colorado was grown in that section, it weighed heavy, but had a weak effect, and he had found it very unsatisfactory. J. O. Flavell, of Lindsay, would like to see it out of the country altogether. E. S. Edmonson, Oshawa, believed the opinion should go out from this Association that the Colorado was an undesirable spring wheat from every view of the case. J. L. Spink, Toronto, thought that perhaps Colorado was equal to goose wheat. President Peplow remarked that whether Colorado wheat gummed well or not, it was a poor wheat; he did not want any of it in his mill.

The outcome of the discussion was the following resolution unanimously adopted by the Association: "Whereas the variety of bearded spring wheat largely grown in the eastern, northern and midland districts of Ontario during the past two years, known as Colorado spring wheat, has been thoroughly tested as a milling wheat and found very deficient in all the properties that go to make up a good milling wheat, being deficient in strength and very yellow in color, and a poor flour yielder; and whereas its value as a milling wheat is not of greater value than the price of goose wheat, if equal thereto; therefore, this Association would strongly recommend the farmers to discard this variety of spring wheat and cultivate some one of the other varieties that are known as good milling wheats."

## ANOTHER SEED WHEAT GRIEVANCE.

Mr. T. O. Kemp asked if it was not possible that the different seed wheats being introduced into the country could each be known under some one distinct and particular name. At present there are many different names given to the same wheat, in this way causing considerable confusion. E. S. Edmonson thought some step of the kind was necessary. J. Hamilton, of Glen Huron, observed that one cannot tell whether a wheat is good or bad until one goes to grind it. John Brown, in answer to a remark that some protection should be given the farmer against the many so-called new, yet worthless, wheats placed on the market, said it was difficult to know sometimes what was old and what new in wheats. He could produce a sample of what is to-day known as goose wheat, that was grown in this country forty-seven years ago. With a view of remedying the trouble suggested by the discussion the following resolution, moved by T. O. Kemp, and seconded by John Wright, was unanimously carried: "That whereas one and the same variety of wheat is frequently introduced in the Dominion for seed purposes under various names, making it difficult for any person or persons appointed for the purpose of pronouncing upon any one variety without reflecting on others; and whereas farmers are frequently misled into purchasing and seeding with very inferior varieties greatly to the injury of the country in general, and themselves and the millers in particular, therefore, be it resolved that legislation be sought making it compulsory that at the various kinds of wheat in the Dominion, or that may hereafter be introduced in the Dominion for seed purposes, shall be examined and tested by a board appointed for that purpose, whose duty it shall be to determine the names by which such varieties shall be known throughout the Dominion, and to describe as fully as possible, both as regards the grain and its natural growth, in order that it may be readily distinguished from any other variety so far as possible; that such penalty for selling it under any other name be fixed as may be thought wise by the Government; such board of examiners shall consist of one or more professors of agriculture as may be appointed by the Government, and two or more members of the Dominion Millers' Association, as may be appointed by the said association."

## THE NEWFOUNDLAND AFFAIR.

The Newfoundland matter was by resolution referred to the Executive Committee with instructions to act as conditions and circumstances might make necessary.

At 11.30 p.m. the convention was brought to a close, to meet in annual session, as provided in the bill of incorporation, in July.

## CONVENTION CHAFF.

President Peplow ably filled the bill, as everyone had expected.

Beat J. L. Spink, if you can, with a clever piece of

epigram, as witness his compression of the Colorado wheat discussion into the one sentence: "Colorado spring wheat ain't worth a cuss."

Is there a miller in Canada who can afford to remain out of the Dominion Millers' Association? If anyone thinks so it would be interesting to know what is their basis of figuring.

Mr. T. O. Kemp, manager of the large Seaforth mills of W. W. Ogilvie, showed in his remarks on the seed wheat discussion the thorough and practical grasp he has of the real essentials of successful milling.

Who can object to the breadth of the Millers' platform as outlined in their bill of incorporation? It is made to include those who are engaged or identified even in a remote degree with the business of milling. The mill-furnisher will not be excluded.

How everyone missed the jovial face of the late president, Thomas Goldie. The resolution of condolence to the widow and family, *enounced in handsome morocco cover*, fittingly, yet in slight measure, expressed the deep-down feelings of every member.

## A GOOD SUGGESTION TO ADOPT.

EVERY mechanic should have a library of his own, no matter how small. A library, even if it only consists of two books, is of value. One the habit is formed of purchasing books, it is surprising how soon a creditable collection of books will be secured, and what a benefit they will be to the owner. The mechanic unaccustomed to the use of books has no idea of the benefit to be derived from them. He does not know that the use of books will fit him for a better position, and enable him to earn better wages and do better work.

It is a good plan to set aside a certain sum each week or month to be applied to the purchase of books. Here the mistake of buying the wrong books must not be made, or the money will be wasted. Some men, once in the habit of acquiring a library, buy books merely because they are books, and will help to fill the shelves and make a show. Avoid all such nonsense. Buy books as tools are bought, because they are needed, and they will be a benefit to their purchaser.

## THE FIEND OF THE MONKEY-WRENCH.

THE engineer who is always trying to improve the engine, as it came from the maker, with generous use of the monkey-wrench, has his counterpart in many operative millers who are always "improving the system" to which the mill was adapted by the mill-furnisher. You will always find him tearing something out and putting something else in, but seldom with a definite idea of what he wants to do, or how to go at it, beyond a vague notion that somehow he will make an improvement at this particular point that will paralyze the owner. Usually it has this effect, but not in the way intended by the ambitious operative. We do not refer to the class of active-brained men who study out the causes of failure and apply a remedy that has been well considered, but of that large class who, the moment something goes wrong, immediately begin work with the monkey-wrench. It is unsafe to meddle with a machine or a part of a mill until the exact cause of the trouble has been ascertained. It often happens with a mill that the cause of trouble is quite remote from the point where it first becomes visible, and it requires long experience to determine where to look for it. Not that a mill programme of any size can be put in by the most experienced mill-furnisher that will be right from the start, or where considerable attention would not be necessary, or that a mill will ever be successful without the intelligent oversight of a competent miller, but where the miller is not thoroughly competent he will likely do more harm than good by trying to "fix it up." We have seen some of the best standard machines on the market rejected by the buyer because an ignorant, but well-meaning operative, in putting it together, had got it together wrong, or who in trying to doctor it had made it worse. Young millers and others who have charge of machinery are usually quite gifted with a desire for experimenting, and seldom consider that the maker puts his machine in all right. Old and experienced men when they meet a difficulty, search its cause before doing anything, and then, if it is not of trivial nature, apply to the maker to fix it himself.



PUBLISHED ON THE FIFTEENTH OF EACH MONTH

BY  
**ARTHUR G. MORTIMER**

Office  
75 CANADA LIFE ASSURANCE BUILDING,  
LESLIE ST., OTTAWA.

**TERMS OF SUBSCRIPTION.**

One Copy One Year, in advance \$1 00  
One Copy Six Months, in advance 50  
Foreign Subscriptions, \$1.25 a Year

ADVERTISING RATES FURNISH ON APPLICATION

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada containing full and reliable information on all topics touching our patrons, and is constituted as an organ with any manufacturing company, we will always be found honestly and earnestly endeavoring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling, or the grain and flour trade.

**MILLERS INCORPORATING.**

CANADIAN millers, by a unanimous vote at the Convention on the 30th ult. decided to seek powers of incorporation from the Dominion Government. Many members have labored patiently and long to see this work accomplished, and all that is required to consummate their work is the legislative endorsement of Parliament. The draft bill approved of by the association is now in the hands of a member of the Commons and it is hoped will be pushed through this session. It has been intimated to Secretary Watts that it might be necessary to throw the bill over until the House meets next year, owing to the pressure of business on the order papers. This statement was based on the theory that the session would be brought to a close at an early date. Developments of the past week change this supposition, and it does not look likely that an adjournment will take place before July at the earliest.

However weighty may be the matters of State that must engage the attention of our legislators in the next two months this question of incorporation cannot be allowed to take any unimportant place. It affects one of the largest commercial interests of the country, which occupies no isolated position in a few particular centres, but mills and millers are everywhere throughout this country. Every township is particularly interested in the success of Canadian milling. The millers are handicapped in their work without the strength that comes of an incorporated organization. To throw incorporation over for another year is something that simply cannot be considered for one moment.

**BUSINESS HOMILETICS.**

HOMILETICS is not in the line of commercial journalism and its conductors are not called upon to devote any considerable space to questions of business morals. We expect business men to be guided by those common-sense rules that teach them, even when no higher motive prevails, that honesty is the best policy, and that any deviation from this law will certainly bring its own retribution. And yet there is in the general practice of business a violation, frequently enough, of these well-fixed canons of business, to make it necessary for organizations of business men and commercial journals to sound the note of warning and plainly condemn known dishonest practices.

At the Dominion Millers Convention in December it will be remembered a resolution was unanimously passed reproving in vigorous terms the practice that had come under the notice of the association of certain millers, who were shipping to their clients flour that was short in weight. A month or so later the Board of Trade felt called upon to move against a dishonest grain dealer in western Ontario, who had been mixing frozen Manitoba wheat with Ontario wheat and shipping it to exporters as Ontario wheat. Reference is made in our trade review of this month to a letter written by W. P. Howland & Co. showing the favor with which two-

rowed barley is received in the English markets over six-rowed, when the berry is even. But the practice with farmers is to mix two-rowed and six-rowed, and consequently Canadian barley becomes in a measure prejudiced in the eyes of the English dealer. At the present time this city has at least one grain man whose methods of doing business are so disreputable, that if decent men are going to remain in the trade he will have to go out.

We do not say that these practices, in any of the particulars named, flour, wheat or barley, are alarmingly frequent. Enough to know that they do exist, to commend the prompt steps taken in each case to expose the practice and, if possible, nip it in the bud. The serious view from the business side is unfortunately this. The foreigner who does business with us, takes the exception to be the rule, and the operations of the entire trade are brought down to the level of the dishonest dealer. Under no circumstances, viewing business methods from a proper ideal, can business men allow these conditions to obtain a foothold. Particularly is it so with Canadian millers and grain merchants, whose hope of increased trade is with foreign countries.

**THE MILLER'S INTEREST IN SEED WHEAT.**

THE farmer is not one whit more interested in the sowing of first-class wheat than is the miller in seeing that such wheat, and only such wheat, is sown. This fact was incidentally, but very suggestively, illustrated in the discussion at the Dominion Millers Convention a fortnight ago on the question of Colorado spring wheat. The farmer primarily had no occasion to be dissatisfied with his return from the seeding of this particular grade of wheat. It was only when the miller had ground it into flour and discovered its disappointing qualities that the farmer found that he would lose his best customer. The farmer, in any of the counties where this wheat has been grown, who, in the face of what he has learned from the millers, would persist in growing Colorado, would quickly find that he had loaded himself up with a most unsaleable article.

Millers are so closely and directly interested in the growth of first-class milling wheats that they cannot afford to lax any effort that will prevent the growing of an undesirable and poor quality wheat in their several districts, and furthermore, that will secure the use of only such seed wheat that out of their experience as millers they know to be undoubted in milling parts. It will pay millers to make a selection of first-class seed wheats, purchase a reasonable quantity, and dispose of these to the farmers in their section at actual cost. If the farmer does not buy from the miller he is going to buy from someone else, whose interest is to sell the stocks in his warehouse, rather than any consideration for the character of the seed after it has gone through the natural courses of germination and fructescence and finally passed into the hands of the miller.

What we say here has a special significance in its relation to spring wheat and is one of these matters that should not be simply considered by the miller, but is a case that calls for action.

**GRAIN INSPECTION.**

THE MILLER has published no little lately in the way of interviews, communications and editorial comment, touching the question of the grading and inspection of wheat. More friction and unpleasantness in grain circles is resultant probably from unsatisfactory inspection than from any other one cause.

A letter in a recent number of the Monetary Times, signed "Grain Man," Winnipeg, Man., is somewhat suggestive in a number of particulars. One suggestion of this correspondent is that Montreal, Toronto and Winnipeg each appoint an inspector, all to be residents of Winnipeg, any certificate to be signed by at least two, and no new certificate to be issued after the one inspection.

We are told that "the grade of a car of grain is given in the casual glance of half a palmful of grain - not in every instance, but the writer has seen it, and the result is unsatisfactory to both shippers and receivers. Of course it can always be said that this would cut both ways, but if a farmer ships a car of wheat on grade, and the inspection goes a grade lower than the quality of wheat really deserves, then the farmer loses \$66; and if

the grade goes one higher than it really is, the receiver loses \$66. Too much care cannot be given to the question of grade. The writer has had experience of a difference between two official grades of the same wheat in the same cars, where the difference in cash result on certificates actually was \$205 for three cars. Such a thing as this ought to be an impossibility. The system at present in vogue is for wheat to be graded in and out of Fort William elevators. That is, if you ship twenty cars to Fort William you get twenty certificates, one for each car; but you can get one certificate for the quantity shipped, only it is permissible for a shipper to order out inferior wheat to go with it, and still get a No. "2 Hard" certificate even when the best of his wheat only graded "2 Hard" originally. This should also be an impossibility. If our wheat grading gives "2 Hard" for a certain quality let the country get the benefit of superior wheat tenders. There is no injustice done the shippers by making them tender original grade certificates; or, if necessary to avoid bulk, let one certificate be issued in exchange for the originals. The grading can all be done in Winnipeg by the inspection committee, and the cars can be unloaded at Fort William according to that inspection and primed up according to grade. Another point is also of vital importance, and that is that any person drawing samples of wheat for certificate purposes should be put on oath that they were truly and properly drawn. The writer, too, heard on the highest authority that a car of wheat of high grade would be given a grade higher if going to North Bay for orders than it would if unloaded at Fort William, to allow for the messing about it would get. Surely on so great a question as the proper handling of our only article of export, it is at least worth a little more earnest attention than it gets at present."

**ELECTRICITY IN FLOUR MILLING.**

THE electricians have recently been telling of the marvellous growth of the uses of electricity within a decade. In 1882 not more than 15,000 incandescent lamps were in use in the United States and Canada, now there are over 5,000,000. Electricity has been applied to the propelling of street cars in nearly all the large cities on the continent, and as a means of driving our mills and factories it is coming more extensively into use every day. It has been found possible during the past year to transmit 300 horse power in electricity a distance of 100 miles. Its application to milling whereby the system of innumerable belts, shafting and gearing required to transmit the power of the engine to the many stories and different parts of a mill would be supplanted by a system where the engine would transmit the power by wires, to various points where small electric motors would communicate it directly to a line of similar machines on a floor has, as yet, been rather insignificant. We learn, however, from our milling contemporaries, that the system will soon have a practical illustration in a mill now being built at St. Paul, Minn., to be operated by electricity. "The experiment," it is aptly remarked, "will be watched with great interest, and the success of the Edison company in so arranging the Schenectady works of that corporation, leads to a belief that the experiment in a flouring mill will be equally successful. The power house is situated almost in the middle of a piece of land twelve acres in extent, and is surrounded on all sides by the different buildings to which it supplies the necessary power. This house contains a battery of boilers of over 2,000 horse-power capacity, the engines necessary to drive the electric generators, and the generators themselves. Radiating in all directions run the conductors through special Edison underground tubes, to the different buildings, where they are connected to Edison motors, which in turn are connected by belts to the shafting serving to operate the machinery. Whether the fifteen per cent. of power lost in transferring the energy of the steam engine into electricity, will be over-balanced by the gain induced by throwing out large quantities of friction producing shaft journals, gearing and slipping of belts, is the real question. But there is no doubt but that in large mills the economy of transmission will lie on the side of the wires. The original costs of the two systems, and the matter of relative maintenance, are also among the things requiring demonstration."



Office of the CANADIAN MILLER,  
April 14 1892.

**THE GENERAL SURVEY.**

**A** LOCAL cartoonist illustrated the situation of wheat a few days ago with a representation of a moderate sized bear set squarely on top of a good sized animal of the bull species, who was firmly pinned to the ground, whilst not a sign of relief was visible in the expression of the bear. The representation was apt. Memory does not readily recall when a more decided slump has taken place in wheat. The history of the entire month has been one of depression, the conditions becoming accentuated within the week of the present writing. Three days ago May wheat touched the lowest quotations for two years past.

The Chicago Times, of recent date, says, "The wheat trader now, almost to a man, is in his own market a bear. There is more unanimity at this moment in the belief in lower prices than there was at ninety cents; a good deal more than there was at \$1. Yet the price has declined ten cents a bushel in a month; fifteen cents in three months. For some reason the environment of a speculative market is against first principles. The Chicago crowd well, there are very few believers in wheat at eighty cents where there were legion at over \$1. Special reasons? There is never any lack of special reasons. There never was a price and never will be when the reasons for an advance do not seem to be just about as good as the reasons for a decline. The opportunities for the application of a general principle in speculation are not nearly so numerous; come sometimes not once a year; only come after very long advances or very long declines. There were any number of special reasons why it did not look safe to sell wheat last August at \$1.15; just as many why it seemed foolhardy to sell corn last year in the 60s. or to buy it the year before in the 30s."

The March report of the United States Government has been a considerable surprise to holders of grain. It shows stocks of wheat in farmers' hands of 171,000,000 bus. A year ago the stocks were 112,000,000 bus., two years ago 156,000,000, while in 1885 they aggregated 169,000,000 bushels. This is a significant statement when the large exports of wheat are taken into consideration. Within a year the shipments aggregated 205,000,000 bushels. The natural inference is that the estimated crop of 612,000,000 bushels in 1891 is not an extravagant one, but possibly much below what was reaped.

Mr. H. Kains Jackson, an English agricultural writer of some repute, in his review of the British grain trade, summarizes the situation in this manner: Neither stocks in hand; neither supplies in sight; neither the date of the season, and its prospects, sanction any further decline in the price of wheat and flour. Not until another and fair harvest is reaped and secured would sound trade be excused if it forced down good foreign wheat below the 35s. to 39s. now accepted, or sound good flour below 26s. per sack; or English wheat below this week's London average of 34s. 4d. per quarter. Apart from the question if the above terms are not really too low for the situation, the tendency of values further downwards must be characterized as a market mistake, a commercial blunder, and a swing of opinion the wrong way. The stores in the cupboard are only such as the nation as a housekeeper should keep. Such is the case at home and abroad. In the six years 1885 to 1890 the annual price of English wheat, 29s. 9d. to 32s. 10d., sickened farmers all over the world and checked production. The average of 1891 was 37s. and farmers at home and abroad took fresh heart, and this reasonable level was thought likely to be maintained, particularly as it was established in the season when from the first America had the promise of a bumper crop to balance expelled European deficiencies. Yet in March, 1892, we have returned to the imperial average of 32s. 11d. when there is not a prospect in a single country of a large harvest. The markets are living upon their principal without knowing what will be their income.

**WHEAT.**

Prices at time of writing are as follows: Liverpool, Eng. Wheat spring, 7s. 6d.; red winter, 7s. 6d.; No. 1 Cal., 7s. 5d. London, Eng. Beerlohm's report says: Floating cargoes. Cargoes on passage—Wheat, America advises cause depression. Mark Lane—Spot good, No. 2 club Cal. wheat, 31s. 6d. was 32s.; present and following month, 32s. 9d. was 33s. 3d.; good cargoes No. 1 Cal. wheat, off coast, 36s. 9d. was 37s.; do, Chilean, off coast, 35s. 6d. was 35s. 9d.; present and following month, 35s. 6d. was 35s. 9d.; do, Walla, off coast,

35s. 6d. was 36s.; present and following month, 35s. 3d. was 36s.; do, mixed, American—Chicago Wheat, No. 1, April and May, 79 1/2 c.; July, 80c. Duluth No. 1 hard, 80 1/2 c. for cash; 81 1/2 c. for May; No. 1 northern, 78 1/2 c. for cash; 79 1/2 c. for May. St. Louis 85c. for cash; 84 1/2 c. nominal for April; 84 1/2 c. bid for May; 78 1/2 c. for July. Canada: Toronto—Old cars of white and red sold north and west at 85c. straight, and the same was bid for more, with sellers at 80c. Goose, 77c. No. 1 hard at \$1.05. Extra, No. 1 hard, sold at \$1.07. North Bay No. 2 hard sold at 95c. and 97c. North Bay; on call there were sellers at 96c. with buyers at 94c. to arrive. No. 1 regular sold at 76c. North Bay; it offered on call at 76c. in store Montreal, with 70c. bid. No. 1 northern offered at 98c. North Bay, with 95c. bid. No. 2 northern offered at 86c. North Bay, with 84c. bid. No. 1 white Fyle offered at 98c. Winnipeg, Man. No. 2 hard, 84c. to 85c. afloat for May delivery at Fort William, and 95c. delivered at North Bay; No. 3 hard, afloat May, 73c. to 74c., and 85c. to 86c. North Bay. No. 1 regular, 46c. to 47c. on track, Manitoba points, and 64c. to 65c. afloat; No. 2 regular, 36c. to 37c. Manitoba points, and 53c. to 54c. afloat.

**BARLEY.**

In a letter written to a correspondent, W. P. Howland & Co. advise farmers to again grow two-rowed barley, with the caution that they grow it on good land and use good seed. They do not anticipate that the American duty will be reduced; their shipments of two-rowed made to England were satisfactory when the berry was uniform. This, however, was not always the case. "A great many of the parcels," we are told, "were made up; although the average weight was heavy, they were uneven samples, and we regret to say that the farmers put in some six-rowed with the two-rowed." Early in the season the firm say they were paying 10 to 15 cents per bushel more for the best two-rowed than for the best color six-rowed. "Just now," they add, "there was a difference of 5 cents per bushel in favor of the two-rowed, and there would be a larger difference if the farmers could give an even sample. They must trust to the barley taring out 54 pounds in weight. English brewers don't care for less weight."

Throughout the month there has been the usual dullness in the barley markets. Perhaps, if anything, prices have been a little firmer, and yet indefinite enough in this regard to make it difficult to say what prices on the local market are really prevailing. Report says American markets are dull. No. 2 western offered at 63c.; No. 2 Canada, 82 to 83c.; No. 1 Canada, 86 to 87c. bid, with 90 to 91c. asked; fair to best Michigan, 55 to 60c.; sample western, 50 to 51c. Oswego and Albany: Quiet and unchanged. New York: Dull; No. 2 Milwaukee, 68 to 69c. Chicago: Nominal; No. 2, 55 to 62c. Milwaukee: Steady; No. 2, 54 1/2 c.; sample, 42 to 59 1/2 c. St. Louis: Nothing doing.

**OATS.**

There is no important change for the month. Local sales have been made at 31 1/4 to 32 1/2 c.; mixed outside 28 1/2 c.; White, east, 32c.; Oswego: Extra No. 1 white, 44c. Buffalo: Sales at from 34 1/2 c. to 37c.

**PEAS.**

In somewhat better demand, 59c. being a pretty steady quotation.

**RYE.**

Only a nominal trade doing. Toronto prices 80c.; outside 76c.; Chicago, No. 2, 75c.; Buffalo, No. 2, 88c. on track.

**USEFUL INFORMATION.**

There is but one really sensible thing to do for an overloaded engine—replace it with a larger one. Various makeshifts may be resorted to, but can not give the satisfaction desired. An overloaded engine is a heavy clog on the earning capacity of an establishment.

The most prolific source of fires in a grain elevator is the elevator head. Watch the elevator heads closely and keep the bearings well oiled. In steam power elevators where slack coal is used, fires are frequently caused by spontaneous combustion. Slack coal should be kept dry and, if possible, it should be so placed that it can burn up without setting fire to the boiler house.

Will iron rust cause fire? A good authority says it will, and that when the oxide of iron comes in contact with wood away from the atmosphere the oxygen that was in the iron leaves it and what remains crumbles into small particles of metal with such an affinity for oxygen that as soon as exposed to the atmosphere it becomes red hot, capable of igniting wood very readily. This furnishes a good reason for keeping a lookout for rusty metal that scales off and drops from pipes and other metallic substances employed in mills. Particularly should out-of-the-way and dark corners be frequently and carefully cleaned.



**W**AS it the types or was it the miller that twisted the following advertisement, which appeared, as we give it, in the columns of the Standard, of London, Eng., a few days ago?

**TWO MILLERS TO BE LET, A WINDMILL,** containing three pairs of stones, a lake house, corn shop, and about five acres of land, dwelling house and garden.

But others besides millers and types give some strange turns to the Queen's English as taught to-day. Only the value of space just now for things more practical tempts me to hold back an interesting collection of bric-a-brac on these lines.

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The gentle invitation in this column two months ago to our milling friends throughout the country to send reminiscences of their milling experiences and business has brought us some interesting information of the Mountain Roller Mills, situated in the county of Dundas, one of the most fertile districts in Eastern Ontario. A property surrounded with many of the advantages afforded to the milling trade of this fair country, yet during all the years up to 1885 the site upon which the property now stands, including the village of Mountain, was little better than a desert waste. The time came when the desert was made to blossom like the rose. The Canadian Pacific Railway located one of its depots in the township of Mountain, and the prosperity of the village is to be marked from the time of this event. In 1887 Mr. A. S. Howen, a gentleman of experience and effort, energy and enterprise, erected a modern roller mill on a site adjoining the railway depot. This he has worked successfully from that day to the present. The mill is built on what is known as the Greey system, by the well-known mill furnishers, W. & J. G. Greey, of this city. The motive power is attached by belt to end of main line, from there to mill, the rope drive transmits the motion, which works noiseless and positive. The engine is of the Leonard Ball type, turning 273 revolutions a minute, and 60 h-p., which ran the mill up to 100 barrels per twenty-four hours. The flours made are of the highest order, and have been well termed the household jewels of Dundas Co. Mr. Bowen, the proprietor, is a descendant of a successful race of pioneer settlers in Dundas, and no man is better or more favorably known throughout his section of country.

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"It is no use for a miller to try to get rich by buying grain for cash and selling flour on time. If he wants to loan money he need not go at it in such a roundabout and dangerous way." This is the short, snappy way I heard the credit system sized up the other day. Full of meat, is it not, brother dusties? The miller gets no credit when buying grain. He is not like his neighbor, the dry goods man, who may perhaps give a four or six months note for his season's purchases. Farmers will take all the credit they can get, but you don't catch them allowing their golden grain to go out in this risky fashion. And yet how many millers buy for cash and sell altogether on credit? I know I am talking on a threadbare topic, but it is a case where "line upon line" is very necessary. What say you, friends; should not the plug be put in now?

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We have had not a few interesting stories told of the "master passion strong in death." The broker who went to church the other Sunday, the first time in years, was not exactly taking his last sleep, but he was having a comfortable snooze all the same. He was curled up in a cosy corner, and though in church he dreamed of stocks. The minister took his place in the pulpit. "The Lord is risen," he said in full voice. The broker started up suddenly. "How many points?" he blurted out; and they cast him forth.



## VIEWS AND INTERVIEWS.

**His Sire a Miller.** Three hundred years ago John Amos Comenius, one of the most remarkable bishops of the Moravian church, was born. He thought and wrote on education two centuries in advance of his age. He has been represented as the founder of our modern methods of teaching. Educationists on this continent are to-day doing honor to his memory in a well-balanced symposium published in the Educational Review. Where was the bishop's connection with milling? is asked. He was the son of a Bohemian miller named Komensky, and was born in Nionitz, Moravia, 300 years ago this month.

**Ancient Chinese Mills.** Antiquarians have recently made a study of the ancient mills of China. The present inhabitants of that country have absolutely no record of the peoples who ground their corn in these pre-historic mills and who dwelt in the ruined cities in which they are found, so completely have they and their history been blotted out. The cities are numerous and are found almost everywhere within eighty or a hundred miles of the Chinese frontier. The mills are curious. They are found in various degrees of preservation; of some only traces are found, others have nearly half of their structure left, some are perfect and entire. They all consist of two parts, a circular groove and a great round stone with a hole in the centre. It is evident that the circular stone ran on its periphery in the groove. The stone is about 6 feet in diameter, and a foot, more or less, thick, while the groove describes a circle about 26 feet in diameter. The groove is very shallow, being only about 7 or 8 inches deep.

**The Miller's Thumb.** It is a common remark that our individual trades and professions become stamped on our countenance. Constant activity and thought in any line of work leaves its impress on the mind, and often on the face. Our physical appearance conforms to the nature of our daily pursuits. We speak of the carpenter's stoop, caused by his constancy at the bench; the walk of the tailor; the cobbler's hands, a result of the daily use of awl and thread; the look of the dominie, and even about the editor there's a something that singles him out as a man of a class. The miller counts in with the other "boys," and has his own particular brand. Of course he is a dusty; we know him as a dusty; but another, and perhaps a more marked marking, makes his identity safe in any crowd. Look at the peculiar shape of the miller's thumb, for it is by the thumb the miller tests the character and quality of the grain he grinds. Spreading the sample over the fingers by a peculiar movement of the thumb, he gauges its value by the thumb itself. Continual action in this way makes the thumb assume a shape resembling the wide flattened head of the bull-head, or Tommy Logge, a fish prevalent in mill-streams, which in consequence is popularly known as the miller's thumb.

**Mill Made from A Battleship.** In the year 1812, as readers of history know, a naval duel occurred between the American man-of-war Chesapeake, commanded by Captain Laurence, and the British frigate Shannon, commanded by Captain Broke. The battle resulted disastrously to the American vessel, its commander being killed, and the Chesapeake was carried off by the victors. The fate of the Chesapeake was curious. She is in existence to-day, as sound and staunch as the day she was launched, but is used in the inglorious capacity of a flour mill, and is making lots of money for a hearty Hampshire miller, in the little parish of Wickham, England. After her capture by Sir Philip B. V. Broke she was taken to England in 1814, and in 1820 her timber was sold to John Prior, miller, of Wickham, Hants. Mr. Prior pulled down his own mill at Wickham, and erected a new one from the Chesapeake timbers, which he found admirably adapted for the purpose. The deck beams were thirty-two feet long and eighteen inches square, and were placed unaltered horizontally in the mill. The purlins of the deck were about twelve feet long, and served without alteration for joists. Many of these timbers yet have the marks of the Shannon's grapeshot, and in some places the shot are still to be seen deeply embedded in the pitch pine.

**The Parent Of Wheat.**

The most remarkable fact concerning the queer plant the goatseye is that it has been proven by experiment to be the parent of cultivated wheat. This fact was accidentally discovered by a French agriculturalist. He wished to determine what effect cultivation would have upon the goatseye, and planted some from any fields of grass that might mingle with it. The first crop showed much difference from the original, being two or three times taller and more grains to the stalk. At the end of seven years experimenting the yield was over 300 grains for each one planted, and the transformation was complete. Every plant was a representative of cultivated wheat. Later he sowed them in open fields and in no instance have they returned to the form of the original goatseye grass. The same experiments have since been tried by the English Agricultural Society with the same results. The nearest form to true wheat now found wild is the creeping couch grass, a perennial closely agreeing in all essential particulars of structures with our less cultivated annual wheat.

**Origin of Flour Blending.**

The art of flour blending, according to W. A. Thoms, of Glasgow, Scotland, was not a millers art, but came as a legacy from the master bakers to millers when the former had abandoned the old custom of milling wheat of their own selection from which flour for their own baking was made. That old custom, it seems, obtained more generally in Scotland than in any other country, and was primarily the result of a wheat yield of inferior quality. The grain imported for many years went direct into the hands of bakers, from whence it was sent mixed, or blended, as they styled it, to suit the owner to the mill. According to the ability of a baker to blend his wheat properly depended his profits and trade, hence it was brought to the condition of a finished art by the baker before the miller knew much about it. In that day and in that country it was the business of millers to grind what was sent them and to ask no questions. The processes employed by bakers were guarded even more jealously and were surrounded by a denser atmosphere of mystery than than now, and as the miller was not expected to know much his responsibility was light. It was not until millers began to guarantee their product in other countries that Scotch bakers concluded they would relieve themselves of much worry and pains by using flour prepared for them. This they set out to do, and as a consequence Scotch millers, then as much behind the milling procession as Scotch bakers were in the lead in their craft, observed the necessity of practising the art made known to them by the bakers. This they have since done with the result of being thus enabled to live by their occupation, and have had the satisfaction of seeing their teachings of flour blending taken account of in every part of the world where flour milling has kept pace with modern civilization.

**Bread in Folk Lore**

Some measure of superstition, it has been said, has an existence in everyone's blood. This may be so. History and tradition show unmistakably that it has a much firmer hold on some people than others. Nor is this mental condition common only to semi-barbaric races. The Highlander is not to be classed as uncivilized, but whether because of the mountainous character of his native home, or some other occult influence, he is known to be imbued with a score of superstitious notions. Sailors are notoriously superstitious, even to this day, despite all their knocking about the world and association with all classes of people. Intelligent folk, and not women alone, in this nineteenth century, become possessed of terrible forebodings because of the groanings or moanings of the canine species at particular hours of the night, and how many there are who could not be tempted by the wealth of a Croesus to sit down to a table where the number would be neither more or less than thirteen. A present-day writer on "Bread in Folk Lore" has collected a number of interesting stories showing what hold the superstitious view has had on those associated directly or indirectly with the business of bread-making. In the district of the Alps, to prevent any human being from losing his life in the oven from carelessness or suicide, it must be handcuffed as soon as

constructed by cooking a fowl in it. In the environs of St. Malo, if, by mischance, the oven falls in while being baked, some member of the family of the person who has had it built dies within the year. When the tiles crack, the proprietor or one of his relations falls ill and is in danger of death from a chest disease. In Russia the fall of a tile predicts misfortune. In Franconie the bakers throw a small white loaf into the chimney for luck, saying: "Take that for yourself, Mr. Devil." It is probable that this offering actually made to the devil is a relic of a worship formerly paid to a god who dwelt in the oven, and whom the Christian Apostles transformed into an evil spirit, without entirely destroying the worship paid to him. The tales and legends of Germany have preserved traces of the custom of kneeling before the oven and praying to it. The unfortunate and persecuted had recourse to it, complaining and telling it secrets which they would not tell any person. The childish formula which we can no longer understand are the remnants of a primitive fire-worship. Such is the following employed in Germany: "Dear, good oven, I beg of you—you with a wife—send me a husband." In Haute-Bretagne, when the oven was hot, they sprinkled it with a little water—sometimes holy water—to prevent thunder striking the fire. According to a superstition found in Germany in the last century, when the fire in the oven is too strong there will be disputes in the house.

**A Toad In a Millstone.**

Naturalists are not yet determined on the longevity of all animal life. As a result of years of observation and study they have been enabled to reach many certain conclusions, but constantly some extraordinary phenomena is developed that seems to baffle the stores of knowledge of an Audubon or a Darwin. The following wonderful facts, respecting what may be termed "Living Fossils," and which appear to be well authenticated, serve as an illustration in this direction. During the construction of the Erie Canal, while the workmen were cutting through a ridge of gravel, they found several hundred of live molluscous animals. They were chiefly of the "mya curiosa" and "mya purpurea." "I have before me," says Professor Eaton, "several of the shells from which the workmen took the animals, fried and ate them. I have received satisfactory assurance that the animals were taken alive from the depth of forty-two feet. In addition to this discovery in diluvial deposits, mention is made of a similar one in a much older formation. In laying the foundation of a house at Whitesborough, the workmen had occasion to split a large stone from the millstone grit. It was perfectly close-grained and compact. On opening it they discovered a dark-brown spherical mass, about three inches in diameter, in a cavity which it filled. On examining it particularly they found it to be a toad, much larger than the common species, and of a darker color. It was perfectly torpid. It was laid upon a stone and soon began to give signs of life. In a few moments it would hop moderately on being disturbed. They saw it in the yard moving about slowly for several days but it was not watched by them any longer, and no one observed its further movements. They laid one-half of the stone in the wall so that the cavity can still be seen." "The millstone grit," continues the author above mentioned, "in which the toad was found, is the oldest of the secondary rocks. It must have been formed many years before the deluge. Was this toad more than 4,000 years old? or was it from an egg introduced, through a minute and undiscovered cleavage, into this cavity or grade, made precisely to fit the form and size of the toad? I was particular in my enquiry, and it turned out that the whole stone was perfectly compact, without an open cleavage that would admit an egg. Besides it is well known that the millstone grit is neither porous or geodiferous. If this rock stratum was deposited on the toad it must have been in aqueous, not in igneous solution, and the toad must have been full-grown at the time. Toads are often found in compact, hard, gravelly, diluvial deposits, in situations which demonstrate that they must have lived from the time of the deluge. I think I am warranted in saying this without citing authorities, as it is a common occurrence. Then, why may they not have lived a few centuries longer, if we admit them a life of at least 3,000 years?"

BEST RESULTS  
HIGHEST MERIT

RELIABLE  
SATISFACTORY  
DURABLE

ALWAYS ATTEND

GREEY MILLS AND

GREEY MACHINERY

Read these voluntary Letters recently received :

**AFTER RUNNING SIX-AND-A-HALF YEARS**  
ORWELL, April 4th, 1892.  
MESSRS WM. & J. G. GREEY, Toronto, Ont.  
Gentlemen, Please send me 6 brushes for a 6 x 15 inch roll. This will be the first cent the rollers have cost us since we started. They still hold their corrugation and look as well as ever.  
Yours truly,  
E. R. WHITE, Miller, Orwell

RICHMOND, Ont., April 5th, 1892  
MESSRS. WM. & J. G. GREEY, Toronto, Ont.  
Dear Sirs, - We have had a big trade this winter Mill doing first-class  
Yours, etc.,  
MC EROY & GEMMEL.

WHEATLEY, Ont., March 22nd, 1892.  
MR J. G. GREEY, Toronto, Ont.  
Dear Sir, We have our mill in splendid shape Everything works well. The rolls you last sold us just work charming. We claim that we have the best mill in Western Ontario, at least we are making the best flour and giving the best results. Mr. Greey, I thank you for your kindness. My mill is giving excellent satisfaction.  
Yours truly,  
D. OMSTEAD.

TEESWATER, Ont., March 22nd, 1892  
MESSRS WM. & J. G. GREEY, Toronto, Ont.  
Gentlemen, We would remark that we have strong competition here now, but are happy to say that we can beat them every time  
Yours truly,  
JAMES ROBERTSON,  
Miller for Andrew Little, Teeswater, Ont.

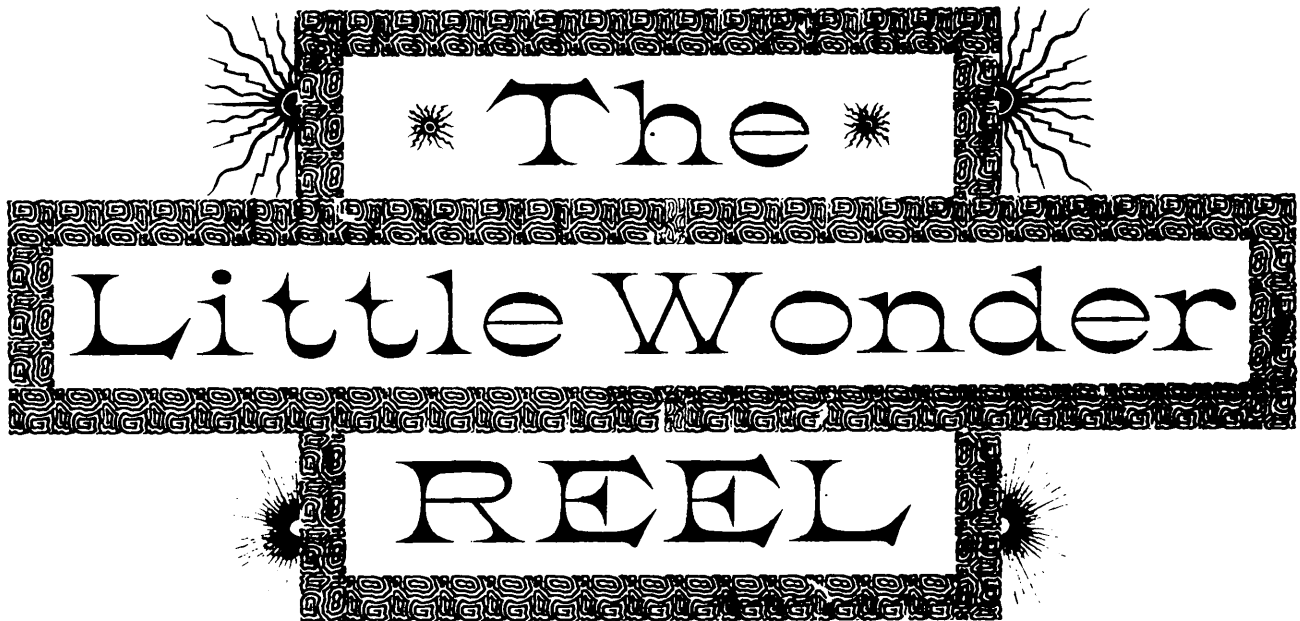
GARDEN HILL, Ont. Feb 24th, 1892  
TO WM & J. G. GREEY, Toronto, Ont.  
Gentlemen, I have pleasure in accepting the mill you built for me and handing you settlement for same in full, and in doing so I can say that I am fully satisfied and pleased with all your dealings with me. The mill is fully up to your guarantee and the work done by your Mr. McKeown is first-class, the millwrighting being solid and substantial and the mill running very smoothly all through. I believe I was fortunate in entrusting my contract to your firm, as all our dealings have been of the most agreeable nature.  
I have compared the work of the mill with some larger mills in this locality and I believe it is fully up to any of them.  
Wishing you every success, which your dealings with me would lead me to believe you deserve, I am,  
Yours truly,  
J. DOUGAN GRAY

High Glass Machinery for Roller Flour Mills

Manufactured by

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONTARIO



The  
Little Wonder  
REEL

Is Cheaper at Double its Price

Than any other Reel as a Gift

CHATHAM, Ont., April 8th, 1892.

WM. AND J. G. GREEY, Toronto, Ont.

Gentlemen, We have been running your Little Wonder Reel now for some two weeks and it is giving splendid satisfaction, being just what we needed to make our second grade of flour lighter in color and of even make. Your draft for same has been presented and paid.

We may require another of the Reels in the near future: meantime, we are

Yours very truly,

CAMPBELL & STEVENS.

◀◀ UNEQUALLED FOR BOLTING OR RE-BOLTING ANY STOCK IN THE MILL ▶▶

SO SMALL, IT GOES ANYWHERE  
RUNS SO EASY, NO TROUBLE TO DRIVE

WM. & J. G. GREEY 2 CHURCH STREET

TORONTO, ONT.



QU'APPELLE farmers are moving for an elevator.  
JOHN MOIR, grist mill, Holland, Man., has assigned  
SAYLOR'S mill, at Tiverton, Ont., is being overhauled.  
FLOUR is now being exported to China and Japan from Victoria, B.C.

SUBSCRIPTIONS are being solicited for a farmers' mill at Lisle, Ont.

A STOPPING mill is being erected at Black Bank, Ont., by J. W. Rinn.

HARRIS & GRANT, grain dealers, Winnipeg, Man., have dissolved partnership.

THE ground in many parts of the country is in favorable condition for early seeding.

McKAY & GUEST'S grist mill, at Renfrew, Ont., was totally consumed by fire on the 26 ult.

JOHN OLIVER, a practical millwright in the employ of Mr. Cargill, of Cargill, Ont., is dead.

THE farmers of Miami, Man., are talking of getting up a joint stock company to build a grist mill.

THE Indians of Crooked Lakes Reserve, N.W.T., are proving themselves to be successful growers of wheat.

COLLINGWOOD ratepayers have voted almost unanimously to spend \$15,000 for the purpose of dredging the harbor.

CHARLES ARMSTRONG, miller, Guelph, Ont., writes: A great lookout for winter wheat in this section this spring.

SNEAK thieves broke into Wm. Milne's grist mill, at Ethel, Ont., but managed to secure only ninety cents in stamps.

JOHN LUMMIS is erecting a roller mill at Wychbridge, Ont.; capacity fifty barrels per day; to be operated by water power.

SIR CHARLES TILDER is en route to Madrid, seeking to maintain and extend our good relations with Spanish West Indies.

THE annex to elevator "A," Fort William, Ont., is completed. This increases the storage capacity there by 1,250,000 bushels.

JOHNSON, elevator man, of Minnesota, Man., contemplates starting a machine shop at Neerawa. He wants exemption from taxes.

At Hartney, the new Manitoba town, 350,000 bushels of wheat were marketed the first year, and about 200,000 are yet to be marketed.

THREE hundred and fifty acres of wheat have already been sown on the Canadian Agricultural company's farm, at Namaak, Alberta.

HALL, ROSS & CO., Victoria, B.C., have distributed forty tons seed wheat in the Delta, agreeing to purchase the wheat in the fall at \$30 a ton.

THE Western Milling Co., of Regina, Assa., have had powers granted to increase the capital stock of the company from \$40,000 to \$100,000.

A local correspondent from Elk Creek, Chilliwack, B.C., writes to say that a grist mill has been erected and is now in operation at that place.

N. MAYNARD, who is in the flour and feed business at Dunham, Quebec, has decided to build a new store for the better accommodation of his trade.

JAMES H. PETHICK, of Millbrook, Ont., was killed a fortnight ago by being caught in the gearing of a grain crusher. He had only been married a few months.

At the Frontenac Assizes, held recently, the hull-less-outcase was dismissed, the judge holding that the defendants, or alleged "sharps," had maintained their case.

MANAGER Thompson, of the Ogilvie mills, Winnipeg, Man., who has been in Florida seeking better health, is expected home during the month, feeling the benefit of his trip.

D. McLEAN, of Lakefield, Ont., will build a 100 barrel flour mill, at Calgary, Alberta. The town gives a bonus of \$3,000 and exemption from taxes for ten years, he to find his own site.

C. R. COUGHA CO., dealers in grain, flour, etc., of Lennoxville, Que., have been compelled to make extensive alterations and improvements in their premises to meet their growing business.

PORTAGE LA PRAIRIE, Man., where there is now a 600 barrel mill, is to have a mill built by the farmers of the district, having a capacity of 100 barrels. A local stock company will build a 100 barrel mill, at Gaimbars, Man.

It is stated in a leading Winnipeg paper that 16,000,000 bushels of wheat have already been taken this season from the farmers' hands in Manitoba and the Territories. This would mean an average of over 500 bushels for each farmer in the country.

CONTINUED activity is showing itself in the building of elevators in Manitoba. At McDonald Station, it is said, the farmers will build a 100,000 bushel elevator. At Burnside another elevator will be erected. Belmont is also to have an elevator.

ACCORDING to the Empire, some Canadian millers and grain dealers are moving quietly to have a clause inserted in the Canadian Inspection Act, providing that the inspector who, through neglect or wilfulness, issues wrong inspection certificates, shall be liable to imprisonment.

A DISPATCH from Winnipeg, Man., says: Grain men here are considerably agitated over the fact that all the elevators and yards at Montreal are full of grain, and the company is unable to furnish further storage. The grain men are now praying for the opening of navigation.

MR. R. H. REED, of Douro, Ont., last year sowed two and a half bushels of two-rowed barley on barely two acres of land. From this he reaped 104 bushels of grain that weighed 55 lbs. to the bushel. He has sold about sixty bushels, will sow a quantity this year and has a quantity on hand.

A STATE of Red Eye wheat, grown on the farm of Joseph Fullefer, at Lac Round, in the Qu'Appelle valley, is reported to be of an exceedingly fine quality, and it is likely that the local agricultural society will purchase twenty five bushels of this wheat and send it to Winnipeg for competition at the summer exhibition.

MR. ANGUS MACKAY, of the Indian Head Experimental Farm, urges on Northwestern farmers to go in more for mixed culture and not exclusively for wheat. Growing half the wheat they now do, they will be able, he says, to get it all in safely ere the frost comes, and they can make up for the diminution of wheat by the growth of other crops.

It will be remembered that several months ago Esterbrook's grist mills, at Tweed, Ont., were destroyed by fire, the cause of which was not distinctly known at the time, but the matter was solved a few days ago. Workmen, while excavating on the site of the fire, found human bones, and the conclusion is that a tramp had probably laid down his pipe before the fire in it was out, and went to sleep. In this way the fire may have started, and before he could escape he was roasted alive.

JAMES MALCOLM FRASER, who for the last thirteen years was customs appraiser at the dock in Windsor, Ont., died on the 1st inst. of paralysis of the heart. He was on duty as usual the Wednesday before. Mr. Fraser was born in Aberdeen, Scotland, seventy-three years ago, and came to Canada when a lad of eighteen. He settled in Galt and went into the dry goods and grocery business with Adam Warnock, where he remained for twenty years or so, being very successful. He then bought the flouring mills at Flora, Ont., where he met reverses, burning out three times. It is said that he still had considerable money, and to retrieve his losses went upon the Chicago Board of Trade and dropped his pile. After he was financially ruined, he was given a position in the customs department by Sir John A. Macdonald, who was a firm friend of his, and thirteen years ago he was transferred to Windsor.

MR. S. A. McLEW, at a banquet given by the Board of Trade, of Winnipeg, Man., in response to the toast "Our Manufacturing and Milling Interests," gave an interesting history of milling in this country, from 1815, when the first wheat was ground by mills brought by Lord Selkirk. One of these was built of two stones, three feet in diameter and three inches in thickness; its capacity was five bushels in twenty-four hours. In 1864 a small grist mill was established at Fort Garry; its capacity was twenty-five bushels in twenty-four hours. In 1876 flour was imported by the Red River and sold for the sweet sum of \$3 a barrel. Mr. McLeW told of Ogilvie & Hutchinson, of Guelph, obtaining some Manitoba wheat as an experiment, paying about \$1.22 a bushel for it. In 1882 stone mills were used; the total capacity was 700 barrels per day throughout Manitoba and the Northwest. To-day the milling capacity, including the mills at Keewatin, is over 8,000 barrels per day, and they can grind up to something like 20,000 bushels per day. Of the crop of 1881 there were only 272,000 bushels to grind. At that time the Ogilvie mill was started in Winnipeg. Mr. McLeW spoke of the improvements continually going on in roller mills, and of the many distant markets found for Manitoba flour; comparing the crop of 1861 with previous crops he said there was a lack of strength which had been increasing from year to year owing to farmers sowing poor seed. He showed the serious injury resulting from smut; the expense of cleaning being ten cents a bushel, and the effects being even then not removed.

A. J. SAWYER, a prominent grain man, of Duluth, is dead. It is stated that the Columbia Cereal Co., Chicago, will locate an oatmeal mill to cost \$100,000, at Vankton, S.D.

THE Millers' National Association of the United States, is to meet in Chicago on May 24 and 25 instead of June 1 and 2, as first announced.

A RECIPROCALITY treaty has been made with the Government of Nicaragua whereby corn meal, barley, Indian corn, wheat, oats, rice and rice from the United States, will be admitted free of duty on and after April 15.

R. F. WHITAKER and Charles H. Smith, the two clerks who were reported to have embezzled \$20,000 from Lamson Bros. & Co., with which to plunge in the Chicago wheat pit, have been arrested at Chicago.

At Catsburg, Ky., on the 10th inst., the flour mill of J. C. Patton & Co. was burned. Loss \$50,000. Charles McCoy, the miller, was burned to death. He was to have been married in a few days to a young lady of Catsburg.

A DISPATCH from Duluth is to the effect that the Duluth Imperial Mill Co. is this week making a second annual apportionment of profits to employees, on the system of profit-sharing inaugurated some time ago. The system was started by the taking out of life insurance policies by the company on each employee, of from \$1,000 to \$2,500, and in this way \$3,000 was distributed. This week about \$5,000 will be distributed, and this goes to about 150 men.

INDIA is drawing her wheat to the last bushel to take advantage of the higher prices caused by the European shortage of 1891. Notwithstanding the famine in some important provinces of India, and the bad outlook for this crop, the wheat dealers in that country, have wrapped together a grand total of 55,000,000 bushels for exportation to Europe between April 1, 1891, and March 25, 1892. This total breaks the record for India, and it utterly wipes out her reserves of wheat. Should the 1892 crop turn out badly, India will not figure large as an exporter during this season.

A CITY of no contemporary Asia. In the near future Chicago will doubtless lose most of her grain trade to South Chicago. The migration of the elevators to the Calumet region has long been expected and has apparently now commenced. Counselman will this year build a great elevator there and it is said that three other companies will follow his lead. The Calumet region is the natural clearing house between the east and west for grain, lumber and all bulky products. It is a matter of surprise that the city was not originally built there. It has grown out to Lake Calumet, however, and South Chicago now has a population of over 50,000.

OWING to the comparative scarcity of water power in many parts of England for the generation of power for electrical purposes, attention has been given to wind power, with which the country is well supplied. A small experimental plant has been in operation at a flour mill near London, the windmill supplying sufficient power to run a small dynamo. The current is used to charge a storage battery, from which a number of arc and incandescent lamps were lighted nightly. Although the current obtained was small the experiment was successful in demonstrating the value of this form of power for generating electricity. The accumulators give out a steady current to the lamps, of course, independently of any conditions of wind and weather, and practically the obstacles which have hitherto stood in the way of running dynamo by windmills have been overcome.

THE Manchester Guardian gives a summary of the English "National bread bill," which conveys a good view of the position. The annual average amounts spent by the United Kingdom on bread for the five years ending 1880 and 1891 respectively are thus contrasted:

	1880	1891
British and Irish farmers for wheat	\$200,000,000	\$200,000,000
Foreign nations	85,000,000	125,000,000
Canada and Australia	10,000,000	30,000,000
India		15,000,000
Freights	10,000,000	20,000,000
English and Irish millers and net chauts for manufacture, profit and railway carriage	20,000,000	25,000,000
Bakers for manufacture and profit	45,000,000	55,000,000
Cost of home baking	10,000,000	10,000,000
Total average annual cost of bread	\$395,000,000	\$550,000,000



The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pot barley, linseed meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The Miller each month covers very effectively the field of flour, landers and buyers of mill products not only within the borders of the United Kingdom, but in New Zealand, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industry. We invite correspondents from millers, shippers and buyers on any matter touching these important questions.

#### WEST INDIAN TRADE

CANADIAN millers, full as much as any branch of commerce, are interested in the development of trade with the West Indies. The visit of Mr. Foster, Minister of Finance, to the tropics in 1890 should be taken as an earnest of the Canadian Government to open out these markets for our products. Mr. W. E. Halstead, himself a native Canadian, secretary Jamaica Chamber of Commerce, in a letter to the Globe under date of March 31, admits that this mission, so far as actual results are concerned, was not successful, but this success "was limited, not because of lack of effort, but simply because of his Mr. Foster's ignorance of the people he went amongst, and of their methods of doing business. He was in ignorance of the hindrances that were in the way of trade with Canada, and consequently could point out no way to overcome them." Mr. Brown's visit at a later date was more hopeful in its results and by means of the exhibit he made of Canadian products, the interest of the people of the Indies was aroused in Canadian affairs, and a strong disposition evinced to do business with us.

What appears to be most needed now is the adoption of such methods as will place our products readily on the West Indian markets. On this point Mr. Halstead says: "This can only be done by a reduction of freight rates from Halifax to Montreal and the upper provinces. Since the 1st of January last eight out of the ten vessels cleared from Jamaica for Canadian ports have gone in ballast, and the two remaining took but half a cargo. The consignees tell me they send no cargoes because the Halifax and Lunenburg markets are very poor, and the freight rates to markets beyond are prohibitive. Sugar is not sent to Canada because the Canadian Government does not admit as low a standard as does that of the United States.

"Having opened as wide as possible the doors to Canadian markets, the next thing necessary is the appointment of a trade agent or representative in the West Indies, whose duties it shall be to study Canada's interests, to afford any information to Canadian firms, to advise and assist any travellers the firms may send, and to arrange for the sending of return cargoes to Canada. Or, perhaps, it might be better still to make the agent manager of a "Canadian house," to which Canadian merchants may send samples, and through which orders may be transmitted. If an increase of trade is really desired the appointment of such an agent is absolutely necessary. Local commission agents will not take the trouble to advertise and work up the sale of any new lines of goods, as it pays them better to handle articles already well known.

"A representative in the West Indies could also be of farther use in acting as a sort of immigration agent. There are, I believe, hundreds of Canadians whose delicate health prevents their success in their own country who could regain their strength in the West Indies and at the same time earn a comfortable subsistence. There are always openings here for steady young men with business educations, and for those whose forte is agriculture there are thousands of acres of rich uncultivated lands that, as one writer puts it, only require scratching to produce wonderful results.

"Being a Canadian myself I am anxious to see Can-

ada trade in the West Indies extended, and having carefully studied the subject and taken the opinion of numerous responsible merchants I am confident that the steps I have suggested must be taken before Canada can secure a fair proportion of West Indian trade.

Mr. Halstead describes the merchants of the West Indies as being thoroughly conservative, who have been doing business in a certain way and buying in certain markets, and who will not make a change for any uncertain advantages. This condition makes it necessary for our Government and people to take hold of any negotiations in an earnest, thorough going fashion.

#### NEWFOUNDLAND AFFAIRS.

Conditions, pointing to a satisfactory solution of trade difficulties with Newfoundland, have not improved during the month. On the 5th inst., after a prolonged debate in the Legislative Assembly of Newfoundland, a resolution, for a *modus vivendi* with Canada, was defeated by a straight party vote. Public sentiment in Newfoundland is certainly with Mr. Morine, the mover of the resolution, in his effort to reach a practical and business-like settlement of the business side of this question. The Government, however, appear to be determined in their opposition to this course. Mr. Bond, colonial secretary, going out of his way to declare that Newfoundland would prohibit the sale of bait to Canadians till the Bond Blaine Convention was assented to. He further hinted at certain covert negotiations with the United States that would secure to the colony important commercial concessions from that country. This kind of talk is excusable on the political stump, but coming from a crown officer in his position in the House it is assuredly unstatesmanlike and entirely lacking in national dignity.

In the meantime affairs are in the hands of Mr. Bond and his friends, and even though, as intimated in the despatch from Newfoundland, the party whip itself failed to bring not a few recalcitrant ministerialists into line, and made it difficult for the Government to maintain its attitude, yet they accomplished despite these difficulties the defeat of the proposed *modus vivendi*. When an opportunity is given the people themselves to express their opinion on the question we need not fear either their fairness nor good sense. Their attitude is one of friendliness to this country, and as a business people they are ready and want to do business with us.

It is with the business view of the case the MILLER has to do, and it is this view that prevails evidently with the majority of Newfoundlanders. This fact makes the action of the Newfoundland Government in refusing to consider the *modus vivendi*, which is the present business solution of the difficulty, and alike generous to both countries, the more disappointing to all reasonable men. The diplomatic negotiations may be safely left in other hands.

What this means to the Canadian miller it is easy to see. It means no trade with Newfoundland while the present strained relations are continued. As a leading Montreal exporter has expressed it "I do not expect to sell a dollar's worth of flour to Newfoundland this season, yet I have exported in a season as many as 27,000 barrels of flour to Newfoundland. The same quantity of American flour will go through Canada to Newfoundland in bond and all the profit be obtained by the United States.

#### CORN MILLING

Corn milling, it is anticipated, will show a great increase in Kansas during the year 1892. This is the territory in which King Corn has an unquestioned ascendancy. An American milling contemporary commenting on this fact counsels corn millers to give greater heed to more profitable methods of corn milling in the future. It will no longer do for the "flour miller to rig up a corn meal plant with machinery dismantled from their flour mills. Corn milling is no longer by the tail end of flour mills. Like in flour milling, those corn millers who supply the trade of the future must cater to it with the product of the best grain, cleaned and milled according to the best system known to progressive millers. Because a cheap grain, and at the same time capable of producing a good, nutritious and healthy bread, corn is almost certain to play an important part among the future breadstuffs of European countries.

#### NEW USE FOR CORN.

A new avenue of usefulness for Indian corn is likely to be opened up in the manufacture of an oil which is destined to supersede linseed oil. The discovery was made through the scarcity of Russian linseed oil, thus forcing soap manufacturers to look elsewhere for a supply of oil. The attention of a number of chemists was directed to the matter, and these gentlemen began a series of experiments with Indian corn with successful results. After careful examination it was found that Indian corn oil did not lose its clearness when subjected to the cold live linseed oil, and that it was far superior to linseed oil in every respect. It was further found that owing to its cheapness Indian corn oil could be probably used in the manufacture of soft soaps and for other purposes.

#### TRANSPORTATION TOPICS.

An order in Council has been passed by the Dominion Government declaring that the regulations of last year with respect to the rebate of canal toll on cargoes of grain for Montreal passing through the Welland shall remain in force until the end of 1892. There will accordingly be made a rebate of eighteen cents out of twenty cents per ton canal toll on wheat, Indian corn, peas, barley, rye, oats, flaxseed and buckwheat, which have been carried through the Welland Canal and the St. Lawrence canals to Montreal, or to any port east of Montreal, in all cases where such products so carried are exported, and in such cases only.

From the report of the Department of Marine, laid before Parliament this month, we learn that the total number of vessels remaining on the register books of the Dominion on December 31, 1891, including old and new vessels, sailing vessels, steamers and barges, was 7,015, measuring 1,005,475 tons, register tonnage, being an increase of twenty four vessels and a decrease of 19,499 tons register, as compared with 1890. The number of steamers on the registry books on the same date was 1,433 with a gross tonnage of 221,679 tons. Assuming the average value to be \$30 per ton, the value of the registered tonnage of Canada, on December 31 would be \$30,164,250. The number of new vessels built and registered in the Dominion of Canada during the present year was 312, measuring 32,145 tons, register tonnage. Estimating the value of the new tonnage at \$45 per ton, it gives a total value of \$2,346,525 for new vessels. The number of tons of new vessels is included in the total register tonnage of 1,005,475, and in the total value of \$30,164,250.

The Montreal Shareholder notes with pleasure that the advantages of the St. Lawrence route from the lakes to the sea over all other routes seem to be even better appreciated by our neighbours in the United States than they are by ourselves. Leading newspapers in New York and elsewhere continue to direct attention to the immense importance of the Canadian system of canals as the national outlet to the sea of the rapidly increasing traffic from the west, and urged the necessity of Government action on the subject with a view to obtaining treaty rights by the United States to the permanent use of the Canadian canals. Trade always follows the cheapest route, and Canada without doubt possesses a route from the great lakes to the ocean that must distance all competitors. The people of the United States realize this, and this fact is not likely to be lost sight of by the Canadian Government.

The Pickford & Black West Indian Steamship Co., who now run two steamers between Halifax, Bermuda and the West Indies, say that trade is steadily increasing, and that it will soon be necessary to put a new steamer on the line, the outward cargoes being so large that the present carrying facilities are not sufficient.

#### CONDITIONS AND PRICES.

"Dull as dish water" is the way one prominent miller answered our inquirer: How is flour? The flour market is undoubtedly on the quiet side. This remark has greater relevancy to export than home trade, though prices at home are depressed in sympathy with English advances. The Northwestern Miller expresses the export situation in these words: "Export trade is still restricted to very small limits, foreigners being slow to place much confidence in the permanency of prices. Patent is the grade mainly exported. Bakers and low grade continue

almost wholly neglected, and so few sales are made that millers have no very well established prices. The direct exports of flour last week were 46,400 barrels, against 48,740 barrels the preceding week. Altogether it is difficult for our millers to do anything approaching a large business. It is reported from Montreal that dealers are asking their Manitoba agents to withhold shipment of orders placed until they themselves see a more certain outlet for stocks. Large quantities of American flour, it is said, are stored at Montreal waiting shipment by first boats, a consequence of the closing out of the Newfoundland trade in Canadian flour, and directing it straight into the hands of United States millers. Of conditions in Manitoba the Winnipeg Commercial says: "Millers have paid long prices for wheat, which they now hold, or have been running on for some time back, and the recent decline in wheat leaves the milling industry in an unsatisfactory position." The brand of "Our Gem," which had been selected as the standard for straight roller flour by the Board of Delegates for this purpose in October last, having been found of too high a grade as to color to meet the requirements of the market, an order-in-council has been passed rejecting that standard and substituting the brand "White Star" as the standard for straight roller flour and after May 1.

PRICES OF FLOUR AND MEALS.

Quotations at the various market points are as follows:—Toronto: The Millers' Bulletin reports "Sales straight grade at \$4.05, \$4.10, \$4.15 and \$4.25; Patents at \$4.10, \$4.15, \$4.20, \$4.24, \$4.35 per barrel, f.o.b. for Lower Provinces. Small sales of extra, \$3.65, and low grade, \$2.60, west. Bran, \$13, \$13.50 and \$14. Shorts, \$13, \$13.50, \$14 and \$15." Strong bakers is the only flour that is meeting with a local sale, selling at \$4.65 to \$4.90; patents \$4.75 to \$5. The oatmeal market shows a larger supply than there is a demand, and prices declining. Standard, in jobbing lots, \$4; granulated, \$4 to \$4.10; rolled, \$4; bran, \$14 to \$14.50 per ton.

Montreal: Patent spring, \$5 to \$5.20; patent winter, \$5 to \$5.10; straight roller, \$4.50 to \$4.70; extra, \$4.20 to \$4.30; superfine, \$3.90 to \$4.05; fine, \$3.30 to \$3.60; strong bakers' Man., \$4.60 to \$5. Meals: The market rules very quiet, and prices are not disturbed. Granulated, in barrels, \$3.95 to \$4; granulated, in bags, \$1.92 1/2 to \$1.95; standard, in barrels, \$3.85 to \$3.90; standard, in bags, \$1.92 1/2 to \$1.95. Feed: The market is quiet and easy. Bran, \$15 to \$15.50; shorts, \$16 to \$16.50; mealie, \$20 to \$23.

Winnipeg, Man.: Patents, \$2.40; strong bakers' \$2.20; second, do., \$1.80 to \$2.00; XXXX., \$1.20 to \$1.40; superfine, \$1.10 to \$1.15. Less than 100 pound sacks five cents extra per hundred. Millstuffs - Prices are said to be maintained more regularly; bran at \$10 to \$11 and shorts at \$12 to \$13 per ton, in small lots, to the local trade. Quotations are, of course, much lower in car lots, at mills, to ship. Ground feed Quoted at \$13 to \$15 per ton, locally, in broken lots, as to quality.

DUTIES IN SWEDEN.

EVER since it convened in January, the riksdag of Sweden has been wrestling with the question of readjusting the import duties on grain and kindred articles. Sweden's demand for foreign grain is supplied largely by Russia, especially so far as rye is concerned, and consequently the Czar's ukase forbidding the export of rye was instantly felt as a disturbing factor in the Swedish grain markets, prices rising to an abnormal height greatly increasing the cost of living and causing hardship and distress among the working people. A demand for the repeal of the duties began to make itself heard and gained force as time went on. The beginning of the parliamentary session was awaited with great anxiety. The extreme free traders demanded the abolition of all grain duties. The protectionists took the ground that the present condition of the grain market was merely temporary and showed no disposition to make concessions. The Government took a middle ground and presented a bill for the temporary reduction of the duties. At last a vote has been reached, with the result that the position of the Government has been sustained in the main. The present duties are: Rye and wheat, 68c. per 100 kilograms; flour of all kinds, \$1.17; potatoes, 14c. Under the modified tariff a duty of 41c. per 100 kilograms is imposed on rye and wheat for the rest of the year. The duty on corn, 68 cents, will probably not be lowered.

TRADE NOTES.

Our thanks are due the Consumers' Goodage Company (limited), of Montreal, Que., for a unique and exceedingly tasty desk calendar for this year, encased in full morocco frame. This company has a way of doing things liberally and well always.

PERSONAL.

The MILLER had the pleasure of a talk the other day with Mr. J. H. Walker, the popular manager here for the Canadian Rubber Company, of Montreal. He had recently returned from a business trip in western Ontario, and reports a large demand at all leading points for their celebrated "Seamless Tube Hose," "Forsyth Patent Rubber Belting," and other excellent specialties that this company control and manufacture. The trade done this year is largely in excess of that for same period of former years.

CANADA'S BIG BELT.

The largest driving belt ever manufactured in Canada is that which is now almost finished and to be seen on a monster sixty inch hydraulic press erected for the purpose in the leather belting manufactory of Messrs. Robin & Sadler, 2520 Notre Dame Street, Montreal. This belt, when finished, will be placed in position on the driving pulley of the Royal Electric Light Company's saw engine at the establishment on Wellington Street and will transmit 800 horse power. It is made without a rivet and is a solid mass of leather, three-ply, cemented together by a pressure of thirty tons weight from the press. Its width is fifty-three inches; length 130 feet and about an inch in thickness and of 2,000 pounds weight. The outsides of the belt are without a patch, while the whole contains 100 steer hides selected as to superiority from a collection of over 2,000. From the press the belt will be submitted to a special process, known only to this firm, whereby the surface will be made proof against oil absorption, when it will be ready for use. This firm is also manufacturing a belt forty inches wide, three-ply, for the Royal Electric Company's new 600 horse power engine.

TO STOP THE LOTTERIES.

QUEBEC, April 12. A deputation of the St. Jean Baptiste Society, consisting of Messrs. L. O. David, Jacques Gremer, J. D. Rolland and I. E. Beauchamp, waited upon the Government this morning and were received by Hons. Messrs. De Boucherville, Casrain, Nantel, Flynn, Beaubien and Pelletier. They drew the attention of the Government to the fact that several lotteries have recently sprung into existence in this province notwithstanding that the only legal one was the Province of Quebec Lottery, which was authorized by Parliament, and asked that steps be taken to wipe those lotteries out of existence, with the exception of the Province of Quebec Lottery. They also asked the Government that a certain time be fixed for the existence of the provincial lottery. Hon. Mr. De Boucherville said that he was opposed to lotteries in general and would immediately put a stop to all lotteries, with the exception of the Province of Quebec lottery, but when the object for which the latter was established was attained, it would also be put out of existence. The deputation returned to Montreal this afternoon highly satisfied with the result of their interview. Montreal Star, 12th April, 1892.

JOHN BROWN JOHN REED GEORGE HAMILTON

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**Rubber Seamless**  
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WHY run your chop, stone, cleaning machinery and other machinery occasionally used

WHEN all could be cut off and on as needed instantly with our Grip Couplings, Gears, Pulley

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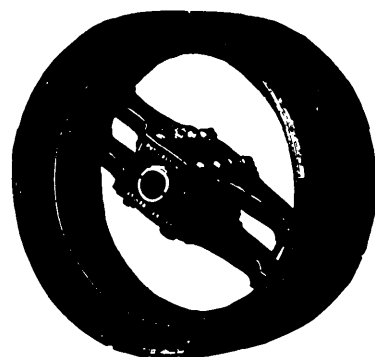
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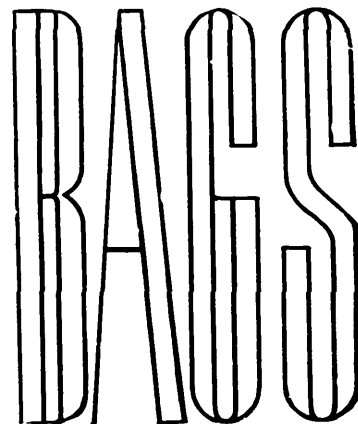
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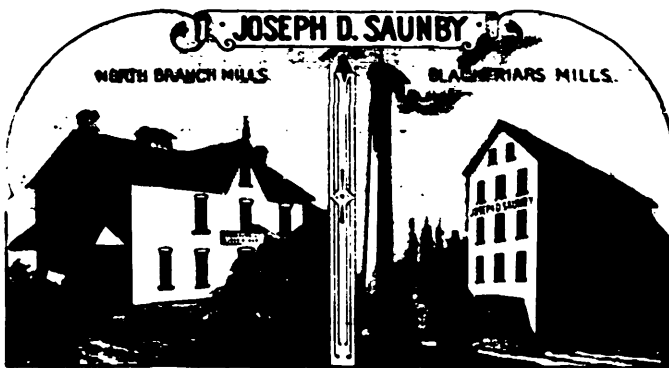
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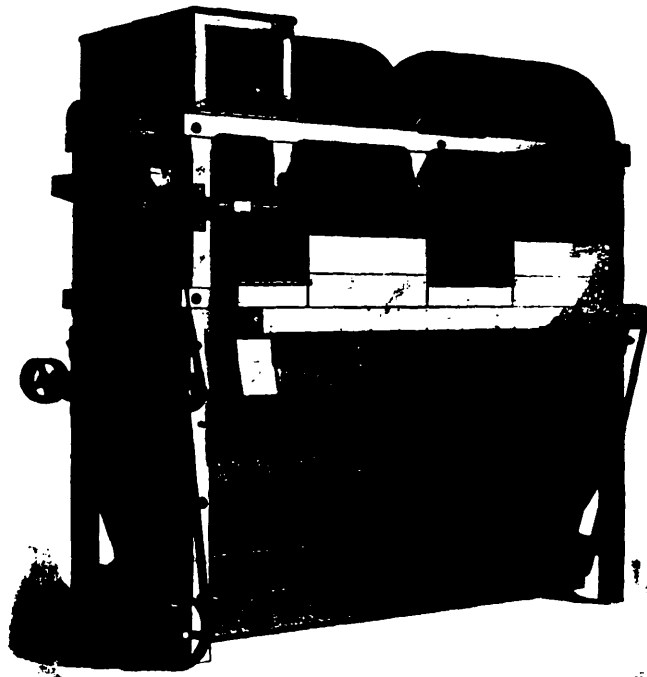
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Is Excellent for  
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We supply a Reliance Sieve Purifier alone, with a dust catcher in place of the usual purifier fan. The air is returned beneath the sieve, thus applying the air belt principle to a sieve purifier.



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We supply a combined Air and Sieve Purifier with a dust catcher in place of the usual purifier fan. The air is returned beneath the sieve. No air drawn from the outside. Dust from the air and the sieve purifiers discharged separately.



Air and Sieve Purifier, with Dust Collector



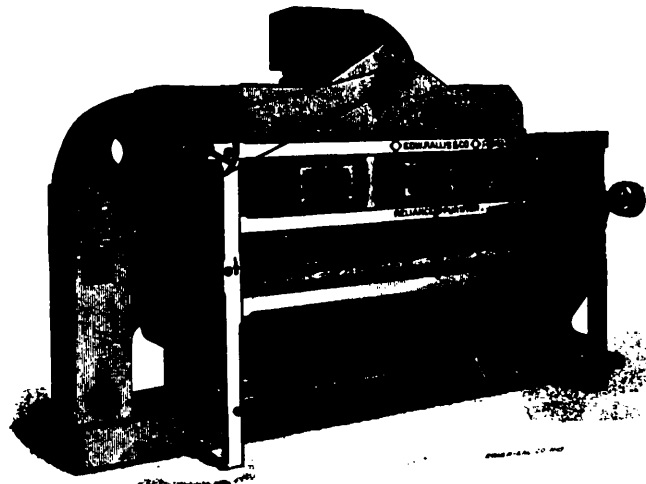
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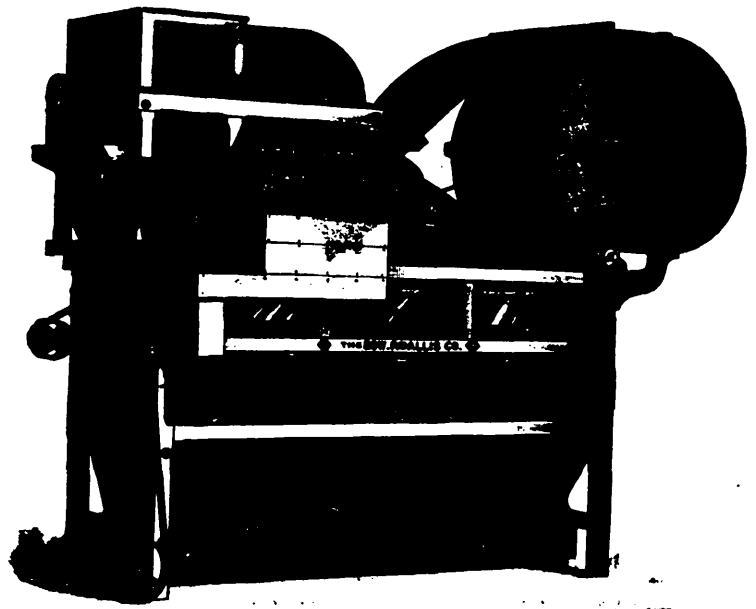
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THE middlings purifier illustrated in Cut No. 1 is of the Reliance patent, in a handsomely finished chest, with double conveyors of the hollow shaft Reliance patent, having reversible flights. The reciprocating sieve is operated by smooth working eccentrics and covered with Dufour bolting cloth or gritz gauze, and the cloth is kept clean by an automatically traveling brush, moving crossways of the sieve so as to avoid mixing the clean stock at the head of the sieve with the inferior middlings at the tail. An excellent cloth tightener is provided, and the air currents are controllable at will.



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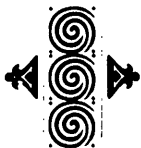
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**T**HERE is no chance to sell any Canadian flour to Newfoundland till the Canadian millers bring enough pressure to bear on the Government to settle the difficulty between the two countries.

Duty on Canadian flour, \$1.05 per barrel.

Duty on American flour, .30 per barrel.

There is no reason why this quarrel should be kept up.

**IMPROVED SINGLE PILLAR DORMANT**

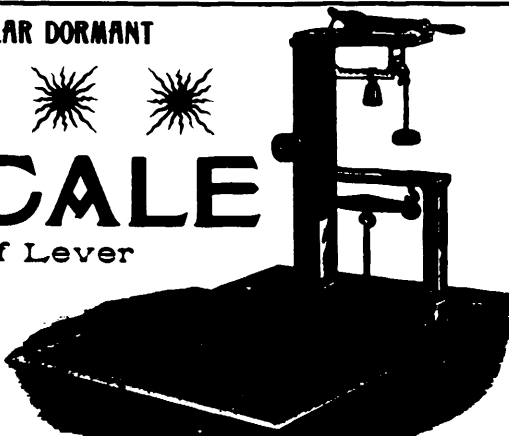
Warehouse  
or Hopper



**SCALE**

With Cutoff Lever

With . or . without  
Drop . Lever



♦ ♦ **GAIS SCALE** is much cheaper than the Double Pillar Dormant, but is equal to it both in strength and accuracy. All the strain and leverage is centered directly on the pillar instead of bearing on the cap piece as in the two pillar scale, thus effecting a saving of two iron pillars and heavy cap piece required in the double pillar pattern. It has an advantage over double pillar in that a Drop Lever may be used to let down the platform when not in use.

It is more accurate than the ordinary Single Pillar Dormant scale, as the cut-off lever removes half the pressure which in the ordinary scale causes straining and deflection of the beam, and thus the beam of new scale works more freely and indicates more correctly. Each weight at beam point weighs twice the weight on platform than it does on the ordinary scale.

The removal of so much strain and pressure prevents the parts from breaking or wearing so quickly, and the improved scale will be found to be much more durable than the ordinary scale.

PRICES GIVEN ON APPLICATION

**BURROW, STEWART & MILNE**

Manufacturers of SCALES  
of all kinds

HAMILTON, ONT.

Improvement secured by Letters Patent issued 5th January 1922