

• Massey's Illustrated •

(PUBLISHED MONTHLY.)

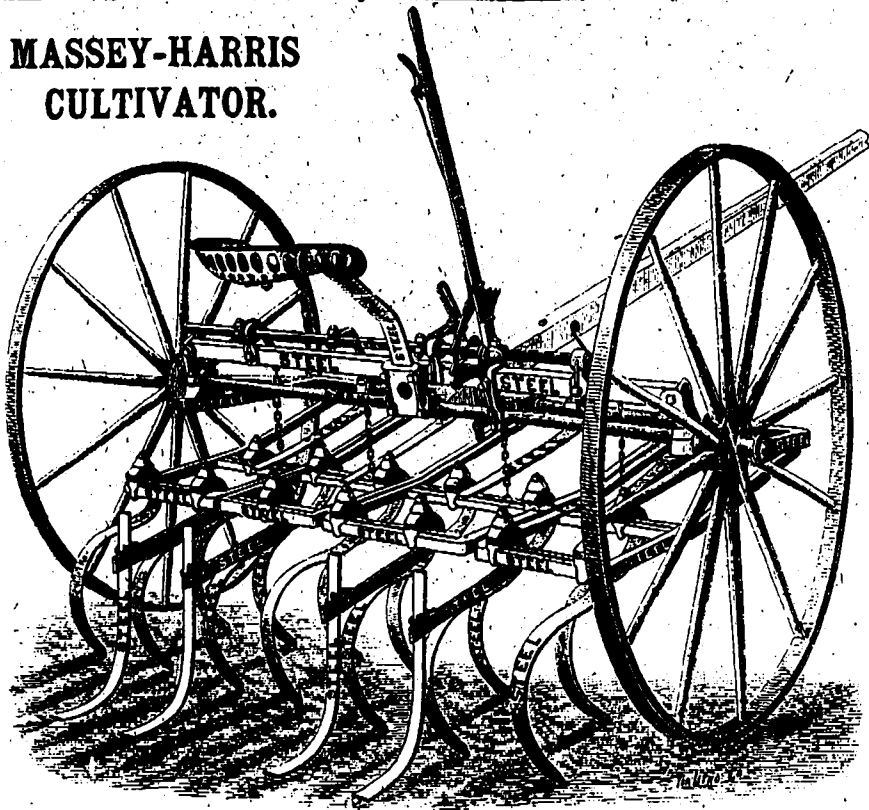
Mid-Winter Number

New Series, Vol. 6, No. 2.

Toronto, February, 1894.



**MASSEY-HARRIS
CULTIVATOR.**



The greatest cultivating implement ever invented.

Will cultivate the hardest clay land with great facility.

The patent "Helper" prevents the breakage of teeth.

The Steel Sections are perfectly flexible, even when full pressure is applied.

The depth of work can be easily and perfectly regulated.

One lever does it all—puts on the pressure, or, when reversed, lifts the teeth up for transportation.

This Machine is a
Massey-Harris Cultivator
with Seed Box attached.



ALL STEEL.

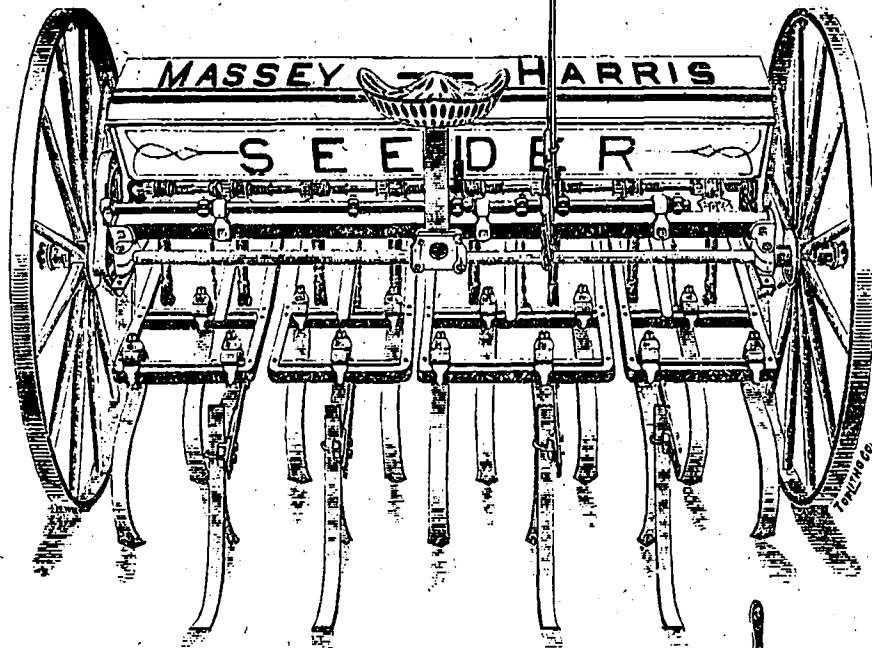
FRAME
AND
SECTIONS
ARE OF
ANGLE STEEL.

ALL STEEL.



This Machine is a
**MASSEY-HARRIS
CULTIVATOR,**
with Grain Seed Box and Grass
Seed Sower complete.

- STEEL FRAME.
-
- STEEL TEETH.
-
- STEEL
PRESSURE BARS.
-
- STEEL SECTIONS.
-
- STEEL AXLE.
-
- STEEL SHOES.
-



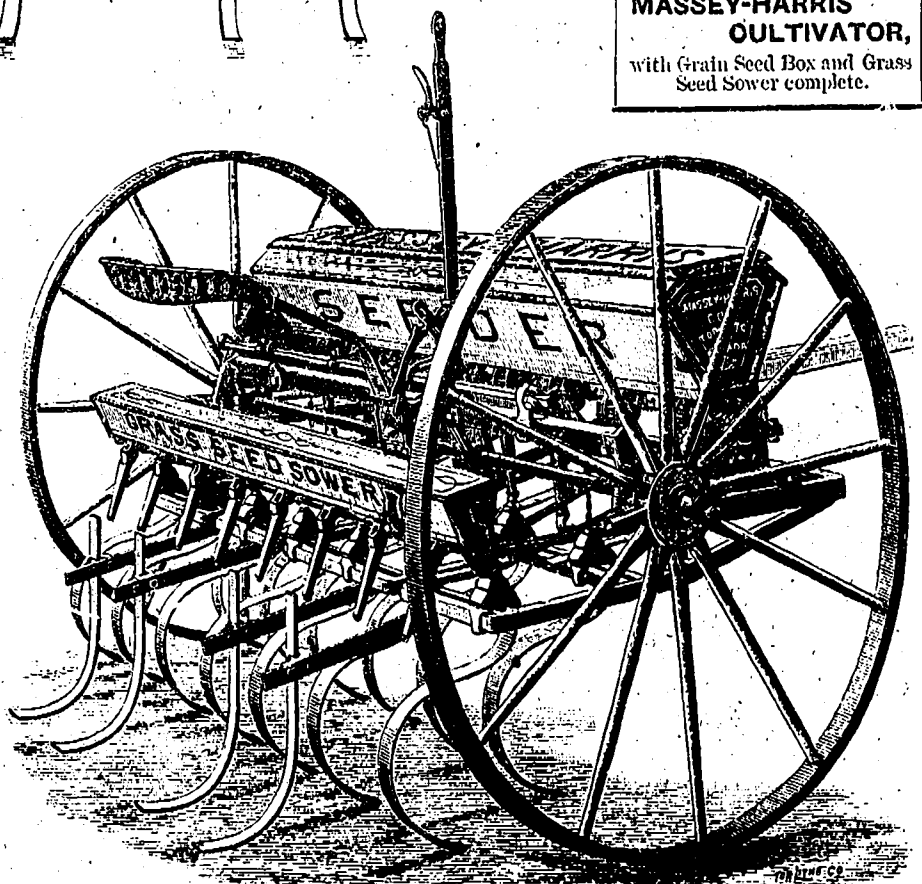
Four Steel Sections carry the Teeth.

New Patent Movable "Tooth-Seat" is a great achievement. By this plan, the teeth may be so divided up as to make the Cultivator into a Scuffler for cultivating corn, beans, potatoes, etc.

Thus one implement takes the place of several different tools.

A seed box with new improved scattering apparatus is made to go with the Cultivator. When thus equipped it makes a perfect Sectional Seeder.

A Grass Seed Sower is also adapted to this multum-in-parvo machine.



• Massey's Illustrated •

(PUBLISHED MONTHLY.)

A Journal of News and Literature for Royal Homes

NEW SERIES.]

TORONTO, CANADA, FEBRUARY, 1894.

[VOL. 6, No. 2.

THE NORTH-WEST.

ITS POSSIBILITIES AND RESOURCES.

Few realize that before the purchase of Alaska, Canada was larger than the United States, but such was the fact. The territory of the Dominion is 3,470,392 square miles while that of the United States was but 3,025,600 square miles.

The area, in square miles, of the organized districts of the North-west is as follows:—

Manitoba.....	73,000.
Kewatin.....	100,000.
Assiniboia.....	95,000.
Saskatchewan.....	114,000.
Alberta.....	100,000.
Athabasca.....	122,000.
British Columbia.....	311,305.
	1,215,305.

Beyond these provinces and districts lies an unorganized territory with an area of more than sixteen hundred thousand square miles.

The Canadian Northwest falls naturally into three great divisions. The territory lying between Hudson's Bay and the great chain of inland lakes in the valley of the Mackenzie River, extending from Lake Superior to the Arctic Ocean, is wooded, mostly rocky, and swampy, but with some areas of good land, merging finally into what are known as the barren lands,

northwest of Hudson's Bay. Second, the great stretch of fertile plains, part prairie and part wooded, lying between the great lakes above mentioned and the Rocky Mountains and extending from the international boundary line almost to the Arctic Ocean. Third, the Alpine region, extending from the Rocky Mountains to the Pacific coast.

It may seem far-fetched, but it is a fact, tried and proved, that the limit of the profitable cultivation of wheat lies at least twelve hundred miles to the northwest of the City of Winnipeg. Rye and oats can be grown at least two hundred miles still further north.

The map we give speaks for itself, and will be a surprise to many who have the idea that the wheat belt of the Northwest is but a comparatively narrow strip.

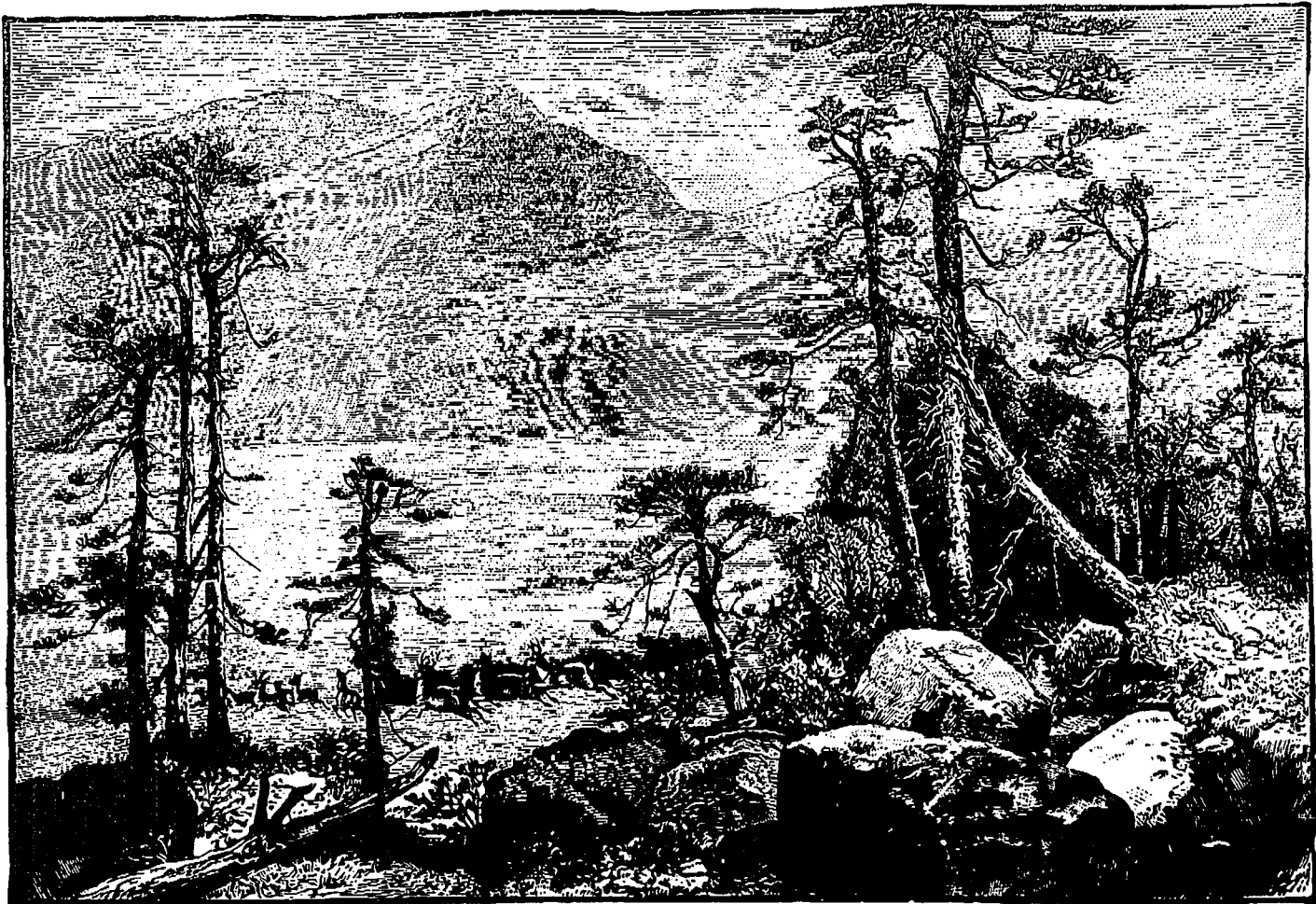
Latitude has a good deal to do with climate but not everything. Altitude is at least as important. The great central plain of North America is two miles high in Mexico and gradually slopes down towards the north, so that the navigable channel of the Mackenzie River is but three hundred feet above the sea level. Hence, the climatic conditions from Iowa north to the Peace River valley, a range of nearly twenty degrees of latitude, are essentially the same. It is a region marked by great heat in summer and great cold in winter.

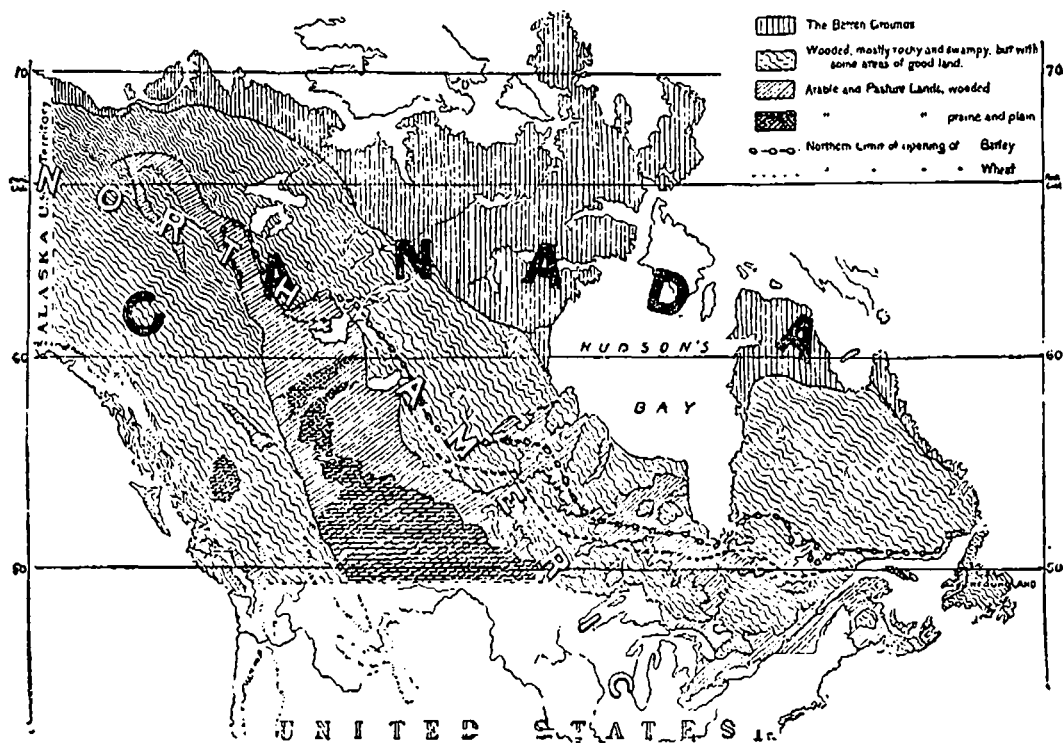
The greater length of the day in the summer

is a great factor in the growth of vegetation in the far northern latitudes. In latitude 56 degrees, which may be taken as the average of the Peace River country, on June 20th sunrise occurs at 3:12 a.m. and sunset at 8:50 p.m. To this is partly due the wonderful rapidity with which vegetation matures. At Fort Simpson, Archbishop Clut speaks of trees passing in a single week from bud to perfect leaf.

In the great Northwest, the region of rigorous winters, cold, moist springs, and dry but intense summers, the undue luxuriance of stem and foliage is checked in the earlier stages of growth, greatly to the advantage of the fruit and seed. Dr. Samuel Farry states as a universal fact that the cultivated plants yield the greatest product near the northernmost limit at which they can be grown. His illustrations include nearly every plant known to commerce. Cotton is a tropical plant, but yields the best staple in the temperate latitudes. Consul Taylor cites the fact that in Iowa, near the southern border of the spring wheat region, seldom more than two well-formed grains are found in each cluster or fascicle forming the row; in Manitoba three grains become habitual, while in wheat from Prince Albert and Fort Vermilion each cluster is made up of five well-formed grains.

West of the great belt of wheat country is an enormous area not adapted to the production of cereals, but admirably suited for the raising of





cattle, horses and sheep. Dr. J. B. Hulbert, of Ottawa, says in regard to this:—

“The entire area is fit for pasturage, as the native grasses grow over the whole country, even to the shores of Hudson’s Bay and the Arctic Ocean, and down the Mackenzie to the sea, and all the region in the valley of the Mackenzie and its tributaries is fit for the production of summer grass. Through all the country east of the Great Lakes of the Mackenzie River system the grasses are like our June grass. The Dominion embraces the chief pasture and meadow lands of North America, and these with their accompanying flocks and herds, are of more importance than wheat lands.”

Over all the plains south of the Great Slave Lake buffalo roamed in countless millions in days gone by. One peculiarity of the grasses of that region is that they cure naturally on the stalk. In nutritious qualities the buffalo grass is equivalent to a combination of Kentucky blue grass and oats, and the horses and cattle of these northwestern plains will turn, with a contemptuous sniff, from the finest cultivated hay placed before them in the manger, and go outside and paw away a foot or more of snow, and eat their fill and fatten on the sweet grass lying underneath.

In a territory so vast and so little explored it is not likely that more than a mere fraction of its mineral riches are known. The coal area of the Northwest is estimated at 65,000 square miles with from 5,000,000 to 9,000,000 under each mile. Fuel will be in no wise lacking for future settlers in this great country.

The tangled mass of the mountain ranges are seamed through and through with veins of precious metals. More than \$53,000,000 of gold alone has already been taken from the mines of British Columbia. Mines of gold are worked also on the Lake of the Woods. Salt, sulphur, asphalt petroleum, metals and minerals of every kind and sort lie beneath the soil, waiting the needs of the coming millions who shall one day make the great Northwest their home.

Our great West needs only to have the truth told of its resources and its abilities. Its climate, soil and products will stand criticism and fullest investigation in the light of day.

Manitoba, being the first portion of Rupert’s Land to be inhabited and developed, it has of necessity made greater progress than the territory to the west of it.

From a population of 62,260 in 1881, it rose to a population of 152,506 in 1891, an increase of 90,246 in 10 years. The total acreage occupied in 1881 was 1,511,435, and in 1891, 4,416,592. In 1881 only 45,750 acres were in wheat, which rose in 1891 to 896,471 acres, and there were 1,000,000 acres in wheat in Manitoba in 1893, yielding 16,000,000 bushels of the finest wheat that was ever put through an elevator—an average of 16 bushels to the acre, while Ontario only yielded 15½ bushels; Wisconsin, 12½; Minnesota, 13; Iowa, 11½; Nebraska, 12½, and Dakota, 12½ bushels—and it was not a good year for yield in Manitoba either.

118,807 bushels of oats were raised in 1881, and 8,470,212 in 1891. They only had 11,800 horses in 1881, but could boast of 86,753 in

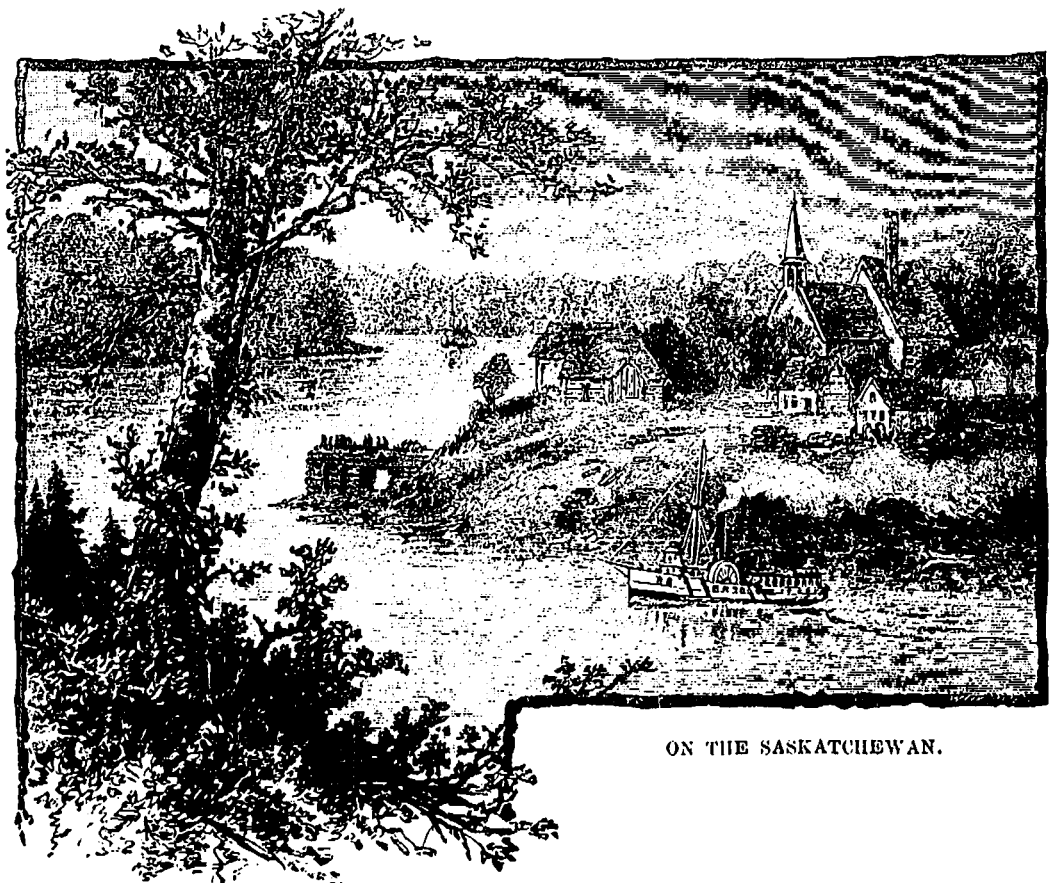
1891 and their cows ran up in the same period from 17,624 to 82,614. The farmers of Manitoba made 4,857,132 pounds of butter in 1891, as against 857,808 pounds in 1881. In 1881 there were only about 130 miles of railway constructed and operated in Manitoba, now there are in Manitoba and the Territories 6,372 miles of railway.

In 1881 Winnipeg had a population of 6,245, with an assessment of \$4,208,460; in 1891 its population had risen to 24,068, and its assessment to \$19,914,210, and for 1893 its assessment is \$21,692,700, exclusive of \$1,500,300 of exemptions, and it is safe to say that the population of Winnipeg is to-day 30,000 and over.

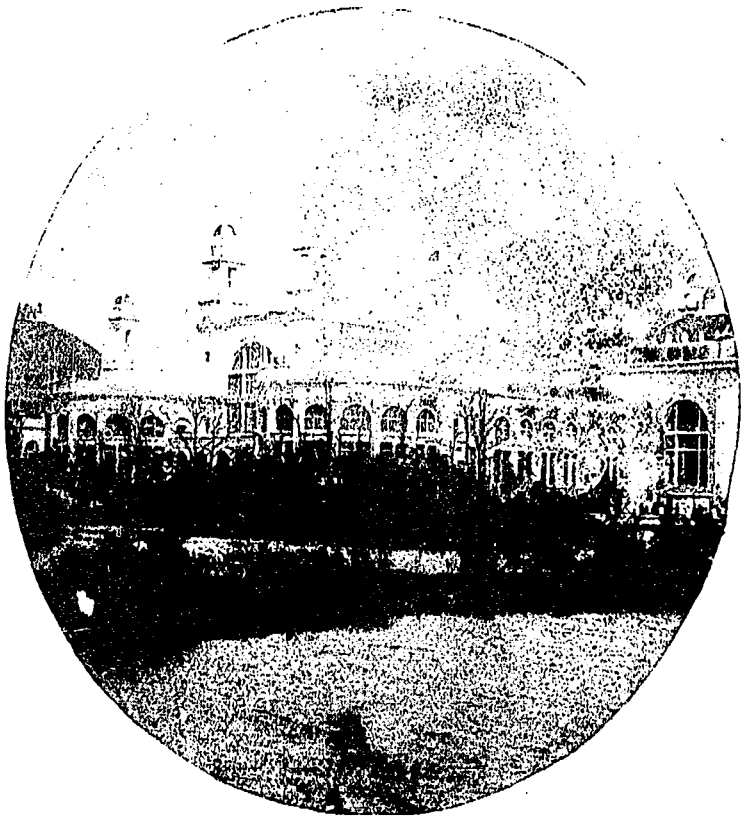
The volume of commercial business in Winnipeg done in 1892 was \$40,000,000; the combined capital represented by the chartered banks of Canada having branches in Winnipeg is \$40,000,000; the city has now 26 churches, 19 schools, 12 banks, 16 newspapers, 122 miles of sidewalk, 20 miles of water mains, 11 miles of gas mains and 19 miles of street railway, as against 20 miles of very indifferent sidewalk, 8 churches, no street railway, a great deal of mud, 4 newspapers and 4 banks in 1891.

What has been said as to the soil and capabilities for wheat growing in Manitoba applies equally well to the districts of Assiniboia, Alberta and Saskatchewan, since as fine samples of No. 1 hard Fyfe as were ever grown in Manitoba have been produced in the districts named. And when the day comes when these future provinces shall have absorbed the same agricultural population as Manitoba has to-day, and the population of all these provinces increases from year to year, as it is bound to do, the 16,000,000 bushels of wheat raised in Manitoba in 1893 will be as a pint is to a bushel, compared with the millions of acres of golden grain that will await the harvest of the hardy toilers on what will yet be the greatest wheat field of the world.

But the wealth of resource in these great prairies is not bound up in the grain produce



ON THE SASKATCHEWAN.



THE ELECTRICITY BUILDING.

alone. While there are millions in wheat, barley and oats, the luxuriant grasses of the prairie yield pasture and hay of unexcelled quality for dairy and beef cattle. The farmers of Manitoba and the Territories have been paying more attention to mixed farming during the past few years. Nowhere in Canada can better butter or cheese be made than the farmer of the Northwest can produce from his prairie grass fed cattle. Cheese factories and dairies are in operation, and yielding good profits to their proprietors.

The grass land of Alberta is the only ranch country of any size left on the American continent; so that along with the immense spring wheat belts of Manitoba, Assiniboia, Saskatchewan and Northern Alberta, Canada is rich in the possession in Southern Alberta of the greatest free range for cattle on this continent to-day, and in Western Assiniboia for sheep.

One of the factors which conduced to the building of a trans-continental railway through Canadian territory were the terms made with British Columbia when that province came into confederation, it being agreed that the Government of the Dominion of Canada should, within a given period, construct a railway which would unite the Pacific province with the rest of Canada. The history of this greatest of Canadian undertakings is well known. After many years had been spent in exploratory surveys, the great undertaking was given into the hands of worthy Canadians, who entered into their contract in 1881. So well did they carry out their part, that the road was constructed and the first train sent through from Montreal to Vancouver in 1886, marking one of the greatest triumphs in enterprise, skill and good management that have ever been exhibited by man in the history of the world.

The building of the Canadian Pacific Railway has opened up and is developing the resources of the great province of British Columbia, and exhibiting the richness it possesses in mine, field, forest and stream. These alone

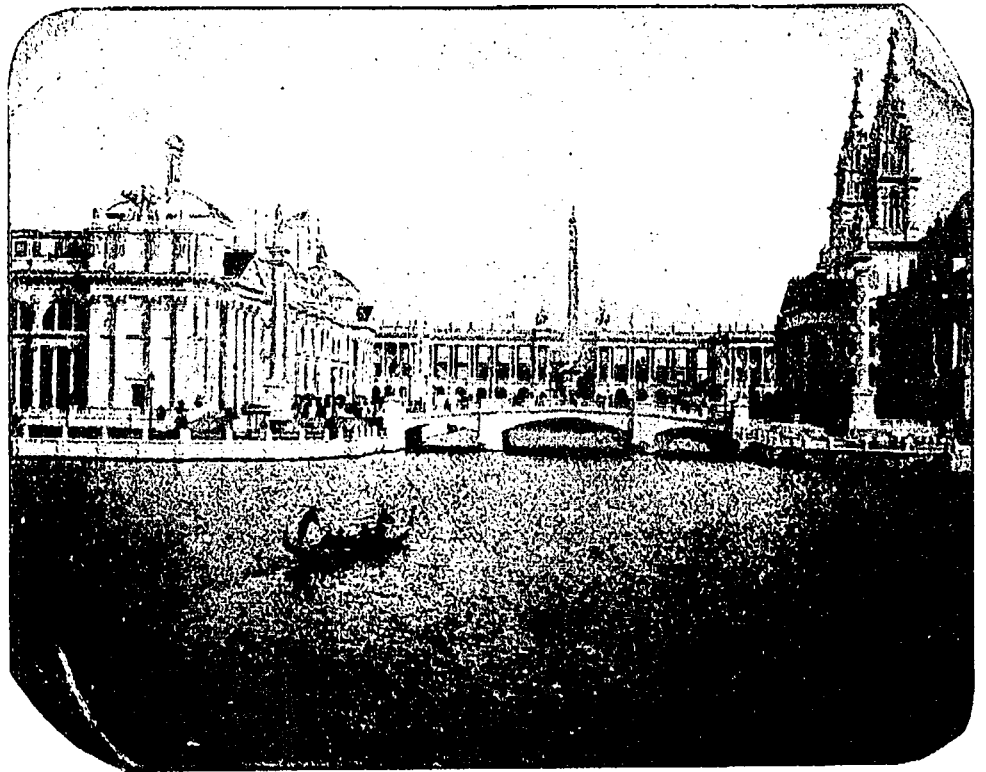
miles of arable land suited to the production of every cereal, fruit, vegetable, plant and flower, so diverse are the soil and climatic influences.

The Hon. T. M. Daly, Minister of the Interior, speaking recently, said:

"There is nothing going on in Canada to-day which is more likely to bring about that Canadian national feeling or sentiment, which we all so much desire to see in our fair land, as the commingling together in our North-West and British Columbia of the representatives from each of the older provinces who are living side by side in every town and village, and are cultivating and farming the land in every settlement. Meeting as strangers in this far-off country, they have become brothers, united in the united cause of building up and developing

its magnificent resources. It is theirs to possess and occupy in right of their common citizenship, and as natives of the older Canada, whose statesmen had the foresight and sagacity to acquire it. This good land is for the use and benefit of future generations of Canadians, a heritage that we and our children's children can possess, in which every Canadian of every degree can live and work and prosper, governed by the laws of the country which gave him birth, and beneath the folds of that flag all true Canadians love so well. But this good land is not for Canadians only. There are welcome the people from Great Britain and Ireland, the English, the Scotch and the Irish, and the Germans, the French, the Scandinavians and other good people from continental Europe."

It has been written, "Population moves westward as if driven by the mighty hand of God." From the mountain valleys of Asia, where the race was cradled, a ceaseless pilgrimage has moved ever on and on. Mountain walls and continental wilds and long leagues of trackless sea may lie across the appointed path, but still the mighty column in its own onward march surmounts, subdues, and crosses all, impelled by forces as resistless as those which speed the Pleiades on their course. But on the great Northwest of this continent the long, long journey will at last be done; and the race will reach its final home. Here have been grouped, as nowhere else in all the world, mountain and valley and plain, river and lake. Here has been stored illimitable wealth in mine and forest, soil and fisheries not exceeded in the known world, and to these broad foundations for a sure prosperity there has been added a climate which embraces exactly those conditions best adapted to produce the highest development of the individual and the race. Here genial summers' sun woos the fruit from fertile fields, and winter's stinging cold tend alike to physical and moral health. Here for long years to come shall they who hunger for a home be satisfied and all the needs of countless millions be well supplied.



VISTA LOOKING SOUTH TOWARDS THE OBELISK AND COLONNADE, BETWEEN THE AGRICULTURAL BUILDING AND MACHINERY HALL.

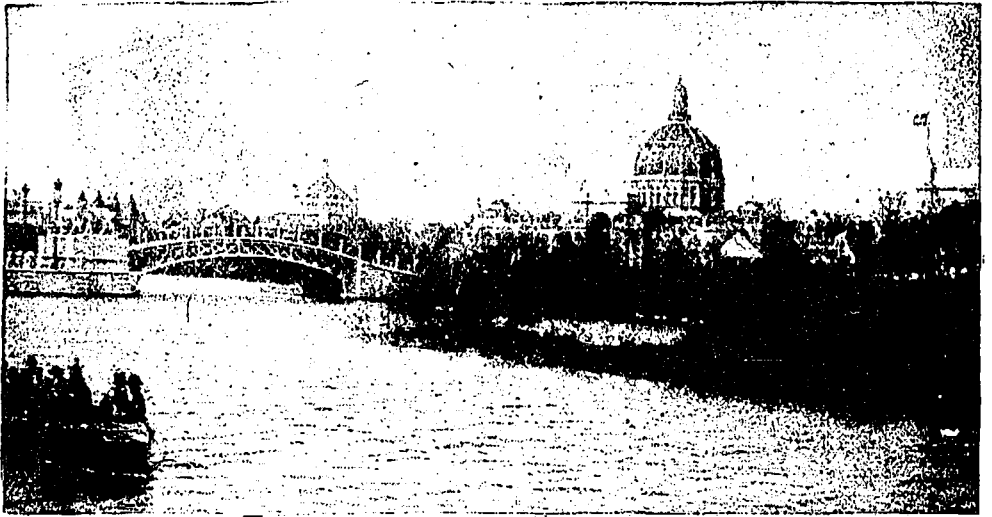
Our World's Fair Views.

SPECIALLY ENGRAVED FOR *Massey's Illustrated* FROM "SNAP-SHOT" PHOTOGRAPHS TAKEN BY W. E. H. MASSEY.

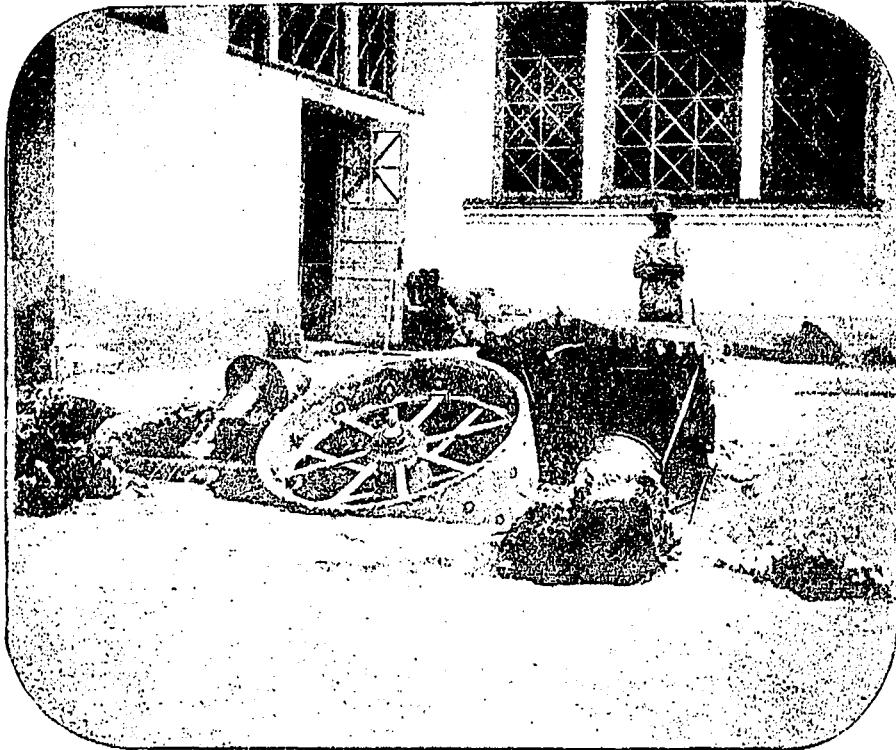
This month we give eight other World's Fair illustrations, which will probably conclude the series, though we may occasionally insert one or more during the next few months.

On the previous page is a view of the Electricity building, as seen across the Wooded Island when passing around the island in a gondola. At the bottom of the same page is a fine illustration of the canal or lagoon between the Agricultural Building on the left and Machinery Hall on the right. At the end of this lagoon is a beautiful colonnade, and just beyond it the spacious building where the cattle and horses were exhibited, known as the Stock Pavilion. The view from this colonnade, looking north from it, was one of the finest on the grounds. Two pictures on this page illustrate some of the beautiful landscape effects. The centre picture is a curiosity and was taken just a few moments after the accident happened. Fortunately no one was injured. A number of these heavy traction rollers were used to form the splendidly-formed roadways through the park and around the buildings. At this particular point a road had been built upon old logs and rubbish, in part supported by posts, to save the expense of filling in a little ravine below. The contractor's work was decidedly superficial, and hence the accident. However, considering the fact that so vast an amount of work was performed for an exhibition to last but six months, it seems wonderful that they took so much pains to do it as well as it was done.

The picture at the top of



VIEW FROM NEAR THE "GOLDEN ENTRANCE" OF THE TRANSPORTATION BUILDING.



A CALAMITY—ONE OF THE HEAVY TRACTION ROLLERS GOES THROUGH A ROADWAY PHOTOGRAPHED JUST AFTER THE ACCIDENT.

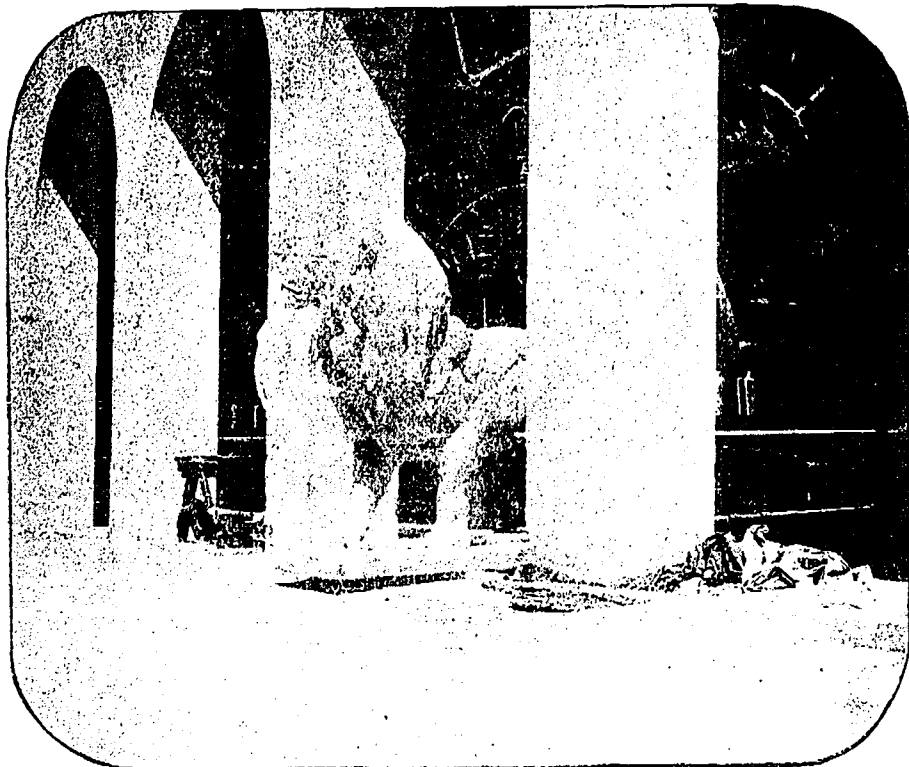


LOOKING ACROSS WOODED ISLAND TOWARD THE MINES AND MINING BUILDING—ADMINISTRATION DOME BEYOND.

the next page is even more curious, and is an illustration of one of the trying experiences of the amateur photographer, due to too much haste, and resulting in a comical blunder. The handsome colossal animal statues which ornamented the entrance of some of the buildings and the bridges were made under this colonnade, and then transported to their final resting places. This lion had just been finished and had been taken out, and made a very good subject for a photograph; but, alas! forgetting that an exposure had been made, our photographer exposed the same plate in taking a picture of the mammoth dynamos in the Machinery Hall; hence the two pictures in one.

The photograph of the Allis engine does not show it to good advantage, and scarcely conveys a correct

idea of its enormous size. This engine had the same relation to the World's Fair as did the great Corliss engine to the Centennial. It has a rated capacity of 2,000 to 2,500 horse power, when working under such conditions as to develop the best economy in steam consumption, but has a maximum capacity of from 3,000 to 4,000 horse power. The steam passes successively through four cylinders, doing a part of the total work in each, and then to the condenser. The first, or high pressure cylinder, is 23 inches diameter; the second, or first intermediate, is 40 inches diameter; the third, or second intermediate, is 60 inches diameter; and the fourth, or low pressure cylinder, is 70 inches diameter. The stroke is 72 inches, and the speed 60 revolutions per minute. The balance wheel, 30 feet diameter by 76 inch face, weighs 150,000 pounds, and the total weight of the engine is 315 tons. This engine was used to drive two large Westinghouse generators, each rated at 13,000 16-c.p. lamp capacity. This is the engine that President Cleveland set in



A DOUBLE EXPOSURE—A GREAT LION STATUE JUST COMPLETED UNDER THE COLONNADE, AND THE MAMMOTH ELECTRIC DYNAMOS IN MACHINERY HALL.

motion by the pressure of a Victor Key at the opening ceremonies of the Exposition. It was much more powerful than the great Centennial Corliss engine, which was designed to develop only 2,200 horse power.

World's Fair Gossip.

The expense incurred in construction of buildings, improvement of grounds, and preliminary organization amounted to \$19,015,081. The buildings alone cost over \$11,000,000.

The general and operating expenses averaged \$19,300 per day, amounting in all to \$5,750,000.

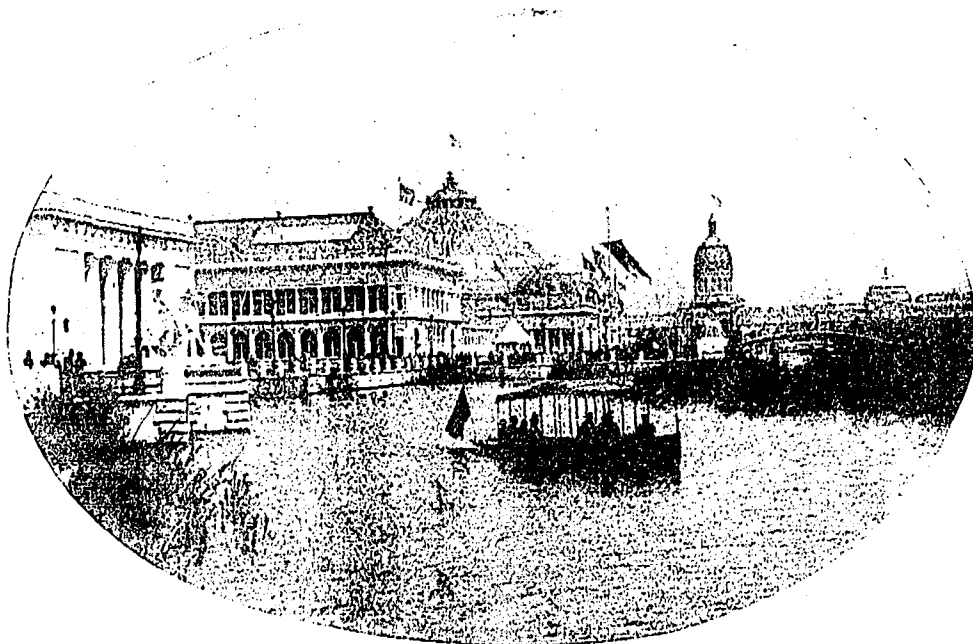
Compared with the Paris Exposition in point of attendance the Columbian World's Fair shows well. Its grand total by months is as follows:

	PAID.	FREE.	TOTAL.
May.....	1,050,037	481,917	1,531,954
June.....	2,675,113	302,721	3,577,834
July.....	2,760,263	1,217,239	3,977,502
August.....	3,515,913	1,172,215	4,687,708
September....	4,653,871	1,149,071	5,808,942
October.....	7,000,000	1,150,000	8,150,000
	21,651,227	6,073,193	27,724,970

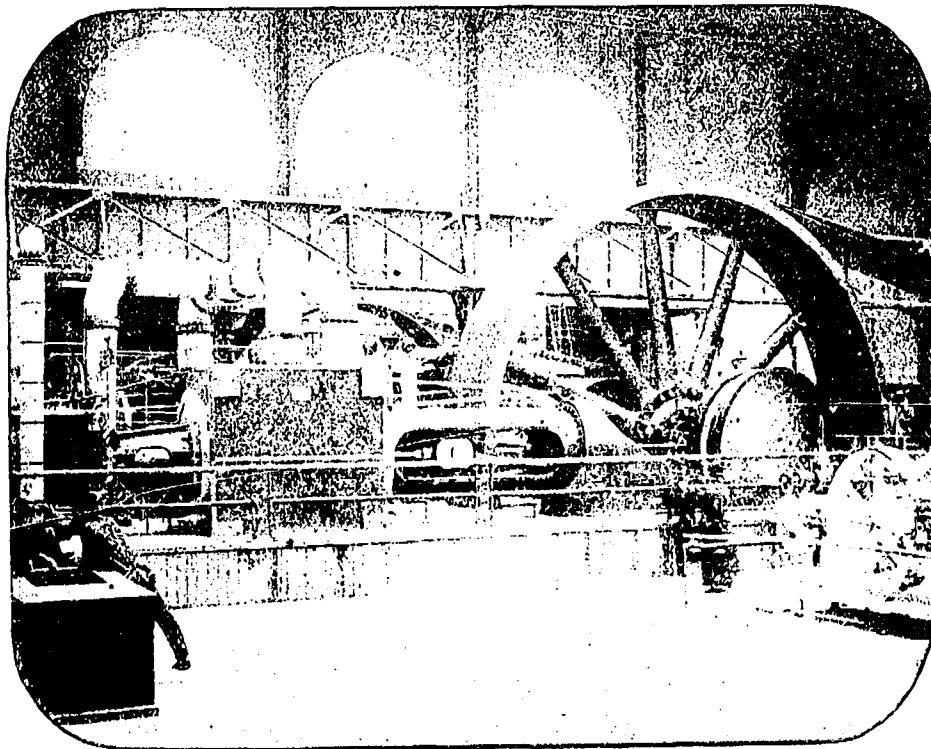
As shown above, passes were freely issued. At the Paris Exposition, passes were issued very sparingly, and the free list did not even include concessionaries.

The following tables give a summary of the results of the Centennial Exposition at Philadelphia, the Paris Exposition, and the Columbian World's Fair:

ATTENDANCE, PAID ADMISSIONS.	
At Chicago.....	21,660,000
At Paris.....	21,000,000
At Philadelphia.....	8,000,000



VIEW LOOKING NORTHWARDS FROM THE MINES AND MINING BUILDING.



PARTIAL VIEW OF THE GREAT ALLIS ENGINE STARTED BY PRESIDENT CLEVELAND.

The largest attendance on any one day, paid admissions:

At Chicago, Chicago Day, Oct. 9.....	715,881
At Paris, closing day, June 10.....	370,354
At Philadelphia, Pennsylvania Day, Sept. 28.....	274,919

	Chicago.	Paris.	Philadelphia.
Receipts....	\$27,820,318	\$9,500,000	\$11,133,675
Expenditures	25,996,330	8,000,000	9,041,513

Net proceeds. \$1,823,988 \$1,500,000 \$2,092,162

The area covered by the exhibits of Canada in the Agricultural Building was 7,760 square feet.

The lion of Canada, and perhaps of the Agricultural Building, was the mammoth cheese, weighing 22,000 pounds, the colossus of all curdles, a monster in whose heart an elephant might play, and a marvel to be "smelled the length of the building," as our envious neighbors were pleased to say.

The Manufacturers' Building cost \$1,700,000. The Agricultural Hall cost \$618,000

The orange globe, in the California Building, took 6,500 oranges to cover it.

The highest Sunday attendance was 88,000, the lowest 16,000.

The premium realized upon the sale of the souvenir coins was \$520,000.

The income from percentages on concessions was \$3,500,000.

It is estimated there were nearly 4,000,000 visitors to the city of Chicago during the World's Fair.

The entire interior of the Manufacturers' Building was painted or calcimined by the electric painting machine, which sprayed the paint or calcimine on the surface by means of a force pump. A great saving in brushes and time was the result.



A DRUNKARD'S HOME.

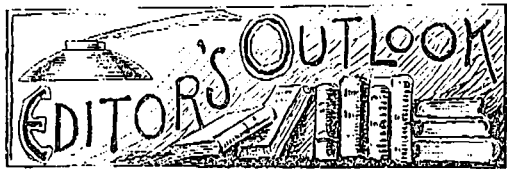
A HUT of logs without a door,
 Minus a roof and ditto floor;
 A clapboard cupboard without crocks,
 Nine children without shoes or frocks;
 A wife that has no bonnet
 With ribbons and strands upon it,
 Sealding and wishing to be dead,
 Because she has not any bread.

A tea-kettle without a spout,
 A meat cask with the bottom out,
 A "comfort" with the cotton gone
 And not a bed to put it on;
 A handle without an axe,
 A hatchet without wood or flax;
 A pot-lid and a wagon-hub,
 And two ears of a washing tub.

Three broken plates of different kinds,
 Some mackerel tails and bacon rinds;
 A table without leaves or legs,
 One chair and half a dozen pegs;
 One oaken keg with hoops of brass,
 Tumbler of dark green glass,
 A fiddle without any strings,
 A gum-stock and two turkey wings.

O reader of this inventory,
 Take warning by a graphic story,
 For little any man expects,
 Who wears good shirts with buttons on 'em
 Ever to put on cotton checks
 And only have brass pins to pin 'em.
 'Tis, remember, little stitches
 Keep the rent from growing great,
 When you can't tell beds for patches
 Warning words will be too late.

—Alice Cary.



FARMERS' Institutes have been in full blast throughout the country during the past month. As a rule the meetings were well attended, the phenomenally fine weather permitting of this with comfort. To follow the course of the meetings would be tedious and unprofitable, the talks being practically the same in each circuit. If one typical meeting be taken, the reader will have a fair specimen of them all. Taking the meeting at Baltimore, Ont., at which the deputation were Messrs J. C. Snell, H. Arkell, H. L. Beckett, B. S. A., and G. A. Caston. Mr. Snell read a paper on swine breeding, giving his experience in the breeding and preparing for the market. In the discussion which followed he said "that he had sold pigs 5 months and 10 days old, weighing 280 pounds, gaining 3 pounds per day. What is intended should be pushed from the start, sell young. The next speaker, Mr. Arkell, addressed the meeting on sheep raising. This was a very practical address. Each paper evoked interesting and intelligent discussion,

Two English gentlemen—Messrs. G. B. and E. Samuelson—who are manufacturers of implements in their own country, have been making a tour of the United States, with a view to studying the implement manufacturing trade in that country. What they want to find out particularly is, why Canadian and United States machines are preferred in foreign markets, as against English machines. This point they have not been able to decide yet to their full satisfaction. They have, however, come to the conclusion that the implement trade is not in a particularly flourishing condition in the United

States or Canada, owing partly to the prevailing financial depression, and failure of crops in some sections. They have also come to the conclusion that there is too much competition in the trade, and that machines have frequently been sold at a too narrow margin of profit. This is the opinion expressed by these English gentlemen, in an interview with a newspaper in one of the cities which they had visited. Coming from men who are not interested in the trade in Canada, but who are endeavoring to compete with Canadian manufacturers in other markets, their opinion is worthy of respect. In these days, when there is much talk from men who know nothing about the cost of farm machinery, to the effect that prices are too high, it is certainly a relief to learn that the implement trade is suffering from over competition, and selling goods at unprofitable prices. These English gentlemen, being themselves manufacturers of implements, though not interested in the business here, are competent to form a reasonably close opinion as to the condition of the trade; and this is their opinion after visiting the various implement manufacturing centres, and studying the situation on the spot. We have men here about us, however, who are neither farmers nor mechanics, and who know absolutely nothing about either building or operating a binder, yet these men will undertake to explain how much it costs to build a binder, and what the selling price of the machine should be. How absurd all this is? How can a man who has no mechanical knowledge of any kind, and who never engaged in a manufacturing business of any kind, sit down and figure out on paper the cost of an intricate machine like a binder? The thing is ridiculous. But there are men whose self-assurance is equal to anything. It is on a par with the efforts made by city men to figure out on paper the cost of producing a bushel of wheat, though even more absurd than this, for the variety of conditions and features which would have to be taken into account would certainly be much more numerous and intricate, in attempting to arrive at the cost of a binder, than in undertaking to figure out the cost of growing wheat. The fact that no two alleged authorities agree as to the cost of growing wheat, indicates how little these parties can know about the cost of a binder, or any other article of farm machinery of an intricate nature.

Yankee Justice at the World's Fair.

MR. J. S. LARKE, Canadian Commissioner at the World's Fair, is in town. He was asked yesterday for a statement of the facts concerning the difficulties in connection with the awards for agricultural implements to Canadian firms, those primarily involved being the MASSEY-HARRIS CO., Toronto; the SAWYER, MASSEY COMPANY, Hamilton, and the John Abell machine works, Toronto.

Mr. Larke said:—"The exhibits of these firms had been examined by the jurors at Chicago, in accordance with the regulations laid down for granting awards, and awards had been recommended by these jurors. On that jury there were no Canadians, nor anyone of whom the Canadians had any personal knowledge. It was composed of Germans, Russians, and citizens of the United States, therefore it could never be pretended that Canada received any favors. The recommendations of awards by this jury were destroyed by the agency of the Executive Committee, who had been empowered by the National Commission to control the granting of awards. In order to cover this act of injustice, the Executive Committee had had the implements re-examined, and when the award was still recommended after re-examination, the committee had a second re-examination made. This would lead to the conclusion that they had determined at the outset that these implements should not receive an award, and had passed them from one judge to another until they found someone who was willing to find as the Executive Committee wished their opinion to be."

"Why did the Executive Committee, when they did give so many awards to Canada, withhold from them in this case?"

"The only answer that can be given is that it was done in the interest of certain large manufacturers in the United States, who came into competition with the MASSEY-HARRIS COMPANY and other Canadian machinery firms in foreign countries, and they were determined to secure an advantage over such competition at all events, in the exhibit at Chicago. In the evidence of the men who finally recommended that no award should be given, he stated that it was understood that all the exhibits re-examined belonged to the MASSEY-HARRIS COMPANY, but it turned out that some of them were owned by other firms. Another well-known fact is that the recommendations of the Committee of Jurors granting awards to the MASSEY-HARRIS COMPANY had been shown to rival American exhibitors, when the MASSEY-Harris people could not see them themselves. To continue, however, I may say that even the second re-examination did not decide against the award upon the merits of the machines, but solely upon the contention that they were not Canadian inventions, but the machines were copies of American inventions. In no case was an opinion given that the implements shown were not first-class machines, the design and construction being of a high character. It had been determined in the interest of American competitors that no award should be given to the Canadian implements, and evidence bearing this out is found in the fact that it came out that the second re-examination upon which the committee based the refusal to grant awards to Canadian firms did not take place until the 4th of November, and the result was not known until the 6th, whilst the awards had been refused before the end of October, so that the Executive Committee made an excuse for doing in October an event that did not occur until the following month. An appeal was heard, lasting for eight days, and the decision is now under the consideration of the court appointed by the National Commission. In doing this the commission took the work out of the hands of the Executive Committee on awards, and created a dispute between these two bodies that has not yet been settled, and will perhaps lead to a consideration of some other awards."—*Empire, Jan. 23rd, 1891.*

Interesting to Farmers.

ANYTHING pertaining to the welfare of the farmers of Canada, is always welcome to our columns. Mr. John Hallam, in a letter dated Jan. 4th, writes us. "I send you a paper which I had the pleasure of reading before the Live Stock Association at their last meeting at Guelph." We have much pleasure in presenting it to our readers:—

"Owing to the constantly declining prices of wheat and barley, the attention of Canadian farmers is being rapidly directed to dairy and cattle products. The wonderful success and extent of the cheese production is inducing the Dominion and Provincial Governments to use praiseworthy efforts to accomplish similar gratifying results with butter, in which direction much improvement has already been made both as to quantity and quality. The great extension of these two industries has created a similar increase in the number of cattle and hogs fed. The increase is largely in excess of the requirements of the population.

The profitableness of the dairy and cattle industry must largely depend upon the prices obtained for the cattle and hogs which are raised in conjunction with it. The home market will soon prove utterly inadequate for the consumption of animal products, even under the exceptionally favorable conditions which Canadian cattle and sheep were formerly admitted into Great Britain.

The disposal of live cattle there was attended with so much risk and expense, that it was

thought that some cheaper means of transportation must be found. The withdrawal by the British Government of the preferential terms of admission for Canadian cattle on foot, has emphasized the necessity for such a change.

Many believe that a great improvement in the price of cattle and their products, would be effected by free trade with the United States. Such expectations have no foundation in fact, as is evident from the following statement taken from the Official Report of the Bureau of Statistics at Washington, for the year ending June the 30th, 1892.

The total value of animals and their products exported from the United States to foreign countries was \$183,875,199
Of which there was exported to Great Britain 121,507,081

The Dominion trade and Navigation reports show for the year 1892—

Imports into Canada from the United States and entered for home consumption and duty free	5,225,400
Animals and their products Dutiable	1,298,916
Total	\$6,493,806
Exports from Canada to the United States animals and their products	\$3,035,924

From this it will be seen that Canada purchased from the United States a much larger value of these products than it sold to that country. The trade in animal products between the two countries could be very largely increased, if it was not for the excessive duty paid on live animals and their products. Canadian lambs under one year old, 75c. per head; sheep and lambs over one year old, \$1.50 each; cattle less than one year old, \$2.00 each; cattle over one year, \$10.00 each.

The success which has attained the beef and pork packing business in Chicago, and other places, is almost incredible. In 1892 the United States sold to foreign countries, besides supplying their own market, of hog products for human food, bacon, hams, lard and pork 1,225,538,352 pounds valued at \$85,116,566, averaging a little over 7½c. per pound. They also sold beef products fresh, canned, cured and preserved, including rendered tallow, 468,522,730 pounds valued at \$34,436,169, averaging a little less than 7½c. per pound.

The demand for animal products seems to be unlimited. Canada should have a share of this growing and prosperous trade; she is unexceptionally situated for growing cattle, hogs and sheep.

To develop this trade and centre it in Toronto, will require men of ample means, with enterprise and brains, and free corn, so that the farmer can feed more hogs, and give a constant supply to the packing houses.

The farmer should raise cattle and fatten them to meet the requirements of the home and foreign markets. To make this business successful in Canada, the packing houses must have a constant and increasing supply of hogs.

The statistics of live stock in Canada, are very scanty and unreliable. The latest statistical information concerning live stock in the Province of Ontario, is as follows:—

Cattle	2,025,000
Sheep	1,927,000
Hogs	1,070,000

Number of animals slaughtered for home consumption and sold to foreign countries, in the Province of Ontario:—

Cattle	450,000
Sheep	620,000
Hogs	975,000

It is of the utmost importance that farmers should see the necessity of increasing their live stock. It would be much more profitable than growing wheat and barley, at the very low prices now prevailing. Besides it would give the land a much needed rest from the exhausting process of constantly growing wheat and barley. The manure would enrich the land and make it more productive. By this means the farmer would be enabled to grow a rotation of crops, and not to depend upon any one crop for his living.

It is quite clear from the foregoing, that for the surplus of animals and their products,

Canada must look to Europe, and especially to Great Britain, for its market. For this country the great objects to accomplish are, the cheapest possible methods of preserving and curing for home and foreign markets, and the quickest and most economical means of transporting to the markets of the world. These are the ends which capitalists and railway companies should try to accomplish for the Dominion of Canada, for as sure as the sun shines at noon day, there is in this country an extensive, progressive and profitable field waiting the energy and enterprise of those who have the pluck to enter and take possession of the promised land. The establishment of packing houses in Toronto and the North West, with ample capital, employment of the best skill and latest improvements, is a step in the right direction, that will not only conduce to the advantage of farmers, but to the general prosperity of the country.

CORRESPONDENCE

To the Editor of MASSEY'S ILLUSTRATED.

SIR:—It has been reported to us on several occasions during the past two years, that the organizers of the Patrons of Industry lodges and others, have made statements to the farmers to the effect that at some time the MASSEY MANUFACTURING COMPANY had a car load or car loads of binders wrecked whilst in transit from the factory over one of the railroads, which necessitated the COMPANY making a claim upon the Railway Company for damages, and that Mr. H. A. MASSEY, President of the MASSEY MANUFACTURING COMPANY, or his representatives, made an affidavit as to the value of the machines.

We believe these statements have, to a considerable extent, injured our business, and many have believed the stories because we did not deny them, or explain the matter before. We therefore take this opportunity of saying that at no time in the history of the MASSEY MANUFACTURING COMPANY'S business, or of A. HARRIS, SON & COMPANY'S business, or of the present Company's business, did either or any of them ever have a car load of machines wrecked, which necessitated a claim being made on the Railway Company, and evidence taken or given as to the cost of the machines. Neither Mr. MASSEY or any other officer of either of the old Companies or of the present Company, was ever called upon to make any statement in regard to the cost of binders, and never did make any such statement either directly or indirectly, and further if such a statement had been made, or if they had been called upon to make such a statement, it would have been impossible for them to have made the preposterous statement that is credited to MR. MASSEY, that a binder cost only \$55.

We wish therefore to give the most unqualified denial to any such statement ever having been made, and the story is absolutely untrue and entirely false. The only time that the MASSEY MANUFACTURING COMPANY or any of the Companies had any machines injured in a railway accident was about seven or eight years ago, when a car load of mowers was shipped from the Toronto factory to Winnipeg, and before they had left the city of Toronto some heavy shunting had been done by the railway, and four or five drive wheels were broken in the end of the car. The Railway Company put the car back on the MASSEY MANUFACTURING COMPANY'S siding, and it was unloaded and the wheels replaced.

With this full information our friends will be prepared to refute any statements that are made with reference to the above matter.

MASSEY-HARRIS CO., (LIMITED).



1st.—The Manchester ship canal opened for general traffic. . . . Admiral Mello, of the Brazilian insurgents, seriously wounded. . . . The violent political crisis in Yokohama began. . . . Prohibition plebiscite carried in Ontario on a general vote by over 70,000 majority.

2nd.—The Bucharest chamber of deputies passed legislation modifying the customs tariff. . . . Royal Victoria Hospital at Montreal opened. . . . Royal Artillery headquarters and the military arsenal at Venice, destroyed by a great fire.

3rd.—Remains of Sir Samuel Baker, the famous traveler, explorer, and writer, cremated at Woking, Eng. . . . John D. Rockefeller donated an additional fifty thousand dollars to the Chicago University. . . . John Hope, the well-known manager of Bow Park farm, near Brantford, died.

4th.—Nova Scotia Legislature opened. . . . The phenomenally cold weather in Paris caused several deaths. . . . Fourth annual banquet of the Toronto Board of Trade took place.

5th.—Election petitions presented against all but two members of the Whiteway party, Newfoundland, on the ground of bribery and corruption. . . . Inspector General Landy and twenty-six men in Sierra Leone, West Africa, fired upon by French troops and several killed.

6th.—Trial of Auguste Vaillant who threw a bomb in French Chamber of Deputies begun. . . . Twenty-one sealers sailed from Victoria, B. C., for the fishing grounds.

8th.—Immigration returns show 365,000 to have landed in New York in 1893. . . . Wilson made his opening speech on his tariff bill.

9th.—A. F. Gault, Montreal, presented with a portrait of himself, by the clergy and laity of the Church of England, in recognition of his liberality to the church. . . . The Central fair by-law defeated in Hamilton; and the directors recommend that the Fair property be offered for sale.

10th.—Paul William Forchhammer, the great German archaeologist, died at Kiel. . . . The Winnipeg Gas Co. made default in paying interest on its debentures.

11th.—The widow of the great Thackeray, died to-day at Leigh, Lancashire, Eng., seventy-five years of age.

12th.—Police licenses in Montreal during past year yielded nearly sixty-seven thousand dollars.

13th.—M. Waddington, French Ambassador to Britain, died. . . . The people of Cape Colony are agitating for popular government, with a ministry responsible to the electorate.

15th.—Mr. Wm. Lane Booker, Consul General of Great Britain in New York, received the honor of knighthood.

16th.—Lady Ritchie was elected president of the local branch of the National Council of the Women of Canada formed in Ottawa, to-day.

17th.—Royal decree proclaimed a state of siege in Carrara, owing to popular riots. . . . Majority of the United States Tariff committee decided on a rate of thirty-five per cent instead of twenty, on barley.

18th.—Fourth annual convention of the Canadian Brotherhood of St. Andrews opened in Ottawa. . . . Writ for the election at Broadview, N. W. T., issued.

19th.—Serious illness of Mr. Geo. W. Childs, the great Philadelphia journalist and philanthropist, reported.

20th.—The treaty between France and Siam, was ratified. . . . Mr. James Cleland nominated by the reformers of North Grey, for the Local House.

22nd.—The British Colonial Office recommended a plan to subsidize a purely British cable to Australia via Canada.

23rd.—Local Bankers' Association formed in Montreal in connection with the Board of Trade of that city. . . . Mrs. Austen, the last surviving sister of Cardinal Manning (a notable English woman), died.

24th.—After sixty-nine ballots and twenty-four hours spent in voting, W. M. Ford, nominee of the Patrons of Industry for the Legislature, was elected warden for Elgin county.

25th.—Sir Gerald Herbert Portal, British Political Agent and Consul General at Zanzibar, died of typhoid in London, Eng. . . . Death announced of Mme. Rosalie Elizabeth Papineau, a daughter of the French Canadian patriot.

Sir. Thomas and Lady Mellwraith, ex-premier of Queensland and wife, arrived in Ottawa.

26th.—Prince Bismarck entered Berlin to visit the Emperor. . . . Western Dairymen of Ontario annual convention was closed at Ingersoll. . . . Wentworth county council decided to ask legislation placing the appointment of all officials paid by the county in the hands of the counties.

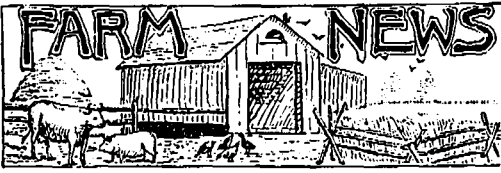
27th.—San Francisco Mid-winter Exposition opened. . . . Miss Sarah Forest, teacher, Centre Island, drowned in Toronto Bay. . . . Decided to call a great prohibition convention in Montreal next July.

28th.—The saw and flour mills at Lion's Head, destroyed by fire.

29th.—Hon. Edward Blake delivered an address to the Young Irishmen's Benefit Association at Montreal. . . . The Quebec winter carnival inaugurated.

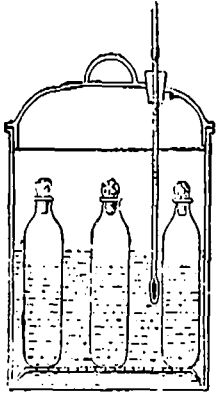
30th.—Small-pox very prevalent in New York. . . . Heavy snow storms in the west.

31st.—Rumored revolutionary outbreak at Oporto, Portugal.



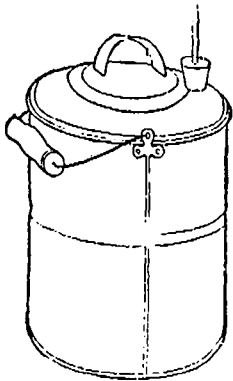
Sterilization of Milk.

At the request of the Secretary of Agriculture, the Chief of the Bureau of Animal Industry has furnished the following simple directions for the sterilization of milk:—The sterilization of milk for children, now quite extensively practised in order to destroy the injurious germs which it may contain, can be satisfactorily accomplished



with very simple apparatus. The vessel containing the milk, which may be the bottle from which it is to be used, or any other suitable vessel, is placed inside of a larger vessel of metal, which contains the water. If a bottle, it is plugged with absorbent cotton, if this is at hand, or in its absence other clean cotton will answer. A small fruit jar, loosely covered, may be used instead of a bottle. The requirements are simply that the interior vessel shall be raised about half an inch above the bottom of the other, and that the water shall reach nearly or quite as high as the milk. The apparatus is then heated on a range or stove until the water reaches a temperature of 155 degrees Fahrenheit, when it is removed from the heat and kept tightly covered for half an hour. The milk bottles are then taken out and kept in a cool place. The milk may be used any time within twenty-four hours. A temperature of 150 degrees maintained for half an hour is sufficient to destroy any germs likely to be present in the milk, and it is found in practice that raising the temperature 155 degrees and allowing it to stand in the heated water for half an hour insures the proper temperature for the required time. The temperature should not be raised above 155 degrees, otherwise the taste and quality of the milk will be impaired.

The simple plan is to take a tin pail and invert a perforated tin pie-plate in the bottom, or have made for it a removable false bottom per-

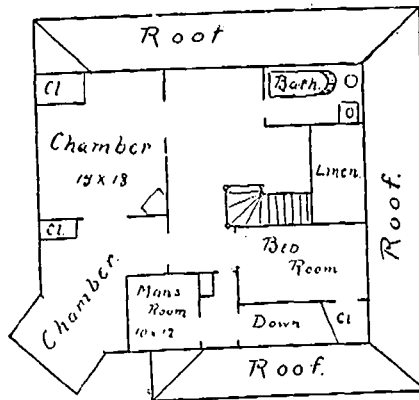
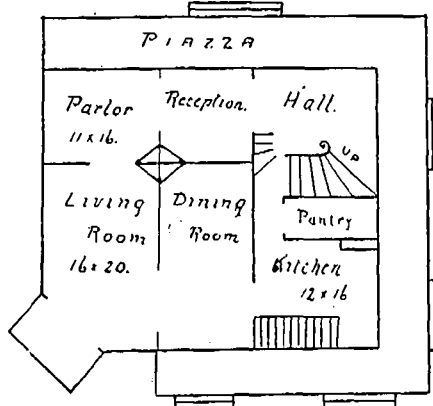


forated with holes and having legs, half an inch high, to allow circulation of the water. The milk-bottle is set on this false bottom, and sufficient water is put into the pail to reach the level of the surface of the milk in the bottle. A hole may be punched in the cover of the pail, a cork inserted, and a chemical thermometer put through the cork, so that the bulb dips into the

water. The temperature can thus be watched without removing the cover. If preferred, an ordinary dairy thermometer may be used and the temperature tested from time to time by removing the lid. This is very easily arranged, and is just as satisfactory as the patented apparatus sold for that purpose.

A Farmer's Home for Every-Day Use.

Do you wish to see the most cosy and comfortable farm house in America? Just come into the back door and let us go through it. We will enter the back side of the house, because it is a house not built for show, but for use. Plans of city houses are shown usually with the front as the point of entrance, but the business of farming compels the more frequent use of rear



and side doors; hence we will start right. It will be easy to observe, however, as we go through this model residence that it is not devoid of modern comforts which are so frequently wanting in country houses. The kitchen has a door at the south, which is entered from the piazza that extends nearly around the house. This shades the kitchen in summer and keeps it cool. The room is capacious, has set tubs, hot and cold water, pipes for conveying away waste water, and a large range connecting with the chimney in such a manner as to carry off both the smoke from the fire and steam from the cooking. The dining room is 12 by 18, and is entered from both kitchen and living-room, which is 16 by 20, and corners on the southwest with a large and well-glazed bay-window, or addition for plants. The dining room may be entered from the piazza also. Back stairs extend from kitchen to the hall in the second story. The pantry is conveniently near the kitchen, and is provided with closets for dishes, drawers for linen, spices, boxes for corn meal, graham flour, &c., as well as the customary place for hiding the barrel of wheat flour. Should the bell of the front door ring, the summons is easily answered without going through the dining room, simply by passing from the kitchen, beneath the front stairs, and through the reception room. This room is fitted with a settee and two or three chairs of substantial design and contains a fire-place. The same chimney permits fire-places in the parlor adjoining and in the living-room and dining-hall.

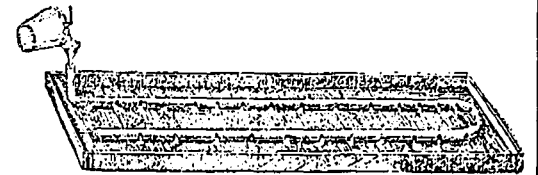
A guest is shown upstairs from the parlor or reception room through the hall and front stairway. This stairway is broad and winding, and

enters a roomy, well-lighted hall on the second floor. From this hall the bath-room and three chambers are entered, as well as the man's room. Each of these rooms is supplied with an ample closet. The guest-chamber is placed at the northwest, not the pleasantest part of the house, which is reserved for the regular occupants, who have the east and south for their enjoyment. This spare chamber has a fire-place in which a hospitable blaze may be started to cheer the chilled comer. If this house is not heated by a furnace it can be conveniently warmed by drums or registers from stoves on the lower floor. This little room over the front stairway and near the bath-room may be used for a clothes-press, receptacle for linen, or connected with the adjoining bath-room by means of a wide arch, and used for a dressing or sleeping-room, the bed-room proper being kept in neat order for an upstairs sitting-room if desired.

The house is nearly square, 32 by 44. The front is toward the north, the parlor, halls, reception room, bath-room and guest-chamber are placed so that they protect the portion of the house most in use during cold weather. This leaves the rooms that are in daily use compactly connected and makes them easier to warm.—HOLLISTER SAGE in *Country Gentleman*

Sub-Irrigation.

SUB-IRRIGATION is the latest scheme for greenhouse culture. It is astonishing to a novice to see how glass gardening is increasing. Around the great Northern cities are acres of glass under which are grown lettuce, cucumbers, rhubarb—in fact almost all the outdoor vegetables. In this way Northern gardeners meet competition with the South. Cheap coal gives them a Florida temperature and glass permits them to surround enough of that heat to make the crops think summer has come to court winter. Experiments have been made at the West Virginia Station and at the Ohio Station and a recent bulletin gives an account of them. The device used for sub-irrigation in these experiments is shown by the accompanying cut. As



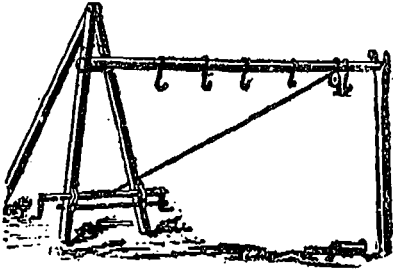
shown it is a pipe, with numerous holes, that run around under the soil at the bottom of the bed. At the top is a tunnel through which the water may be poured. Prof. Rane, who made the experiments at West Virginia, considers that sub-irrigation in greenhouses is a pronounced success. He considers it a more complete system of watering than the usual sprinkling, as with it the soil does not harden, bake or dry out. It saves time, labor and water, and causes plants to run more evenly. This under-watering hastened the growth of parsley and spinach and gave better lettuce, tomatoes and radishes. Fungous diseases were better held in check—in fact, lettuce rot, one of the worst troubles in many greenhouses, was prevented by sub-irrigation. In fact, this system of watering greenhouses is well worth the attention of those who try to deceive plants by turning winter into summer.

A recipe for whitewash that will not be washed off by rain reads as follows: One peck of lime should be slacked in five gallons of water, in which one pound of rice has been boiled until it is dissolved. The rice water should be used hot, and the mixture covered over closely until the lime is slacked. Then add a pound of salt, and the whitewash must be heated to boiling point when used.

Libe Stock.

Handy Derrick for Butchering.

USEFUL in butchering one beef or one hog as well as a number of them. The derrick is constructed of threesticks of strong timber, 13 feet long. The roller for windlass is 4 feet between bearings, and is 3½ in. in diameter. The best way is to have it turned from maple or other tough wood. A blacksmith can make the hooks



and other fixtures. For a number of hogs, use a strong pole or scantling, suitable to hold the weight, by resting one end on the derrick and the other end on a crotched post or a tree with a crotch in it. For one hog or beef, use the tackle in top of the derrick, as usual. Use ropes and tackle to suit. Then you will have a handy tool for a number of uses.

LINCED meal fed to horses will make their coats sleek.

OLD brood sows give stronger pigs that will grow up rapidly.

FAT cattle marketed direct from pasture shrink in shipping.

THE flock of breeding ewes ought to have the best pasturage on the farm.

SHEEP husbandry in connection with mixed farming is a profitable and pleasant business.

THERE are more of the "all purpose" qualities in a sheep than in any other single animal.

Low feeding, or feed of inferior quality, will depreciate the best bred stock.

GOOD breeding and early maturity are recognized as the highways toward profit with stock.

SOILING is the best possible means for increasing the capacity of the farm for carrying stock.

A WELL bred animal of any sort is a machine for utilizing raw products to the best possible advantage.

If not allowed to get too sour, slop can be almost always fed to pigs to advantage, whether growing or fattening.

If the cattle have their hair rubbed off, show-bare patches of skin in some places, rub on a little sulphur and lard.

If you are feeding any stock with the idea of making a profitable gain of flesh see to it that they are well protected from storms and cold.

NEVER let any animal get in poor flesh. If you do the profit is gone. The expense of restoring it to good condition is greater than the profit.

It is a good plan to turn cattle out for a while every pleasant day. Exercise, fresh air and sunlight help wonderfully toward keeping them well and hearty.

THE sheep farmer who puts his dependence in the best breed rather than in tariff, and goes ahead to produce a valuable mutton carcass and a good fleece of wool is pretty sure to come out all right.

THE better the pasture for growing pigs, the less feed required to keep them thrifty; and success in profitable pig-raising depends upon liberal feeding until they are three or four months old.

COMMON stock can be vastly improved by good feed and care, but the same end can be accomplished more quickly, more surely and with a better final outcome by the introduction of new and better blood.

CARROTS and cabbage are two items that should have a larger place in our list of feeding stuffs. The first are excellent for colts, horses, milch cows and all young stock. The second are valuable for pretty nearly all kinds of stock.

EVERY one who has tried it knows that fall calves are a little more difficult to raise than such as are dropped in the spring, consequently more attention should be given them, and an extra effort made to feed them well.

It is always best to have some old corn in the crib when the new corn is harvested. There are many kinds of stock injured by eating new, soft corn. It is not so nutritious for any. Think of this while you are feeding fattening animals in the winter. Kill or dispose of them two or three weeks before your corn is gone, and so keep some until next summer and early fall, when it will bring you twice as much if fed then as it is likely to produce now.

The Poultry Yard.

THE best roosts for a poultry house are strips four inches wide and one thick. The fowls can roost on these with comfort to the feet.

No farmer or poultry raiser can count on results or expect anything but failure, if he leaves a lot of fowls to take care of themselves.

CHARCOAL should be fed to all poultry, young or old. It assists wonderfully in the growth of chicks, and contributes largely to their healthfulness.

DURING frosty weather the careful man will see that his water vessels are emptied every night. Refill in the morning with fresh water and the fowls will appreciate it.

THE Langshan is the latest arrival among the Asiatics, but it has already gained the reputation of being the most productive. It is the smallest and most active of them all.

FAILURE often comes from attempting too much. A single variety of pure bred fowls, turkeys, ducks or geese can all be raised on the same farm without danger of intermixing. Better to handle six varieties and be successful than two dozen and partially succeed.

ECONOMY and good management are necessary to success in poultry culture as they are to any other business.

No other fowls have done more to stimulate the interest in high-bred poultry than have the Asiatic races. They are the largest and most imposing breeds extant, and always attract much attention at poultry exhibitions for their magnificent carriage and form.

AN Indiana poultryman says an equal amount of corn meal and pulverized alum mixed and placed in the yard, will be eaten by chickens afflicted with cholera. to their great benefit; also, dissolved alum in water to drink. They will not eat or drink readily, but will, as last resort before famishing.

PUT a tablespoonful of sulphur in the nest as soon as the hens or turkeys are set. The heat of the fowls causes the fumes of sulphur to penetrate every part of their bodies, every louse is killed, and, as all nits are hatched within ten days, when the mother leaves the nest with her brood, she is perfectly free from nits and lice.

THE business hen is the one that pays her way as she goes and is never found eating her head off two or three times a year. She may wear the white feathers of the Brahma or the dark feathers of the Langshan. She may dress like a Wyandotte, or in any color to suit her taste, if she will only lay eggs enough to be profitable she will still be the business hen.

THE plantain weed was called by the Indians "the white man's footstep," as it was most abundant in or near hard-trodden paths, and not much elsewhere. It is especially abundant in places where poultry is kept. Some entomologists claim that an insect parasite destroys it in the field, but the parasite is itself destroyed around man's dwelling by poultry. A further reason why plantain does not grow in fields is that it is a plant hardy enough when grown alone, but easily smothered when growing surrounded by clover or other plants. It usually does not infest clover fields unless its seed is mixed with that of the clover.

CHOOSE the first clear sunshiny day and give the coops a good cleaning, both inside and out, using a good stiff brush for the purpose, and then put them away in some convenient shed, or in one of the unused compartments of your poultry house, till they are dry. When they are dry and in good condition to do it, give them a good coat of whitewash, especially if they have been made either wholly or in part with unplanned lumber. If planed lumber has been used in their construction, and they have been made neat and tasty in appearance and substantial in build, paint them, instead of giving them a coat of whitewash, as it will adhere far better.

SULPHUR is quite useful to promote general health and thrift among fowls. Give it to the poultry only on bright, pleasant days. Once or twice a week a teaspoonful may be mixed in the feed of a dozen hens. Salt is very needful to all animal life, and a dozen hens may receive a teaspoonful mixed in their soft feed every day. Charcoal corrects acidity and promotes digestion. Wood charcoal may be fed in minute quantity now and then, or ears of corn may be charred and then thrown to the fowls, and they will pick off the kernels and be given some work to do. All these substances are not foods in the proper sense of the term, but condiments and general health promoters, when used in very limited quantities.



Queer Characteristics of John Chinaman.

As an inventor John has achieved some distinction, and has won for himself the name of the "Yankee of the East." Besides the mariner's compass, type, printing, paper, porcelain, silk, gunpowder and clocks are some of his alleged discoveries. He has kept the knowledge of these things to himself as much as possible, scorning to give to those so much inferior to him as he supposes other nations to be, the knowledge which he has made his own. John himself and his countrymen are "celestials," his Emperor is the "Son of Heaven"; why should he stoop to benefit a people so much beneath him as the inhabitants of England or the United States! John's school-books give amusing testimony to the abundance of this national pride and self-satisfaction. His geography allots nine-tenths of the globe to China, about a square inch to England, and no space

at all to our own great country! This same self-conceit helps to account for the lack of progress noticeable in John and his countrymen. For centuries they held themselves quite apart from other nations.

At the same time, John's nation is, in its way, an educated nation. All public offices are open to the graduates of their colleges, without any distinction of class or creed. Brains and skill, rather than money, are the highways to honor and office.

John's language is said to be the hardest of all to learn. His alphabet has 214 letters, and such complications of tones and inflections that one word spoken in 10 different ways means 10 different things.

As a business man John is not remarkable for honesty, to say the least. One traveller asserts that the first Chinaman by whom he was swindled was the first one with whom he had any business transactions—and that the last one who swindled him was the last native with whom he had any dealings when he left the country a year later.

John, as a soldier, is so brave that he goes to a night attack with his lighted lantern. It may expose his whereabouts to the enemy, to be sure, but if hostile soldiers are to be dreaded, much more the dark—in John's opinion.

John's religion? He has plenty—such as it is. Every trade has its patron divinity. The joss-houses have their idols by the dozen, and John smokes and chats as he prays. As he has only a single tongue, however, he must use some device to do either the chatting or the praying. So he prays by means of two sticks, half round, determining by the way they fall whether or not his prayer is granted. Or he prints his prayer on a strip of red paper and pins it on the wall near the door. At the proper time the priest sends it, with other accumulated prayers, up into the air on the wings of fire.—*St. Nicholas.*

Dish Washing in India.

THE Hindoos never pile their dishes "helter skelter" in the dish pan, as some of their American cousins do. In no Hindoo house have I seen tarnished silver or murky glassware. They never hang soiled dishcloths or tea towels on a line to dry, and then use them again, without rinsing; neither is their sink or slop-bucket ever greasy or grimy. Hired girls never break the cups and saucers, plates and bowls, in their undue haste to finish their work, for, first, they are never in a hurry, and second, there are no dishes to break.

The common people of India have neither glassware, silverware, cutlery nor dishes. Sometimes each member of the family is provided with a brass drinking vessel and deep plate of the same material, though often one will suffice for the entire family. They are very fond of curry and rice and rice soup, which they eat very deftly with neither spoons, forks nor chopsticks. Their bread being served in the form of a tough, unleavened pancake, a portion of this does duty as a spoon.

They are exceedingly particular about keeping their brass dishes clean and bright, but would laugh at the idea of using a dishpan to wash them in, or a dishcloth to rub them, or a towel upon which to dry them. They rinse them with hot water, scour with sand, rinse again, then place them in the sun to dry. A sink is entirely unnecessary, the mud floor being not only sufficient as a work table, upon which to prepare dinner but to "do up the work," on after dinner, as well.

There is never one vestige of food left upon the plates, every particle having been sopped up and eaten, hence there is no slop pail. The mothers do not encourage their children to habits of untidiness by allowing them to wear oilcloth bibs, or permitting a square of oilcloth to be placed under each plate, nor are the little ones allowed to use high chairs having little tables in front, either.

But could you see them, you would certainly wish that they had had something to keep the food off their clothing and faces, too. As for tables and chairs they never heard of such luxuries. Of what use would tables be to them, they think. Why desire chairs when they can sit so easily upon the mud floor?

To be sure the floor is not always clean, but they are accustomed to dirt, and upon some feast-day they will hire one of the sweeper caste to come in and clear up for them. Unless they belong to this caste themselves, they foolishly will not sweep, even if they mired in dirt. The wealthier high caste families, have the house swept each day by the "sweeper" who, with his whisk of small twigs, removes all the trash from the floor.

The water carrier makes daily rounds, carrying in a goat skin the water he has obtained from the public well. Sometimes this water is clean and sometimes not, but it is used, nevertheless, for drinking, cooking and washing dishes.—*American Agriculturist.*

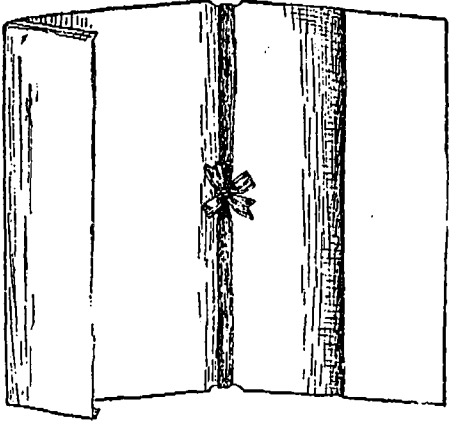


GIVE me a tyrant king, give me a hostile House of Lords, give me a corrupt House of Commons—give me the press and I will overturn them all.—*Sheridan.*



Adjustable Cover for Books.

To preserve the covers of magazines or paper-covered books while reading them, the slip-cover, shown in our illustration above, is valuable. It is made of heavy paper or thin canvas, and is simply a plain strip a little wider than



the book is long, and long enough to fold over the outside of the cover and turn in about half way over the inside of each leaf, the inner fold or flap thus formed being a little wider at each end than the rest of the cover. The loose, unfinished flap will be seen at the right of the sketch, and at the left the folded ends of the flap are pasted or sewed in position, that side being ready for the insertion of the book cover. It is best to insert with the cover two or three of the blank leaves also, and when the book is in place open it near the middle and bind book and cover together by tying about them a narrow ribbon, tape or cord. It takes hardly a moment to remove such a cover when you have finished reading the book, and no longer to bind it on a fresh one when needed, and whether one cares to so protect one's own books or not, it is only fair to take this little amount of trouble to care for borrowed ones.

Toilet Trays.

THE pretty scroll border of this dainty little tray, designed as a receptacle for fancy pins, ornaments, and all sorts of tiny belongings usually scattered about a toilet table, is worked with coarse silk or linen on a six or eight inch

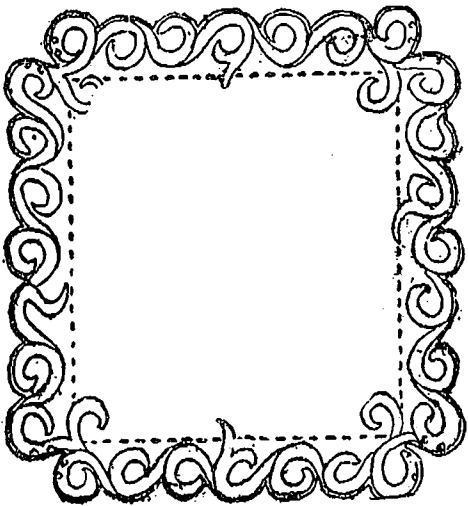


Fig. 1.

square, as shown in Fig. 1, of heavy double linen, either white or colored, or upon fine, stiff canvas of any pretty shade. The outside edge of the design is worked in buttonhole stitch, and the rest in heavy outline stitch; that is, the stitches are quite short and overlap each other

more than in ordinary outline work. The material at the edge is cut away close to the buttonhole stitch, leaving a prettily scalloped border with an open space at each corner. The dotted lines show where the border is creased and folded to form the sides of the tray, which

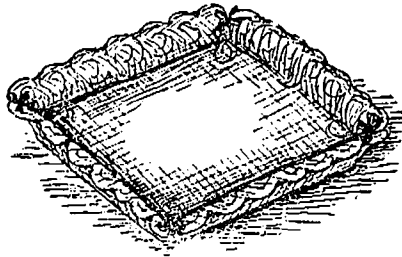


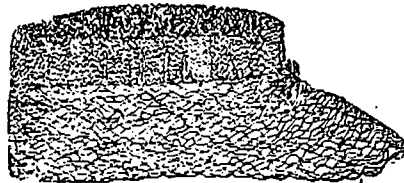
Fig. 2.

are kept in place by lacing narrow ribbons through the eyelets at the corners. The pretty needlework shows with better effect if the scallops are bent to curve outward, as seen in Fig. 2.

These trays are made in various shapes, long and narrow, diamond shaped, or triangular, and are sometimes placed on the mantel or on a small table, to set off some beautiful or curious little article which one wishes to display. By untying the corner ribbons the tray may be flattened so as to be carried or sent anywhere as easily as a sheet of paper. If made of washable material and colors, a tray may be starched to any degree of stiffness.

Knitted Bed Slippers.

FOR those whose feet are often cold at night, a pair of knitted bed slippers would be very acceptable. They are knit of gray Saxony yarn, on coarse steel needles. Cast on 75 stitches and knit a piece two inches deep, ribbing two

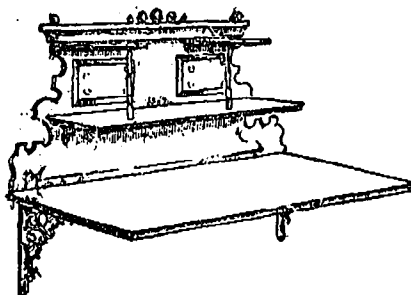


and two; now knit one row across plain, the next purl; continue this until the work is six inches deep; then knit two inches more of ribbing. You now have a plain centre with a row of ribbing at each side. Sew up at each end and finish one with a bow for the front. This slipper is made like a bag and is shaped by wearing.

By using three-threaded Saxony, choosing a light color—for many dyes make wool harsh—and knitting on large needles, the slippers will be very soft and clinging.

A Home-made Sideboard.

THE advantages of a sideboard in a dining room consists more largely in the opportunity to place dessert and extra dishes, fruit, etc., conveniently within reach of the table when any of these articles are desired than in en-



closed closets and drawers. An ordinary sideboard obtained in the furniture shops is beyond the purse of many who would greatly like the convenience of such an article of furniture,

while an attempt to make a full-fledged sideboard in the home work-shop is a decidedly formidable undertaking. As the upper portion of a sideboard is, after all, the part most used, and the part that gives the most conveniences, it may be more advisable to attempt only such a portion as is shown in the accompanying illustration, which may be used as a suggestion, rather than as something to be exactly copied. The broad shelf may be of ash or oak, highly polished, or it may be of white-wood dressed with a cherry stain and varnished. The whole top and back should be of the same wood. Bronze brackets support the two larger shelves, while the supports of the two upper and smaller shelves are plainly indicated in the cut. Beveled glass mirrors can be placed below these small shelves if desired. The lower brackets screw into the wall of the dining room.

Hints to Housekeepers.

In case the oven becomes too hot a pan of water put in it will lessen the heat perceptibly.

Boil or roast a lemon, fill with sugar while hot and eat hot. It will often check your cold.

Mildew may be removed by dipping the stained part in buttermilk, and then put the article in the sun.

Jute is reproduced in designs and colors of the French drapery silks, and is pretty for bedroom furniture and hangings.

The buffalo bug is to be eradicated only by benzine or naphtha. Apparently nothing else will have the slightest effect on him.

Use kerosene for blood stains. Wash colored cottons and linens as quickly as possible, dry in the shade, and take off the line as soon as dry.

The best way of removing the white spots caused by water drops on crepe is an exceedingly simple one. Lay the crepe on a table with a piece of black silk beneath it. Dip a camel's-hair brush in ordinary ink and go over the stain. Wipe the ink off with a soft piece of silk. The stain will disappear as soon as the ink dries.

A good way to test ham is to stick a knife under the bone. If the knife comes out clean and with a sweet smell the ham is pure and wholesome. If not, not.

No matter what cleansing agent you use, never allow clothes to soak more than half an hour. No one thing makes white linen look worse than soaking over night.

Nothing should be cooked in iron vessels that can be cooked in earthenware. The heat is more uniform, the flavor is better preserved and there is less liability to burn in the earthenware vessel than in the iron.

There is a liability of disease germs in the dust and dirt that adhere to the ordinary wear of any person during the day, and it is wise therefore always to brush your clothing every time you change it after a day's use of it.

DO YOU KNOW.

That wheat middlings make just as good bread as rye flour at double the price?

That sheets, pillow-cases, towels, etc., can be ironed nicely by folding smoothly and putting through the wringer?

That a new cotton dress, accidentally torn, can be mended so that it will not show, by starching a piece like it, placing it carefully under the rent and ironing on both sides?

That cookies, ginger-snaps, etc., bake much better if the tins are turned bottom side up?

That the letters can be removed from flour sacks by soaking these in butter milk?

That chopping bread dough instead of kneading so much, saves lots of work?

That sweet, skimmed milk is much better than starch for calicoes and gingham.



CATCHING AN EARLY TRAIN.



HAD INVESTIGATED.

One of the hind wheels of a truck suddenly gave way on Michigan avenue, yesterday, and the usual crowd gathered to see and speculate.

"Too heavily loaded," observed one, in a self-complacent way.

"The sudden jar did it as it fell into that rut," remarked a second.

"The axletree wasn't heavy enough, anyway," added a third.

Several others passed remarks of a like nature, and then a boot-black, who had been carefully investigating causes and results, suddenly straightened up and said:

"Gentlemen, owing to a flaw in the iron of axletree broke short off, and de owner of de vehiele is entitled to a new one widout funder cost. Move on, now, and don't embarrass de gent as drives de team, see!"

PISTOLS UNPROFITABLE INVESTMENTS

Now, as men do not keep revolvers under their pillows because they think they will be handy to have in the house in case anybody should desire to die suddenly and painlessly, why should they keep them at all? "To shoot burglars with," the victims of the revolver habit will tell you. When does anybody, barring he's a policeman, have urgent occasion to shoot a burglar? Why should anyone yearn to shoot burglars? There is really nothing in it. If a burglar pays you a visit, a very remote contingency, by the way, and you discover his presence, what you want him to do is to go away. You will see, if you stop to think about it, that you have no genuine desire that he should remain on your premises longer than is unavoidable, even in the passive capacity of a corpse. To induce him to do as you wish, hastily, you have only to make noise enough to inspire him with a suspicion that you are awake and stirring. The ordinary domestic burglar regards his nocturnal operations purely from a business point of view. He does not enter your house to gratify a grudge against you. He has no desire to harm you or even annoy you. He is simply working at his trade. He burgles for revenue only. He doesn't want to kill anybody. Murder is entirely out of his line. If you drive him into a corner, he may be driven to kill you, by terror of arrest and imprisonment. But it will be your own fault. The man who gets into the habit of prowling about the house after burglars with a revolver, will, sooner or later, get a lesson which, whether more or less severe, will effectually cure him of his folly. He may ruin a valuable mirror by blazing away at his own reflection, or put a bullet through some member of the household roused by his noise, or, achieving his ambition, he may shoot a burglar, if the burglar doesn't see him first, or the burglar may shoot him. Something of this sort is the inevitable outcome of prowling with a pistol.



AN EASY BARGAIN.

WOODSELL—What will you give me for him?
 BYERS—A load of hay.
 WOODSELL—What would I want with hay and no horse to eat it?
 BYERS—Well, I'd lend you the horse till the hay was gone.

AN UNFEELING ACT.

"Well," said Mr. Tripkins, as he sat down to his desk rather later than usual. "They've been to see me at last."

"Who?" asked the man at the next desk.

"Burglars."

"You don't mean it! I suppose you'll have to borrow spoons to use at dinner to-night now."

"No. The spoons aren't silver. They didn't touch 'em."

"Take any money?"

"No."

"Wearing apparel?"

"Not a stitch."

"Well, I don't see what cause you have to be blue."

"Maybe not, but when you get attached to an animal it's hard to lose him. They went through the house and couldn't find anything else worth taking, so they stole my watch dog."

HOSPITALITY OVERDONE.

King Osear, of Sweden, once passed through a little town which was festively decorated for the occasion. Among the rest a huge transparency, affixed to a gloomy-looking edifice, attracted his attention. It bore the inscription: "Welcome to Your Majesty!" in gigantic characters. "What building is that?" the king inquired. "That is the country prison, your majesty," replied one of the aldermen. The king laughed, and was heard to observe: "That is carrying matters a little too far!"

DOING THE HONORS.

Little Girl.—"Yes'm, the girl who tends the front door was taken sick only a minute ago, and the other girls are out, and mamma is upstairs, so I came to the door myself."
 Caller.—"You are very kind, my little pet."
 Little Girl.—"Walk into the parlor, please, and I'll tell mamma. I guess maybe you'd better stand up till I come back, 'cause I never can remember which of the parlor chairs is made to sit on."

THE BOY KNEW.

Teacher.—"Yes, children, when the war broke out, all the able-bodied men who could leave their families enlisted in the army. Now, can any of you tell me what motives took them to the front?"
 Bright Boy (triumphantly).—"Locomotives."

Tramp.—"The world owes me a living." Citizen.—"Well, I'm not the world. Get out!"

The earliest mode of writing was on bricks; and many ancient editors are said to have built sumptuous palaces out of rejected poems.

He may be called an honest man
 As one could wish to behold
 But if you'll notice you surely will find
 He's not above taking a kid.

"Willy," said the History Teacher, "how did Cleopatra die?" "She bit herself with a snake," said Willy.

Snooper.—"He took a drop too much and died." Skidmore.—"Delirium tremens?" Snooper.—"No; parachute."

"Did you visit the Catacombs in Rome?" "Yes. If they were a little lighter they'd be almost as pleasant as a Harlem flat."

Prof. Garner says that gorillas do not talk with chimpanzees, but neglects to tell us which party is at fault or which began it.

Esther.—"Your calendar is wrong; it isn't Friday yet."
 Helen.—"I know it; but I usually tear off ten or twelve days at once; it saves bother."

Mamma.—"Lloyd, have you given any fresh water to your goldfish this morning?" Lloyd.—"No, mamma; they haven't drunk up what they have in the globe already."

Witticus.—"Nobody ought to object to being called down."
 Querius.—"Why not?" Witticus.—"Because he must stand higher than the man that does the calling down."

"Oh what's the matter with Rio?"
 A voice falls on the quiet,
 The pauster hold
 Retains his hold,
 And murmurs, "She's all Riot."

Miss Manhattan (maliciously).—"You must miss the dear old London fogs very much."
 Lord Tuffnut (loftily).—"I do. But I am partially compensated by your charming New York mud."

SNAP SHOTS.

WILFUL ignorance is an incurable ailment. There is nothing more contagious than grumbling. Do not force others to bear the burden of your song. We follow precedent as long as it gives us the advantage. It certainly takes very little to make vain people happy. A fool is a great man who can raise a tempest in a teapot. The crank's methods are naturally more or less revolutionary.

While one is studying he should not forget to do some thinking.

Envy is one of the most expensive exercises one can indulge in.

A good man finds something painful even in the downfall of his rival.

It seems that the good points of some people have all been broken off.

The messenger boy goes slow because he is determined not to run out of a job.

The man who uses all the credit he can get will soon find himself without any.

Some men will get the upper hand of you even if they have to do it by underhand methods.

A vigorous young man expends enough energy in one foot-ball game to saw a whole cord of stove wood.

"I've been lying low for some time now," said the Fire; "and I believe this is a good chance to go out." "Oh, no, you don't!" said the Coal, as the janitor dumped the hod; "I'm on to you!"

Hotel Clerk.—"Did you tell that old gentleman from the country that he mustn't blow out the gas, as I told you?" Barney (new boy).—"Yis, sorr; but it's so afeard to thrust him Oi was, sorr, Oi blowed it owt meself, sorr."

"Take the world as you find it."
 Through life from their birth
 To some, evidently
 Means wanting the earth.

"There's lots of good in that Mrs. Slack who lives up street." "Do you think so?" "I do; she is constantly borrowing things from her neighbors, yet she never has an ill word to say about any of them."

Mr. Newlywed.—"Now, my dear, have I to order anything else?" His wife.—"Yes, dear; two pounds of sponges. You know, mamma is coming in a day or two, so I want to make some spong-cakes."

Bodkins.—"Doctor, how can insomnia be cured?" Doctor.—"Well, the patient should count slowly and in a meditative manner 500, and then—"
 Bodkins.—"That's all very well, doctor; but our baby can't count."

Master Meadow.—"Pop, I wish you'd buy me a bicycle." Farmer Meadow.—"Can't afford that, my boy; but never mind, the next time we have any tools to sharpen I'll rig up a saddle so you can turn the grindstone with your feet."



ON THE OTHER SIDE.

Mrs. HENRY PECK (looking up from her paper)—Ah! well, poor Hyson is rid of his trouble and misery, at last.
 Mr. HENRY PECK (in astonishment)—Why, I didn't know his wife was sick! When did she die?

Rubber Belting!

THE CANADIAN RUBBER CO. OF MONTREAL

Manufacture the Best Threshing Machine Belts in America.

ASK THE MERCHANT YOU DEAL WITH FOR THEM, AND TAKE NO OTHER.

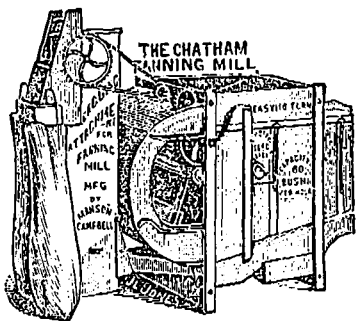
RUBBER

WESTERN BRANCH:

Cor. Front & Yonge Sts., TORONTO.

BELTING

THE CHATHAM FANNING MILL.



1000 sold 1884
1330 sold 1885
2000 sold 1886
2300 sold 1887
2500 sold 1888
3500 sold 1889
4000 sold 1890
4500 sold 1891
5000 sold 1892

More than have been sold by all the factories in Canada put together & doubled.

HOLLY P.O., Simcoe Co., Feb. 24, '93.
MANSON CAMPBELL—
DEAR SIR.—I am well pleased with your Mill: it is the best that I ever used to clean wheat and barley.
Yours very truly,
JAMES LOUGHHEAD.

34,000 Chatham Mills now in use.
Over 10,600 Bagging Attachments now in use.
Bagging Attachment is run with a chain belt that cannot slip. The Elevator Clips are also attached to endless chain belt that cannot slip nor clog.
SPECIAL ATTENTION GIVEN TO THE CLEANING OF ALSAC CLOVER SEED, MARROWFAT AND BLACK EYE PEAS
The Mill is fitted with Screens and Riddles to clean and separate all kinds of grain and Seed, and is sold with or without a Bagger, though it is not wise to be without a Bagger.

For prices and full information apply to

MANSON CAMPBELL, Chatham, Ont.

For Sale by all Agents of MASSEY-HARRIS Co., Ltd., in Manitoba and North-West Territories.

Toronto & Brantford Mowers

Send for our New Illustrated Catalogue.

FOUND AT LAST A RELIABLE, CHEAP POWER

"IDEAL JR." SECTIONAL POWER WIND MILL.

GENTLEMEN,—Allow me to tell you of my experience with the 12 foot "Ideal Jr." Sectional Power Wind Mill which I purchased from you last fall. I made the purchase with many misgivings, because Wooden Power Mills had not given satisfaction, and I had no experience with Steel Mills. My well is 50 feet deep and is 80 feet distant from the barn, but the Wind Mill pumps without difficulty by using cables and triangles, and a half a day a week will pump all the water required for my stock, namely, 27 cattle and 5 horses. I run a Root-pulper, large Straw Cutter and your "Ideal" Duplex No. O Grinder, and have no difficulty in running any of these, and in fact could often run two at once. The power this steel mill gives is an agreeable surprise to me, for I did not think it possible to get such splendid results. At times I think I have had 12 horse power, and have sufficient average good wind to keep my grain ground and feed cut to supply my stock, and, if I cared to, could do the work for three other farmers with an equal amount of stock. One feature of the Sectional which pleases me greatly is the perfect way in which it governs, and thus gives steady power. I want to congratulate you on the excellence of your Grinder, for it is the best I have ever seen. I have ground 15 bushels per hour, and can do 8 bushels on an average. The Grinder regulates itself perfectly according to the amount of power, and does it automatically. I have had a large number to see the mill, and they are delighted with the way the Grinder acts, feeding a large or small quantity, as the mill gives power. Another good feature is that it has a double set of plates, and when the mill runs empty these do not touch. To sum up, I am glad I purchased this mill, and am well pleased with the results, and consider I have made a good investment, and one that will pay large dividends.

H. W. WILLIAMS, BRANTFORD.

We also make the "Ideal" Steel Pumping Wind Mill, with enclosed internal gear. It is a grand mill. Write us if you have any thought of purchasing.

Yours in earnest.

GOULD, SHAPLEY & MUIR CO., LIMITED, BRANTFORD, ONT., CAN.

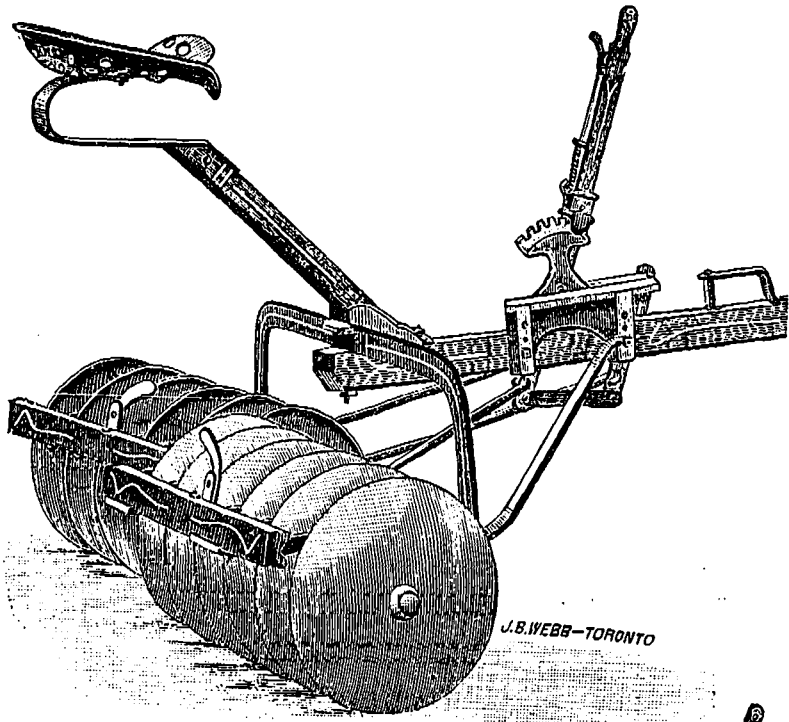
Some Additional Clubbing Rates.

	Publisher's Price.	Price with Massey's Illustrated.
Weekly Mail, Toronto (including Farm and Fireside).....	weekly	\$1 00
Family Herald, Montreal (see advertisement re premium).....	weekly	1 00
Farmer's Advocate, London (renewal).....	semi-monthly	1 00
Farmer's Advocate, London (new subs).....	semi-monthly	1 00
Daily Witness, Montreal.....	daily	3 00
Christian Herald, N.Y. (Tahnage's).....	weekly	1 50
The Book-Keeper, Detroit.....	monthly	50
National Stenographer, Chicago.....	monthly	1 00
Phonographic Magazine, Cincinnati.....	monthly	1 00
Business, N.Y.....	monthly	1 00
Housekeeper, Minneapolis, Minn.....	semi-monthly	1 00
McClure's Magazine, N.Y. (illustrated).....	monthly	1 50
Munsey's Magazine, N.Y. (illustrated).....	monthly	1 00
The Idler, London, Eng. (illustrated).....	monthly	3 00

If any other paper on this list, in addition to the ONE chosen with MASSEY'S ILLUSTRATED, is wanted, we will quote price on application.

Send for our December Clubbing List. It embraces the best publications of the day at enticing prices.

CORBIN DISK HARROWS

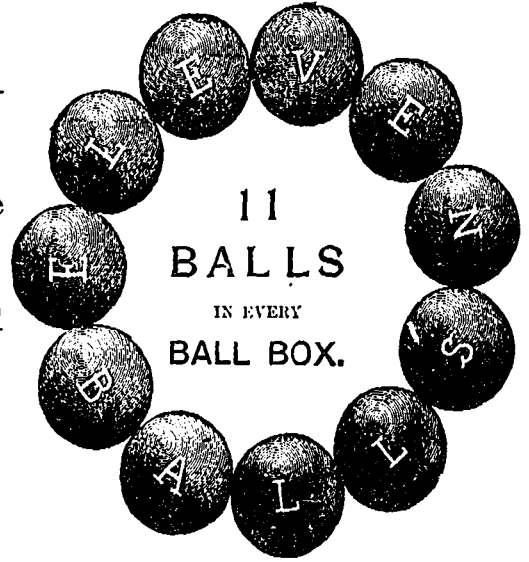


J.B. WEBB—TORONTO

Well balanced and perfectly flexible.

Fits the highest ridge and lowest furrow.

Has ball bearings and chilled boxes, and runs very light.

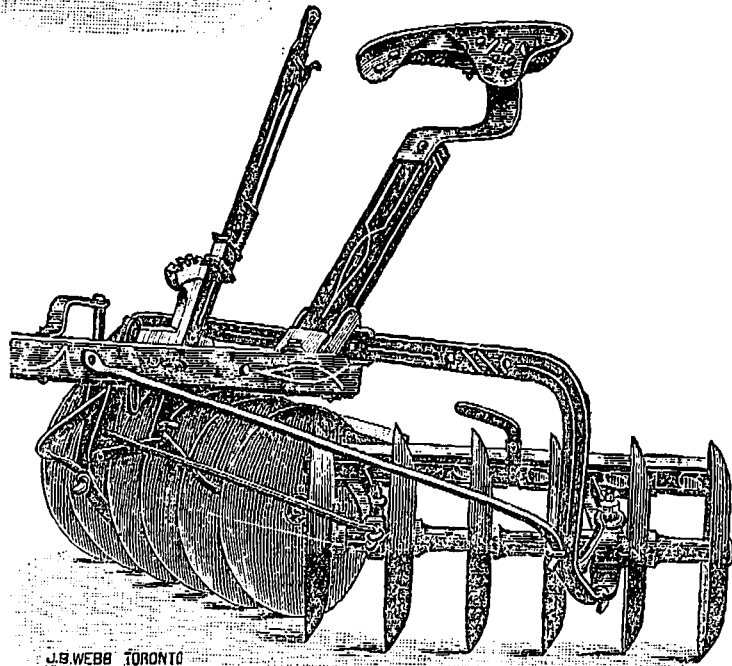


11
BALLS
IN EVERY
BALL BOX.

EITHER REVERSIBLE OR NON-REVERSIBLE.

The Non-Reversible throw the soil inwards, and do not leave a strip untouched, as do many others.

The Reversible is a "throw out" Harrow, but can be set to "throw in" if desired.



J.B. WEBB TORONTO

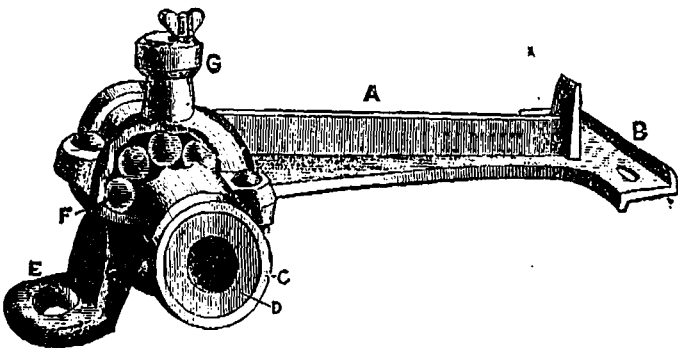
MADE IN TWO SIZES,
6 FEET & 7 FEET WIDE.

All are fitted with Steel Scrapers and Clod Catchers.

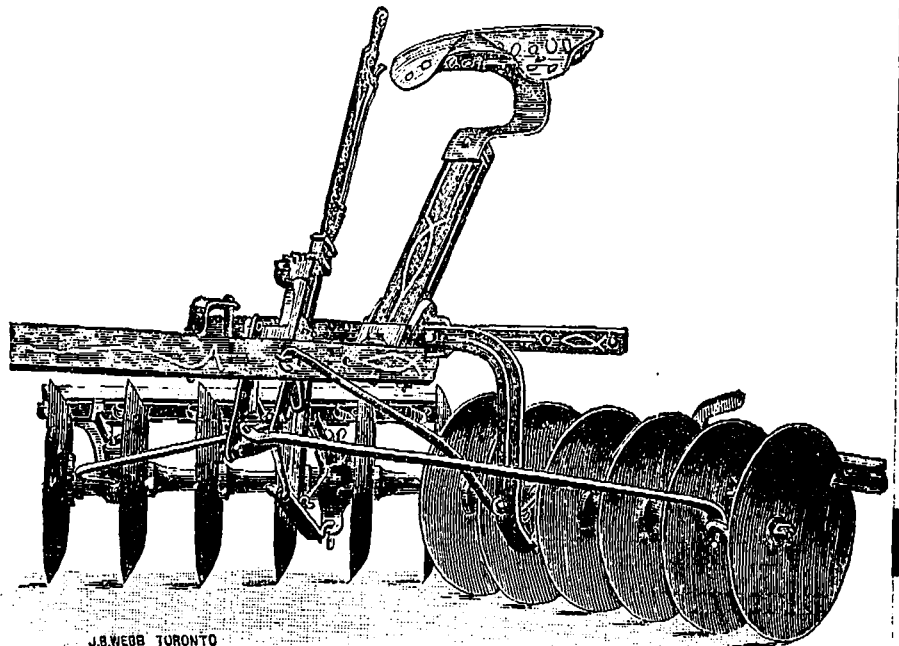
Easy-Riding Steel Spring Seats of new design.

Tempered Disks.

SOLID STEEL "BACK-BONE" in one single piece of Steel keeps the Gangs stiffly in place.



The Disks are tempered and have very hard cutting edges, not liable to break or to wear easily.



J.B. WEBB TORONTO

MANUFACTURED ONLY BY

MASSEY-HARRIS CO. LTD. TORONTO, CANADA.



The "Original Gandy"
 Sewed Cotton Duck Belting,
 For Endless Thresher Belt, Main Drivers, and
 for all places where belts are subjected to mois-
 ture or atmospheric changes, the GANDY
 stands paramount.
 For further information, prices, etc., write
The Gandy Belting Co.
 BALTIMORE, MD.

Canadian Agent, J. H. MORROW, Brighton, Ont.

INSURANCE.

ACCIDENT,
Employers' Liability,
PLATE GLASS

Capital { BRITISH and } over \$3,500,000
 CANADIAN

MASTMURE & LIGHTBOURN,
TORONTO.

GOOD AGENTS WANTED.

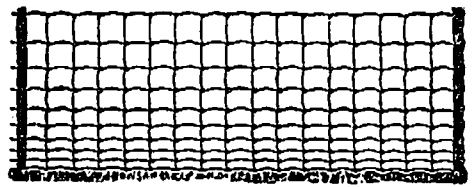
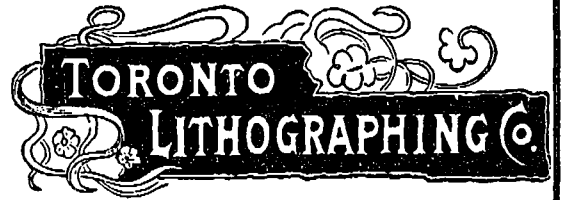


THE MASSEY HARVESTER.

CATALOGUE WITH FULL INFORMATION SENT
 TO ANY ADDRESS.

**WONDERFUL!
 A GARDEN FREE.**

Send us 10 cents for 3 months subscription to **Homes and Hearths.**
 We will send you as a present, transportation prepaid,
**A MAGNIFICENT PREMIUM PACK-
 AGE OF FLOWER SEEDS,** 202 choice, fresh va-
 rieties from largest growers in the world, including such popular leaders as **Sweet Peas,** (Boreatton, Grand Blue, Queen of England, Isa Eckford, "all new" etc.) also **Pansies,** (Rex, Gold Margined, Snow Queen, Highland, etc.) also **Asters,** (Jewel, Perfecton, Victoria, etc.) and many others. The whole is a perfect wealth of flowers, fit for a royal garden. **Homes and Hearths** is an attractive 16 page monthly, with lovely original illustrations, splendid, absorbing original stories; special departments for **FASHIONS and HOME DECORATION;** best selected matter; **FIRESIDE FUN;** a perfect Mine of pleasure and value. The paper will contain other splendid premium offers.
 Address **HOMES & HEARTHS Pub. Co.,** New York.



**The Highest Award
 IN THE WORLD**

Is the unqualified approval of every customer. Our fence has won at every Fair or Exposition where entered, but what does a practical farmer care for that? The fighting qualities of a soldier are proven on the field of battle, not on dress parade.

Send for Descriptive Price List.

PAGE WIRE FENCE CO. OF ONTARIO, LTD.
 WALKERVILLE, ONT.

TO PUBLISHERS AND PRINTERS.

FOR SALE

A large number of electrotypes that have appeared in **MASSEY'S ILLUSTRATED.** Many of these are original. Prices very low. We can also furnish electros of a very choice selection of half-tone views of the World's Fair at Chicago. These were specially taken for this Magazine by Mr. W. E. H. Massey. For samples and prices address **THE MASSEY PRESS,** Massey Street, Toronto, Canada.

The Canada Paint Co., Ltd.

FACTORIES AT MONTREAL, TORONTO, VICTORIA, B.C.

MANUFACTURERS OF

Varnish, Japans, Dry Colors,

**Mixed Paints, Lead, Oils, Colors in Oil
 and Japan.**

**PARIS GREEN, BARN ROOFING AND
 OUTHOUSE PAINTS.**

Makers of Paints and Varnishes for Massey-Harris Co., Limited.

Canadian Bee Journal

**A LIVE MONTHLY
 FOR LIVE BEE KEEPERS.**

EDITED BY R. F. HOLTERMAN,
 PUBLISHED BY
Goold, Shapley & Muir Co. Ltd.
 BRANTFORD, CANADA.

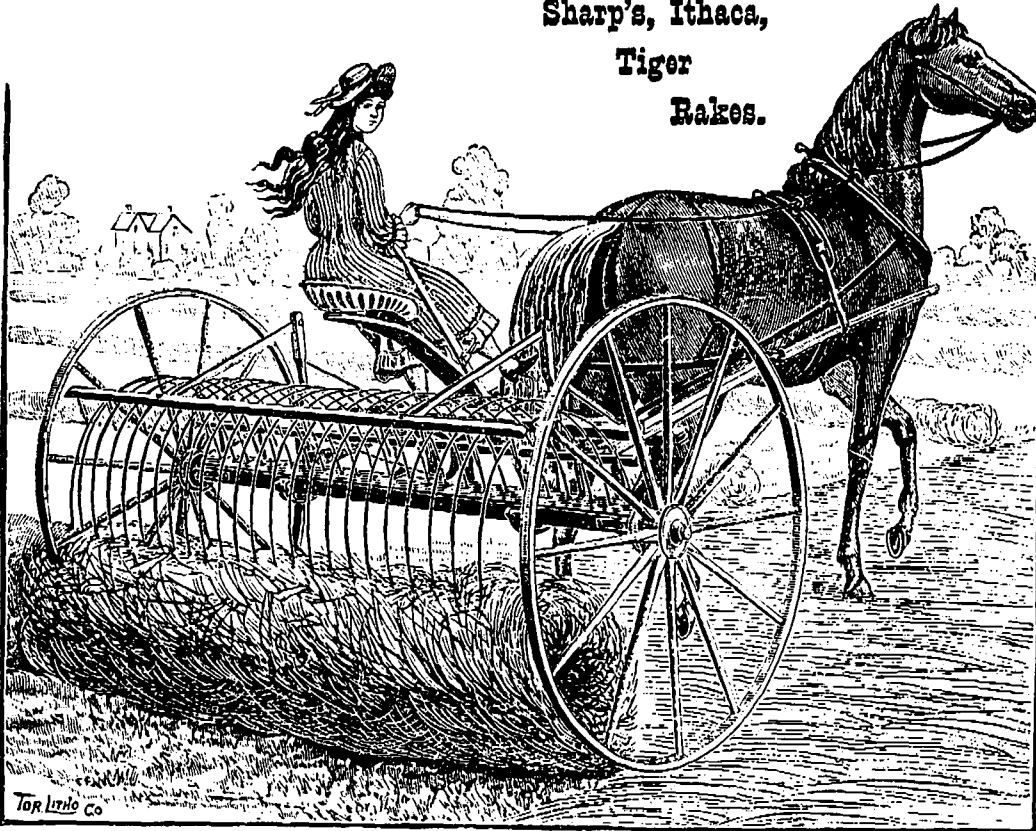
Send 25 cents for four months' trial trip.
 Terms, \$1 per annum.



ROGERS' PEERLESS MACHINE OIL
 is specially manufactured for Farmers' Ma-
 chinery, and excels in all the qualities
 necessary for Farmers' use.

EVERY STABLE SHOULD HAVE
 PEERLESS HOOF OINTMENT.

Sharp's, Ithaca,
Tiger
Rakes.



MASSEY'S ILLUSTRATED

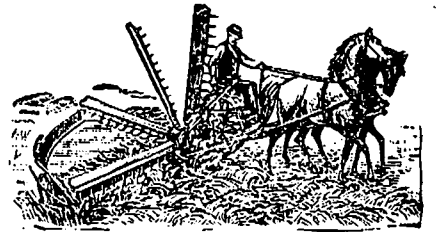
An Independent Journal of News and Literature for Rural Homes.

PRINTED AND PUBLISHED BY THE MASSEY PRESS.

PROF. SCRUB, - - - - - Editor.
ALEX. FRASER, - - - - - Associate Editor.

SUBSCRIPTION PRICE:
To all parts of Canada and United States, only 50 cents per annum, postage prepaid. Stamps taken.

Always address, MASSEY PRESS, Massey St., Toronto, Can.



**MASSEY HARVESTER.
BRANTFORD REAPER**

BUNTIN, REID & CO

29 WELLINGTON STREET WEST,
TORONTO,

Wholesale Stationers

Envelope and Blank Book Manufacturers.

PAPER MANUFACTURERS AND DEALERS

Mills at Valleyfield, on the River St. Lawrence.

SPECIALTIES -
FINE ART * LIVE STOCK *
MECHANICAL

WOOD ENGRAVING

TORONTO ENGRAVING CO
BRIGDEN MANGER
REMOVED TO
53 KING ST W
COR BAY
TORONTO

BOYS FOR FARM HELP.

The managers of Dr. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 5,000 children in these homes, receiving an industrial training and education to fit them for positions of usefulness in life; and those who are sent to Canada will be selected with the utmost care, with a view to their moral and physical suitability for Canadian farm life. Farmers requiring such help are invited to apply to

MR. ALFRED B. OWEN, Agent Dr. Barnardo's Homes
21 Farley Avenue, Toronto.

VERITY PLOW CO. LTD

VERITY PLOW RIDING ATTACHMENT.

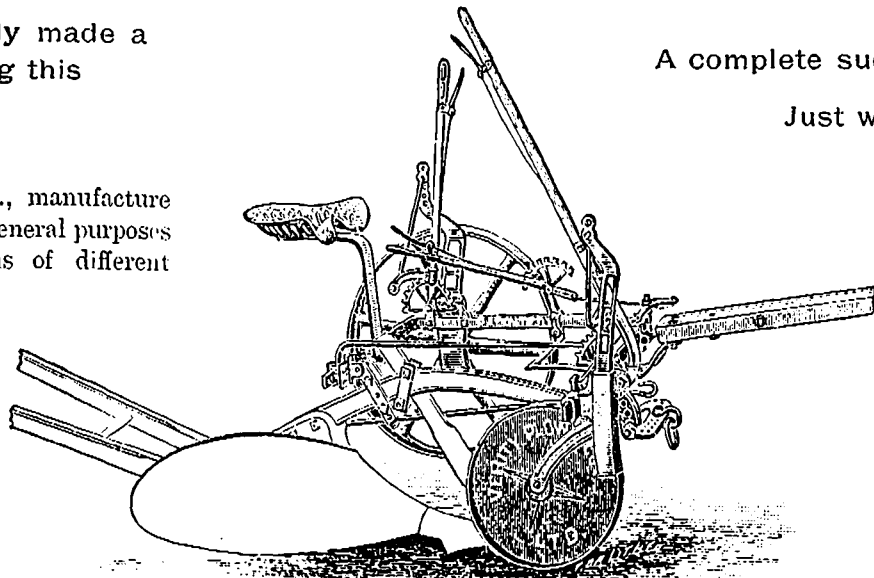
Any Plow can be quickly made a Riding Plow by using this Attachment.

A complete success.

Just what was wanted.

You need it. Try it.

The VERITY PLOW CO., Ltd., manufacture a large line of Plows for sod and general purposes suited to the varying conditions of different countries.



Our works at Brantford are equipped with the latest and best appliances, including the most approved devices for hardening and tempering steel, also an elaborate aerated fuel oil burning plant, by which process alone the best results can be obtained.

American Soft-Centre Steel
MOULDBOARDS
on all our Plows.

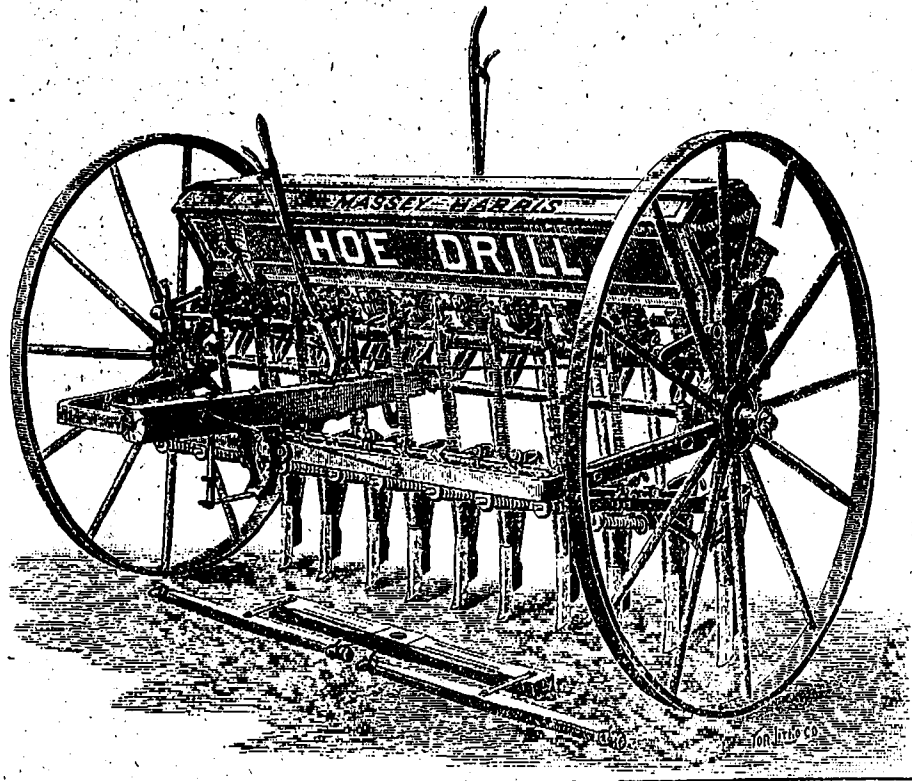
VERITY PLOW CO. LTD

BRANTFORD, ONT., CANADA.

NEW MASSEY-HARRIS COMBINED HOE DRILL AND BROADCAST SPRING TOOTH SEEDER.

POSITIVELY THE LIGHTEST, THE STRONGEST, AND THE BEST COMBINED MACHINE YET PRODUCED.

All Steel. * Neat in Appearance. * Mechanical Principles Unexcelled.



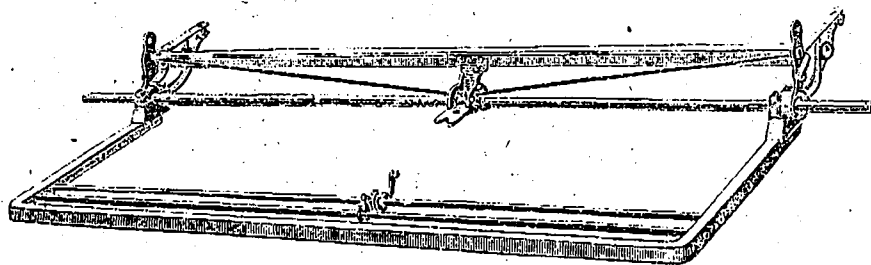
It represents the best features of the "Wisner," the "Goldfinder," and the "Superior," together with some valuable new features

CONSOLIDATED IN ONE MACHINE.

The perfecting of this tool has taken two years of arduous labor on the part of our inventive staff.

IT IS ANOTHER ILLUSTRATION of the advantage of the organization of Massey-Harris Co., Ltd., for otherwise the construction of this admirable implement would have been impossible.

**SOLID
ANGLE
STEEL
FRAME.**



**SOLID
STEEL
AXLE
(Trussed.)**

It is but the work of a few moments to replace the hoes with spring teeth, or *vice versa*.

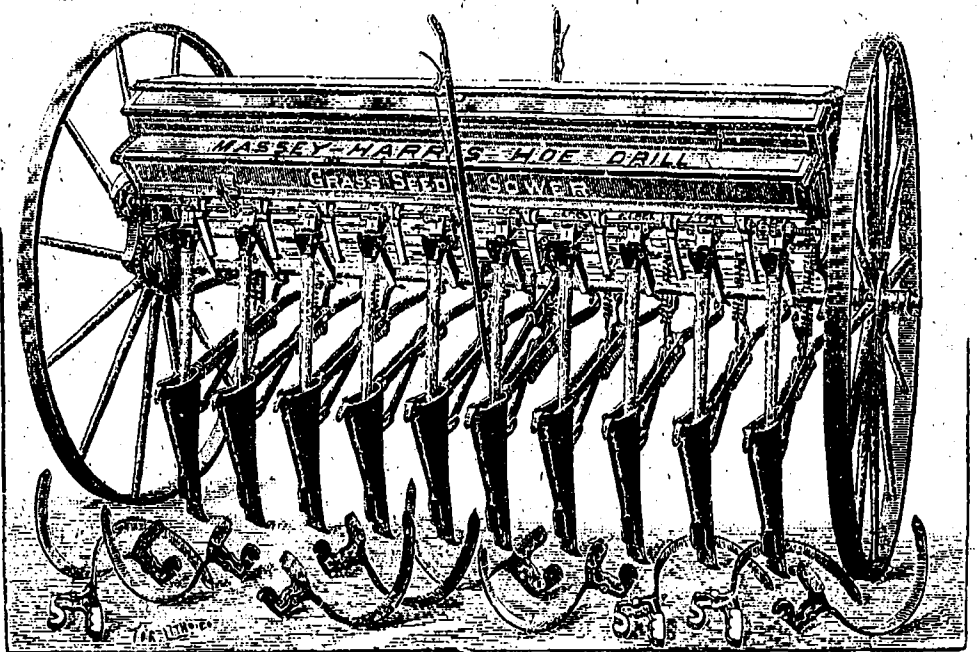
The machine can be instantly changed from "drill" to "broadcast," or *vice versa*.

Hoes or Teeth can be instantly set zig-zag or straight, as needed.

The method of applying the pressure for regulating depth of sowing is simply perfection.

Reversing the pressure lever throws the machine out of gear and lifts the hoes for transportation.

The self-adjusting force feed run will sow all kinds of seed without "cracking," and will sow accurately as to quantity, when the Index finger is set as desired.



NOTICE—The Pressure Device, the Hoe and Tooth Connections, Unlocking Device, Springs in connection with Feed Run, etc., etc., are all fully protected by letters patent, and any attempted infringements will be vigorously prosecuted.

MASSEY-HARRIS CO., Limited, TORONTO, CANADA.

Rubber Belting!

IF YOU WANT THE
FINEST THRESHING BELTS

MADE, ASK YOUR DEALER TO GET FOR YOU THE

'MONARCH' BRAND

It will cost more at first, but will be economy in the end.

MANUFACTURED SOLELY BY

THE GUTTA PERCHA & RUBBER MANUFACTURING CO.

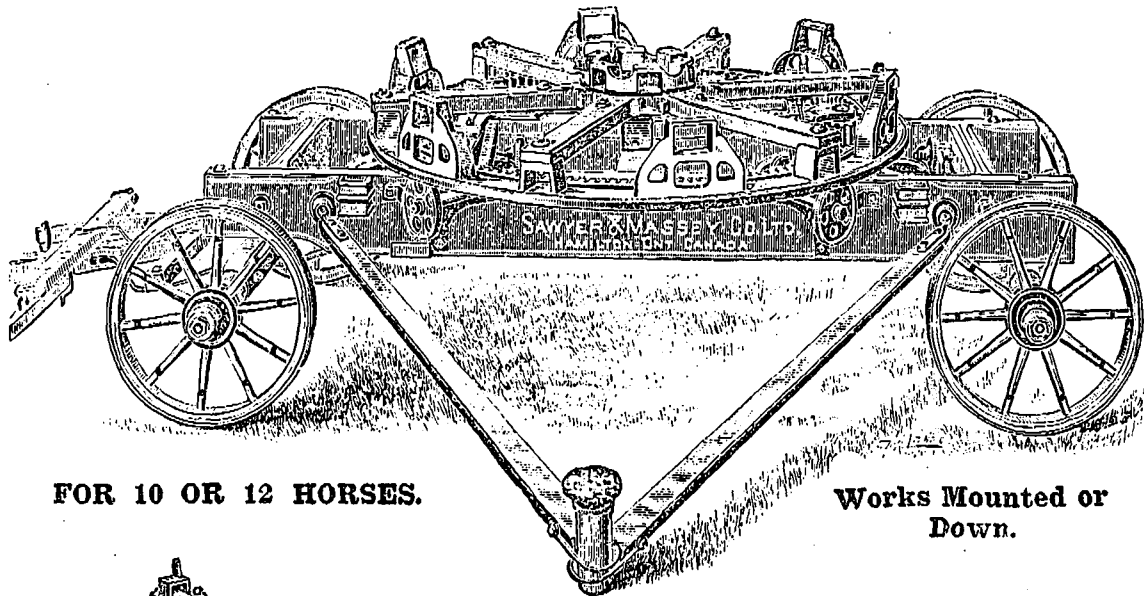
OF TORONTO (LIMITED).

61 & 63 Front Street West, TORONTO.

* * HORSE POWERS * *

WELL
MADE.

*
Prices
are
Right.

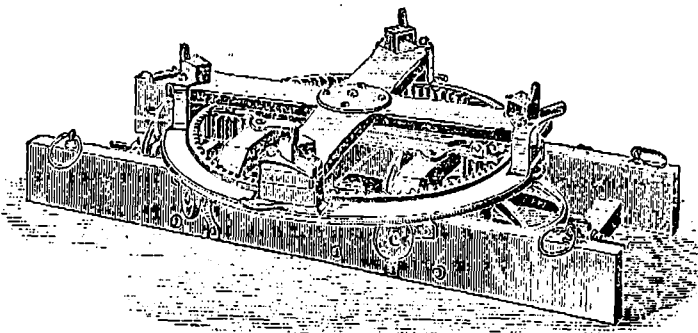


GRAND
WORKERS

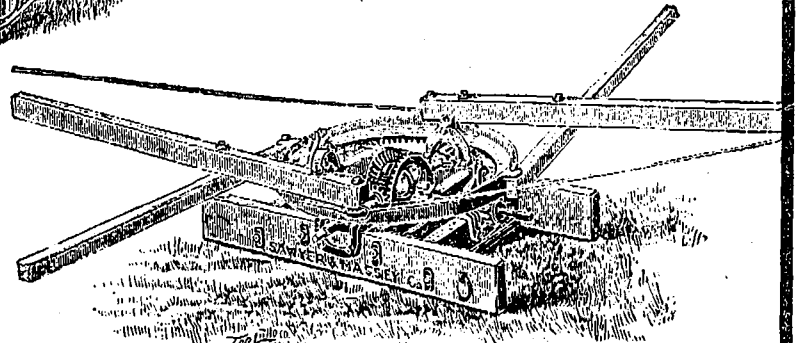
*
Write
for
Particulars

FOR 10 OR 12 HORSES.

Works Mounted or
Down.



4 TO 6 HORSE POWER.



2 TO 4 HORSE POWER.

We also build a Sweep Power suitable for eight horses, the engraving of which is not shown.

Sawyer & Massey Co., Ltd., Hamilton, Ont.