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# Massey-Harris Illustrated

A Journal of News and Literature for Rural Homes.

New Series, Vol. II., No. 6.) NOVEMBER-DECEMBER, 1898. [Whole Series, Vol. XVI., No. 6



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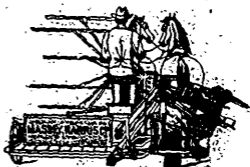
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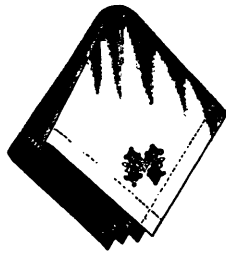
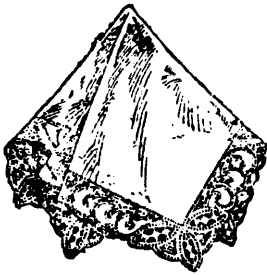
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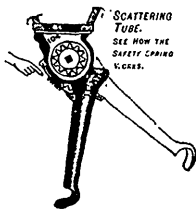


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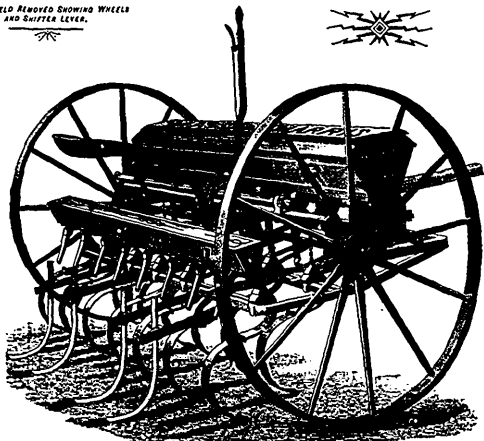
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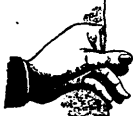
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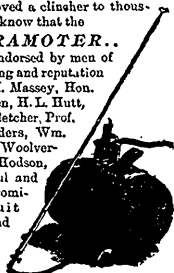
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*H. J. Hill* }  
*[Signature]* } **Judges.**

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# Massey-Harris Illustrated

A Journal of News and Literature for Rural Homes.

New Series, Vol. II., No. 6.] NOVEMBER-DECEMBER, 1898. [Whole Series, Vol. XVI., No. 6.



THE GRAPHIC.

SCENE AT THE ENTHRONEMENT OF QUEEN WILHELMINA OF HOLLAND.

**W**E made a brief reference in our last issue to the coronation of Wilhelmina, the young Queen of Holland, a portrait of whom we also

reproduced. We believe we could not start our trip around the world in this issue more appropriately than by reproducing the scene at the enthronement of



THE ILLUSTRATED LONDON NEWS.  
CHARGE OF 21ST LANCERS AT OMDURMAN.

the Girl-Queen of a country which, in spite of its smallness, has played no mean part in the history of the world. It was little Holland that took the initiative in the struggle which finally broke the power for persecution of the cruel, tyrannical Philip of Spain in the sixteenth century. It was little Holland that offered a refuge to the persecuted protestants of all nations. It was from little Holland that English craftsmen acquired their skill in those textile industries which have contributed so largely to Britain's commercial supremacy. It was the sturdy sons of little Holland who laid the foundation of the present prosperity of what is now New York State, and whose descendants are among the foremost men of the United States to-day. It was little Holland that gave to the world Van Dyke, Reubens and other painters, to whose names artists and all lovers of art pay a devotion little short of reverence. Little in territory Holland may be, but in verity

she proved herself great in those accomplishments which are more lasting than the victories of war; and the heritage which has fallen to the portion of the young Wilhelmina is one of which any monarch might well feel proud. Of the

ladies, officers and functionaries lent light and color to the scene. The church itself was beautifully decorated with a wealth of drapery, banners, palms and natural flowers. At the end of the church, in front of the chancel, was a



THE END OF MAUDISM: THE DEAD YAKUB AND HIS FOLLOWERS BESIDE KHALIFA'S BLACK FLAG.

THE ILLUSTRATED LONDON NEWS.

enthronement ceremony, the *Graphic's* special correspondent says: "The enthronement of the young Queen of the Netherlands in the New Church, Amsterdam, was a simple but impressive civil ceremony. A brilliant gathering of

throno, magnificent in crimson and gold velvet. On stools before the throne lay the emblems of Royalty—the Royal Crown, the Orb, the Sceptre, and Sword of the Kingdom."

There are two scenes in the now hap-

pily ended war against the forces of Mahdism which we deem well worthy of a place among our illustrations of recent events. Our readers in common with all Britons have already felt a thrill of pride pass through them as they learned of the gallant charge of the 21st Lancers at

coat, the other most assuredly evidences the heroism of the misguided dusky sons of the desert. An eye-witness of the scene says: "The finest heroic display in the Dervish ranks was made by the Khalifa's brother, the Emir Yakub, who, with his followers, gathered in a dense



FREE AT LAST: THE FIRST SMOKE IN TEN YEARS.

THE GRAPHIC.

COLONEL WINGATE.

HERE NEUFELD.

SLATIN PASHA.

Omdurman. The accompanying illustration gives a very vivid idea of the terrible character of such incidents of war. Equally convincing in the same direction is our illustration, "The End of Mahdism." If one picture portrays the dash and daring of the British red-

mass round their standard and proudly faced the leaden hail. As Yukub expired several of his wounded bodyguard raised themselves and fired at our men. They were promptly despatched. Slatin Pasha witnessed the death of his old enemy and captor, Yakub, who recognised him."

The story connected with our illustration of three riders on horseback, apparently enjoying themselves, is full of pathos. The central figure, Herr Neufeld, was a contractor in the service of the English government. He was taken prisoner by the Khalifa over twelve years ago, and the intervening period has been spent in prison in Omdurman and Khartoum. He was forced to help in the manufacture of ammunition for the use of his captors, and on more than one occasion was prepared for execution.

of every intelligent person, and such, we are sure, will our readers find the accompanying map, reproduced from the *Graphic*.

Our friends across the line had barely fired their last shot at Spanish ship or fort when they had to contemplate the probability of an Indian war of unusual dimensions. "The Indians at the Leech Lake reservation in Minnesota were fairly well-behaved—for Indians—until, about a year ago, some of them began to distil whiskey illicitly. Eight months



For some reason, however, his life was spared, and when Omdurman fell he who had been lost to wife, friends and the world for so many years, was once more a free man, surrounded by friends and white men. In our illustration Herr Neufeld is seen smoking his first cigar in ten years. No wonder he appears to be thoroughly enjoying it.

The extent to which recent events have changed the political complexion of Africa makes an up-to-date and reliable map of that continent an interesting and useful adjunct to the reference "stock"

ago the United States marshal succeeded in arresting nine of the Indians implicated. Chief Bush Ear, the principal in this unlawful enterprise, evaded arrest. The effort to secure him, as well as the alleged ill-treatment of Indian witnesses, stimulated the outbreak. A few weeks ago, when the government allowance was paid to the Indians, Chief Bush Ear was taken into custody. He was lodged in the reservation jail, but when the officers were ready to take him to Duluth for trial, he was rescued by a band of his own people. The marshal, with a



number of citizens, pursued the rescuers, and a fight occurred. This collision excited all the Indians in the vicinity of the reservation, and it is reported that hundreds of them assembled at Bear Island, in the lake of that name, and defied the authorities. General Bacon

and there fought a sanguinary engagement. Major Wilkinson, a sergeant, and four privates were killed, and eight of the Third's men were wounded. Major Wilkinson had a magnificent war record. He became a volunteer lieutenant at the beginning of the Civil War, and was



LESLIE'S WEEKLY.  
THE THIRD U. S. REGULARS, UNDER COMMAND OF MAJOR WILKINSON, FIGHTING  
THE INDIANS AT BEAR ISLAND, MINNESOTA.

[MAJOR WILKINSON IS SEEN, WOUNDED, JUST BACK OF THE LOG CABIN.]

and seventy officers and men of the Third Regiment of Infantry, United States Army, which had recently returned from heroic service in Cuba, and which was on its way to its frontier post at Fort Snelling, were sent to Bear Island,

commissioned a second lieutenant in the regular army in 1866. At Antietam he distinguished himself for bravery, and was twice brevetted during the war for gallant conduct. In 1877 he made a record as an Indian fighter in Idaho. A

Bear Island he walked in front of his men. He was first shot through the leg,

concealed in the bush. 'Steady, boys,' he said; 'make every shot count. Kill



LESLIE'S WEEKLY.

INDIANS CELEBRATE WITH A MIDNIGHT DANCE THE BEGINNING OF HOSTILITIES.

When this wound was dressed he returned to the field and admonished his

everything you see!' An instant afterward he was shot through the body.



THE GRAPHIC.

THE HURRICANE IN THE WEST INDIES. THE SCENE ON THE WHARF IN BARBADOES AFTER THE STORM.

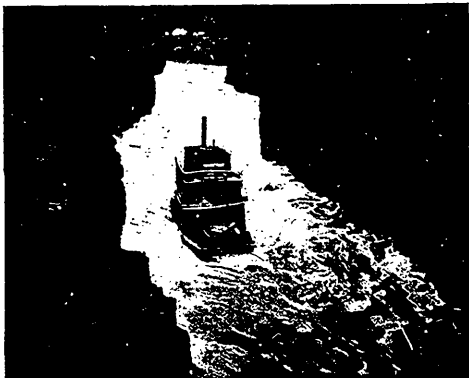
men to lie low. The command was then almost surrounded by Indians, who were

Death ensued in a few minutes. Re-inforcements were hurried to Bear Island,

and the Indians, realizing the futility of standing against the augmented forces, gave up the contest."

Some slight idea of the terrible damage wrought by the hurricane which swept over the West Indies on Sept. 10th may be gathered from the accompanying illustration. The dead in Barbadoes, according to the latest estimate by the government, numbered 112, while the damage to property, exclusive of that inflicted on planters' houses, the plantations of sugar cane, and provisions, is estimated at \$1,500,000. A correspondent writes: "A gathering storm in the West Indies is one of the most remark-

'gullies are down,' racing torrents rushing tawny red to the ocean. In a couple of hours the river beds, which, before the storm broke, were dried-up watercourses, become roaring rivers, sweeping to the sea in their onward rush huge rocks torn from the mountain sides and gigantic trees torn up by the roots. Walls are battered down and streets are torn up, not as we understand the term, but to the depth of some feet; and even the dead are washed out of their graves by the pitiless downpour, a veritable wall of water, which shuts out objects a few yards away from sight. For hours the storm goes on. At length it comes to an



SHOOTING RAPIDS ON THE YUKON. S.S. GODDARD GOING THROUGH MILES CANYON ON HER WAY TO DAWSON. THE GRAPHIC.

able phenomena which can be witnessed anywhere. Suddenly, out of the sky grows a black cloud. It rolls on until it covers the whole of the blue sky. The wind shrieks and roars and thunders so that people sitting in a room have almost to shout to be heard. The lightning laces the black clouds with forked streaks of light while the thunder rolls. Trees sway and bend like living things writhing in torture, branches are snapped off as one might break a cedar pencil, huge trunks are broken or torn up by their roots. The rain comes down in torrents. In a few minutes the streets are running rivers. In an hour the

end, and the brilliant tropical sun looks down once more upon a scene which bewilders the sight of the beholder, and makes him realize his own insignificance against the forces of Nature."

We again conclude our trip in the Klondike. The river steamer, seen in our illustration, in shooting the dangerous White Horse rapids and Miles Canyon on its way from Lake Bennett to Dawson, "goes through many difficulties. On entering the canyon, with its huge, wall-like sides, there is an abrupt turn, and it is most difficult to prevent the steamer dashing against the rocks as the turn is made."

## ANOTHER SAD HEART.

### CHAPTER I.

CERTAINLY the most picturesque thing in the beautiful village of Kangley, in Cornwall, was little Daisy Merton, as she stood beside the artist in her rudo cotton dress and sun-bonnet, her cheeks blushing with pleasure at her face depicted on the canvas. "Oh, how lovely!" she cried—"How lovely! I mean, of course, the painting," she added, hastily, and then blushed more crimson still.

Gerald Dryden had just recovered from a severe attack of pneumonia, and had come down to this quiet little village to gain back his strength; and, truth to say, he had benefited enormously—so much so, that the local doctor expressed himself perfectly satisfied, and said that he might return to London at any time he liked; but still he stayed on. There was something strangely fascinating in this lonely, little spot, particularly so to him who had been brought up in the lap of luxury, and had scarcely moved from London all his life, except to run over to Paris, which was even more noisy and luxurious. But there was something still more fascinating than the bare solitude of the little Cornish village, though he tried to deceive himself into denying it.

From the first moment that he settled down in Mr. Merton's comfortable farm, he had been strangely attracted by his daughter Daisy, a sweet girl of about seventeen years of age, fresh, simple, and natural; and now she had entwined herself into his heart and he could not tear himself away. And yet he knew where his duty lay; he knew that his remaining there was not only fatal to his happiness but to hers also. And on this beautiful evening in June, as he sat there in the orchard painting Daisy's lovely features, he was resolving in his mind that, cost what it might—and he knew that the wrench would be great—he must leave the little village at once. He laid down his palette and brush, and, taking one of her soft, brown hands in his, drew her towards him.

"Daisy," he said, "I have something to say to you—something which it will be very hard to say—something which, perhaps, it will be harder to bear."

Daisy crept nearer, and put her arms round his neck, and nestled close to him.

"There are some things, little one," he

continued, "which make life bitter; and there are some crosses very hard to bear, and yet they must be borne. I leave Kangley to-morrow."

Daisy sprang up, her face pale to the very lips, and a look of horror in her eyes. "Leave Kangley—to-morrow?" she stammered. "It is not true—say it is not true." And she fell at his feet passionately weeping. Gerald lifted her gently up, and, putting his arm round her, kissed her tenderly.

"Oh, if I could—if I only could," he murmured, almost to himself. Then he remembered his resolve and regained his firmness. "Listen," he whispered, holding her tight: "I love you—you know that—and it is because I love you so dearly that I must never see you again. You are good—you are far too good for me; and if I were to marry you and take you to a little home of our own, nothing would make me happier than to have you always near me; but you—you would not be happy."

Daisy looked up astonished through her tear-stained eyes—"Not be happy when always with you?"

"No, you would not be happy. Look at the life you have been accustomed to lead, and try to think how different it would be if you were to come with me. My friends and relations in London would sneer at you, and they would sneer at me."

"But couldn't we go far away—by ourselves—somewhere, and be happy quite alone?"

"I have duties to perform, darling. I shall succeed to my father's property; he is in a very weak state of health—he may die at any moment. It would be cruel and unnatural for me to leave him. And if I were to marry you it would break his heart."

"But why?"

"Oh! I cannot explain—I cannot explain."

She looked thoughtful for a minute or two. Then she vehemently broke out—"Oh, take me with you—take me with you. If you cannot marry me, take me as your servant—as anything—so that only I can sometimes see you—sometimes hear your voice—"

But Gerald shook his head mournfully—"It is impossible," he sighed.

"Do you not think it is as hard for me as for you? Harder, perhaps, for I feel how wrongly I have acted in teaching you to love, Daisy," he almost whispered—"Daisy, my love, pray for me.

Let me picture you praying in that peaceful little church yonder; and pray for yourself that the good God will make you forget that you ever saw me." And he led her sobbing into the house.

The next morning, before anyone was astir, Gerald Dryden had left for London.

## CHAPTER II.

"Well, good-bye, darling," said Sir Gerald, gaily, kissing his wife fondly on the lips. "I hope you will thoroughly enjoy yourself. Mind you make lots of money."

Lady Dryden was just off to Monto Carlo; and as the carriage wheeled away, Sir Gerald looked rather wistfully after it. He was devoted to his wife; he had been married ten years, and loved her better and better every day. He had scarcely been parted from her for a single minute since their marriage; but now the doctor had given imperative orders that she should go to the south of France, and she had selected Monto Carlo as the place the most suited to her tastes.

Sir Gerald hated Monto Carlo, and determined to repeat once more his favorite hobby—a sketching tour. He remembered, as almost a dream of the past, a sweet little village called Kangley, and recollected a picturesque little rustic called Daisy. He recalled something of a silly flirtation he had had with her, and how he had had to run away to avoid a scene. He determined to avoid Kangley, but he thought he would prefer the scenery of Cornwall, even in winter, to that of any other place in England.

A week after he was tramping merrily along, stopping at any picturesque village that struck his fancy, and preferring to spend his nights in the most primitive inns he could find, and selecting the coarsest and roughest food.

One day he had been tramping for many hours without knowing in what direction he was going, and dusk was beginning to fall, and he was growing very footsore, weary and hungry. He was sorely tempted to lie down on a bank and take a few hours' rest, when a rustic appeared, approaching him, walking jauntily and whistling gaily.

"Where does this road lead to, my friend?" asked Sir Gerald.

"To Kangley, sir, about three miles on," replied the rustic, as he touched his hat and moved away.

Sir Gerald stood irresolute; and then a sudden inexplicable desire seemed to possess him to once more see the little peaceful village where he had spent so many happy days. This desire seemed to give him strength—his footsteps grew lighter, and he walked briskly along. Soon the neighborhood grew more and

more familiar, and his eyes glistened as he recognized object after object which, ten years ago, he had so admired and committed to canvas. He went to the little inn he remembered so well, and had a hearty meal and a good tankard of ale; then sauntered out. It was chilly, but he did not mind that; he revelled in all his old haunts. There was the peaceful old church; there was the orchard where he had painted Daisy's portrait; and now an irresistible desire seized him to have one glimpse at the old house where he had stayed so many months. He walked up an avenue leading to the farm, and as he walked a cold wind swept through the bare branches of the trees, and Sir Gerald shivered. A little rabbit peeped out of some ferns, but, at the sight of Sir Gerald, ran fearfully away, and two rooks left their nests on seeing him approach. And now he had emerged from the avenue, and the old house stood opposite him. How desolate it looked in the winter—how different to what it had looked ten years ago! Sir Gerald sighed and turned back. "Ah, Daisy," he murmured, "and what of her?"

"Aye, what of her?" said a voice almost at his elbow. "What of her?"

Sir Gerald gave a start, and then became aware of a solitary figure sitting on a bench quite close to him.

"Daisy," he gasped, "is that you?"

There was a long pause.

Daisy was twenty-seven now; she had lost none of her good looks, but there was a careworn expression about her eyes and mouth—her voice was choked by sobs.

There seemed nothing for either of them to say. The air was still, except for occasional little blasts which softly sighed through the trees. At last Daisy spoke; her voice was unsteady, and her eyes were drooped down:

"Why," she said, "have you come here? Did you not say we should never meet again? I did not want that we should ever meet again."

"I came here by accident," he replied; "and coming here, four happy months of ten years ago were so vividly brought before my recollection that I felt myself compelled to have but one look at the old house."

"Ten years make no difference to a house," she answered, bitterly. "What difference do ten years make to a woman? From the moment you cruelly, selfishly, callously left me in my solitude, I hated, loathed and despised you? Do you remember asking me to go to the peaceful old church and pray for you? I offered not one prayer for you. Yes, I did," she said, more softly, "but my prayers were not uttered in the peaceful old church. As I wandered through the fields, where we had so often wandered together, my life was a living prayer. Gerald, you

did me a greater wrong than you know of. It was not so much the fact of your making me love you and then cruelly leaving me, but do you not realize that during the time we were always together you instilled feelings of refinement in my mind which I had never experienced before? I saw life differently—more and more as you saw it. Before you came I had been happy and contented; the simple, quiet life I led was quite suffi-

cient for me. You disturbed that life; you stirred up feelings of discontent from which I have never freed myself—from which I never shall free myself!"

"Daisy," he said, "only forgive me."  
"Go your way and I will go mine. Your way is a path of roses and mine is a path of thorns. It is cold and growing late, there is a fire in the house. Good-night."—*Woman's Life.*

## SCIENTIFIC JOTTINGS.

DR. VON WELSBACH, the well-known inventor of an incandescent system of gas lighting, has brought out a new filament for electric glow lamps which is made of the metal osmium. The filament is coated with thorium, an oxide which resists fusion by heat in a high degree.

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ONE way of showing that the moon has no atmosphere is to observe the appearance of a star as it emerges from behind the lunar disc; and it has been found lately that the most delicate photographs do not indicate any perceptible change. So that if the moon has any atmosphere it must be exceedingly rare.

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SUCCESSFUL experiments have been made in planting the prairies of South Dakota, Nebraska, Kansas, Colorado, Minnesota and Utah with trees, not for the sake of timber, but to ameliorate the climate by breaking the force of the wind and increasing the humidity. It is proposed to continue the work as the country is gradually settled up.

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THE production of sugar from beetroot was first brought into public notice by a Berlin chemist in the year 1747, but little or no attention was given to the discovery till 1790. The first beet sugar manufactory was erected in Silesia. In France the industry was afterwards taken up seriously, Napoleon I. being personally interested. Later, in 1800, a factory was established in the province of Tula, Russia, and the demand has increased so considerably during this century that there were 754,758 tons produced last year by 238 factories.

DISINFECTING soaps are now so common that Dr. Reithoffer has made a study of their merits, and finds that ordinary mottled soap, white almond soap, perfumed with trobenzine, and hard potash soap, are very hurtful to the cholera microbe. As the soapy water with which we wash is stronger than his experimental solutions, we may infer that in washing our hands or clothes with these soaps we are likely to kill the germs of cholera. Stronger solutions (10 per cent. of soap) are required to kill the germs of typhoid. None of these soaps kill the pyogenic microbe. After washing, the hands may be rinsed in a stronger disinfectant.

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OF the discovery of many inventions there is no end. But there is one most practical utensil which is very much wanted, says the "Siren," namely, a weighing machine which will automatically weigh coal as it is being put into the bunkers. When coal costs from \$6 a ton upwards, it becomes a commodity of monetary value sufficient to make it worth while weighing. The plans in vogue at foreign coaling stations at present are either measuring the lighters or weighing a few bags—usually selected with care by suppliers—and counting the bags when empty. Neither method is satisfactory, as there may be gaps in the lighter or it may not be square, and bags are at times smuggled aboard empty. What is wanted is a tub which would empty itself when a ton of coal had been put into it, and register the number of tons—although this latter is not essential, as the tons could in the way suggested be tallied.

### 1898 ~ NOVEMBER ~ 1898

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

### 1898 ~ DECEMBER ~ 1898

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# On & Around the Farm.

An Epitome of Expert Opinion and Interesting Facts Gathered  
from Authoritative Sources.

## General Notes.

**Argentina's Wheat Exports.**—These are estimated in a recent Buenos Ayres consular report at 1,000,000 tons, or approximately 35,000,000 bu. for the year ending Dec. 31, '98, including shipments from Uruguay. Up to June 18 (the date of the report), 638,000 tons had been shipped from Argentina and 120,000 tons from Uruguay.

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**The German Inspection of Apples.**—A Hamburg (Germany) correspondent writes to a contemporary:—

"During the coming season, all arrivals of American fruit will be landed in the warehouse especially built for the purpose, to be examined at once, whether these fruits are affected from the San Jose scale. All such affected will be prohibited. I am convinced that all apples east of the Rocky mountains, including Maine and Canadian fruit, are not touched by these insect pests and there is not the least danger therefrom. Doubtless the examination of the German officials will soon cease entirely, if all importers only get apples from uninfected districts.

\*.\*

**Anyone who Watches the Fruit Markets** must notice how rapidly people are learning to grade fruit. They will pay more for first-class fruit and less for inferior. The demand for high grade fruit is increasing, and the people are being educated in many ways. Quality is placed before size, but size also is demanded. The horticulturist has an increased incentive for experimental work, and is making sure that he is not wasting his time on inferior fruits. A strawberry does not pay when it takes one hundred to fill a basket, while another variety takes only one-fourth or one-third as many.

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**Crops in Ontario.**—The Report of the Ontario Department of Agriculture, makes the following estimates of acreage and yield for 1898, as compared with the averages for 1882-97.—Winter wheat, 1,018,182 acres and 25,305,890 bushels, or 21 $\frac{1}{2}$  per acre, against 691,144 acres, 18,022,718 bushels, and 20 $\frac{2}{3}$  per acre;

spring wheat, 387,205 acres and 6,714,516 bushels, or 17 $\frac{3}{4}$  per acre, against 479,758 acres, 7,288,391 bushels, or 15 $\frac{2}{3}$  per acre; barley, 488,781 acres and 12,048,215 bushels, or 27 $\frac{5}{8}$  per ac. e., against 612,350 acres and 16,458,522 bushels, or 25 $\frac{6}{8}$  per acre; and oats, 2,376,300 acres and 82,192,026 bushels, or 34 $\frac{6}{8}$  per acre, against 1,875,210 acres and 61,476,051 bushels, or 31 $\frac{4}{8}$  per acre. These figures indicate increases in the areas of winter wheat and oats, decreases in spring wheat, barley, and oats, and a yield per acre above average for all these cereals.

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**Quality Test for Potatoes.**—We must learn to grade potatoes according to quality. There is just as much difference between a mealy and a soggy potato as there is between tenderloin and rump steak. The difficulty is to sort out the good ones. Here is the potato test: Wash them and then put them in a tub of water. They will all sink. Add salt and the poorer, lighter ones will rise. Add more salt and others will rise. Those which finally remain at the bottom you can warrant every time to be prime bakers. Not over 10 to 20 per cent. of potatoes will stand the test. For these, your customers will gladly pay extra prices.

\*.\*

**A Great Country for Horses.**—For each 100 inhabitants in Russia there are 25 horses, according to a recent official report, this greatly exceeding the proportion in western Europe, where the relative number per 100 varies from 2 to 17. There are very few purely local or foreign breeds in Russia.

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**Feed the Sow Liberally** on grain which is not too heating. Keep a trough of wheat bran where she can get it at all times. Do not feed too much corn and she will be ready to farrow a good, healthy litter of pigs.

\*.\*

**Measuring Hay.**—The quality of hay varies so widely that it is very difficult to get an accurate measurement of a certain quantity. It is generally believed, however, that 400 cubic feet, taking it right through, will make a ton. A mow 24 x 12 x 16 would, therefore, contain very close to 1 $\frac{1}{2}$  tons.

## Pertaining to Live Stock.

### Anatomy of the Horse's Foot.

THE more the intelligent farmer knows about the anatomy of his live stock, the better for the beast, and therefore, the better for the man. No animal on the farm requires more personal attention than the horse, and no part of the anatomy of the horse requires more attention than the foot, and an article in the *Agricultural Gazette* (England), by Harold Leuuey, on the



FIG. 1.—A PROPORTIONATE HOOF.

"Anatomy of the Horse's Foot," besides being decidedly interesting, should prove of value to many of our readers.

"The foot, which in shape may be described as a section of a truncated cone (Fig. 1), is conveniently divided into external and internal parts. The insensitive hoof, when detached, has the appearance of a horny box without the lid, and this is called the external. It consists of several parts, known as crust, bars, sole, and frog, the names being fairly descriptive, except the last, which needs some of the imaginative power of a botanist to see in it much resemblance to a frog.

#### THE CRUST.

The crust (Fig. 2 A) is the outer hard shell which is seen when the foot is on the ground, and is about  $\frac{3}{4}$  in. from the covering to the shoe or ground surface when measured from the front or toe, as this portion is called. In a backward direction it becomes gradually narrower, finally turning round at the heel (F) and forming what are known as the bars (E). The sides of the crust are called quarters. The thickest portion is in front, while the quarters get thinner as the crust narrows in a backward direction. The inside quarter is somewhat thinner than the outer in the front feet, the hind ones being more nearly equal and somewhat more upright as a rule.

About half-an-inch of the upper margin of the crust is soft and thin and concave on the inside. This part is called the coronary ring (C), and extends round

the upper part of the foot. This is not so well seen in the dried specimens of museums as in a fresh foot, and he who would form a correct idea of the attachments of the hoof should see a freshly-separated specimen. It is easily enough obtained by applying at any of the horse slaughterers for a foot (divided at the fetlock joint), and immersing it for two or three weeks in a strong solution of common soda, at the end of which time it is readily detached. The structure connecting the skin and hoof is called the coronary band (Fig. 3 A), and is more prominent than the hoof immediately beneath it. In a backward direction it is found to be thicker and deeper where it is finally merged into the substance of the frog, in a manner somewhat similar to that described in connection with the bars. The outer and denser portion of the crust is secreted by this coronary band, hence its great importance. If a foot looks over so good, but is surmounted by a poor, weak coronet, it is likely to be a cause of unsoundness in the future. The benefit derived from blisters and liniments applied to the coronet is due to the stimulated growth and secretion of horn of a better quality, and the amount or strength of such applications should be decided by experts and not left to grooms, who will often apply a corrosive blister, permissible when treating a side-bone in a heavy draught horse perhaps, but absolutely injurious to a high-bred one.

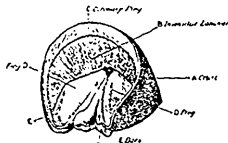


FIG. 2.

A Crust or Wall    D Frog    E Bars    F Heels.  
C Coronary Ring    B Insensitive Laminae.

Blisters applied too strong or too frequently may induce secretion of soft, weak fibres entirely unfit for work, and aggravate the conditions they were intended to cure.

#### THE BARS.

The bars (Fig. 4 C) have been already described as continuations of the crust and they are similar in structure. They form an angle with the heel of the crust, and take a course forwards and inwards for about two inches in the direction of the frog, but not extending to its point. They are about the same thickness as the



crust is at the quarters, although some give the impression of being thicker, when, for surgical reasons, they have to be cut away. The horseman is asked particularly to bear in mind the arrangement of this part of the heel in connection with the subject of shoeing.

This is a close and powerful union between the crust, the bars and the sole.

#### THE HORN LAMINAE.

The horny laminae (Fig. 2 B) are thin plates of horn attached by their edges, growing from the coronary ring above to the sole below, that is to say, about two-thirds of the length of the crust, they are found on the inner surface of the bars as well as the crust, and are on an average width of about the twelfth of an inch.

#### THE SOLE.

The sole (Fig. 4 A). The horny sole joins the crust and occupies a large proportion of the plantar surface of the foot; some portion of it is found between the bars and the frog, and occupies the triangular space between the bars. It is not composed of such dense material as the bars, and the artificial treatment so commonly accorded to it makes it still more soft. The practice of "stopping" feet with cowdung and clay, facilitates the work of the smith, but owners should not allow any stopping to be used, nor any portion of the sole to be pared; if left alone pieces of detached horn will fall out in time without any interference, and while they remain, the pressure is beneficial in causing the softer and less mature material underneath to become more fit to bear the concussion it is destined to receive a little later on. The thickness of the sole, like that of the



FIG. 3.—SENSITIVE FOOT.

A Coronary Band. B Wedge separating the Laminae. C Frog.

crust, is variable, but usually bears the proportion of half that of the crust at its thickest portion—the toe. In a good foot the sole should be somewhat concave without and convex within, this form being usually the thickest and most desirable; flat soles are generally thin, and a "dropped" one indicates attacks of laminitis and serious structural alterations. The horny sole is attached to the sensitive one by villi, corresponding depressions in the horn showing where they were attached.

#### THE FROG.

The frog (Fig. 2 and Fig. 4) is triangular in shape, with the base to the rear and the apex about an inch in advance of a line drawn across the centre of the foot. The material of which it is composed differs from both crust and sole. It is much less dense, but very much more elastic, and is capable of great development when allowed to perform its proper functions, and not raised above the ground by shoes. With pressure it becomes broader and harder, and forms a good bed for the structure within the

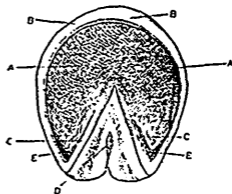


FIG. 4.

AA Sole. BB Crust. CC Bars. DD Cleft of Frog. EE Seat of Corn.

foot, and a non-slipping surface for the animal to travel on. Near the point or above it is firmer and thicker in horses shod in the usual way, but a fair comparison can only be made of an unshod animal, or one that has for a long time gone in Charlier shoes. The frogs of horses that have for any length of time been deprived of the natural share of weight-bearing intended by nature undergo atrophy, and to the most casual observer appear withered and shrunken, or there is more or less unpleasant odour from thrush, a disease which should never exist in horses shod on sound principles and properly looked after. The frog is divided down its centre for about half its length, the space being called the cleft (Fig. 4 D). The thickness of the frog is commonly said to be about the same as that of the sole, but depends entirely upon what amount of use is made of it. Its component fibres run obliquely forward as in the sole, and its attachments, by means of villi, are very similar. The frog is so intimately connected with the hind parts of the crust as to appear like a continuation of it. The channels between the frog and bars are sometimes described in anatomical works as commissures.

### How is Milk Secreted.

In a recent issue the *Farmer's Gazette* (Ireland) says:

"The manner in which milk is secreted in the udder is not yet definitely agreed upon. There are two theories put forth in explanation of the process. The first one, known as the "Transudation Theory" assumes a filtering of the constituents of the milk from the blood through the gland, and an immediate conversion of these constituents into milk. The second theory, known as the "Metamorphic," assumes that the milk is formed in the gland by the decomposition of the cells of that organ. Prof. Sheldon thinks that a combination of the two will probably give the most satisfactory explanation, and this is more apparent when we consider the sources of the various constituents of milk. Neither casein nor milk sugar are found in the blood, consequently they could not be filtered from it, but are probably the result of a special cell activity. Fat, though found in the blood, is not there in a sufficient quantity to supply the fat of the milk.

"The milk sugar, casein and fats are all formed by direct activity of the epithelial cells as a result of the decomposition of their protoplasmic (first formed) contents or their action on the food constituents in the blood. The other constituents of the milk, the water and salts, evidently result from a direct process of transudation from the blood, with the exception that without doubt a certain percentage of the potassium salts and phosphates, like the specific milk constituents, originate in the metamorphosis of the protoplasm (first matter) of the secretory cells."

### Give Cows Good Stables.

A cow, like a human being, suffers from bad environment. Stables must be dry, clean, well lighted, ventilated and comfortable, else the animals confined in them will suffer in health. Most of the bovine tuberculosis is made possible through the dirty, unventilated stables, and it spreads rapidly through herds

when once introduced because of bad physical conditions.

A damp wet stable causes rheumatism in cows. Lack of ventilation and sunlight lowers their vitality, and makes them resemble children who are never allowed to breathe the pure air or to play in the sunlight. When to filth and dampness, to darkness and foul air is added the torture of the innovable stanchion, we may truly say the patient animals are confined in cow penitentiaries, and the conditions are such that to produce wholesome milk is an impossibility.

### Well Spent Labor.

#### The Modern Pighouse.

FOR TEMPERATE OR ZERO WEATHER.

Nearly all pig growers have the wish, some time, to possess a hog-house that will be "up-to-date," and reduce to a minimum the labor of taking care of the hog stock.

The feeling is strong with some that a fine house is necessary to enable a farmer to produce fine pigs of the best quality, and at the cheapest rate. Most men that have undertaken to build hog houses have been disappointed in



FIG. 1.—HOG HOUSE FOR BROOD SOWS.

results, except, perhaps, men living in the northern parts of the United States, and Canada, says "The Rural New Yorker."

The objections are many to a large hog-house, such as will accommodate a whole herd. The difficulties that the farmer meets, in keeping the sanitary conditions of such a house as they should be, should cause him to give the matter careful consideration before he puts much money in a large house. When disease once strikes a herd in such a house, the problem of thoroughly disinfecting the building becomes a serious one, so serious that but few farmers possess the skill to accomplish it. Without this, he can have no assurance that he will be safe from loss when he again puts hogs in the buildings. It is also known that the weather, air, sunshine, rain, and snow, are the best disinfectants that we can

command. If we can construct buildings so that we can expose every part, inside and out, to the weather, we are in better shape to ward off disease, and if once caught, can the sooner start again.

Our illustrations depict a very convenient and at the same time inexpensive and easily made house.

Fig. 1 represents the house as in use for all weather, except when a sow farrows in zero weather, when the house should be covered with straw or fodder to make it absolutely safe against the frost and cold that destroys young pigs so quickly. Fig. 2 shows the house covered with bundled fodder. Straw will answer as well, or even fresh stable manure piled around the house to one-half its height.

The most convenient size for the house is six feet square. The sills should be oak or other durable wood of 2 x 6 or 2 x 8-inch stuff. The rafters, of 2 x 4-inch material, are cut five feet long, three on a side. If the roof is to be of plank, the best quality of roofing plank should be used, and the joints carefully covered with strips. If to be of metal, the sheathing should be of matched lumber. The ends, excepting the doorway, to be of matched lumber.

When frame is put together, it should be spiked and nailed as securely as possible. The lumber used in construction—except the sills—should be of light material. This is best to make it easily handled, and being light, it will not rack to pieces so easily. Another point must not be forgotten—the house must be as tight as it can be made, as all the air needed can be had through the doorway. The best door, when one is needed, is a fertilizer sack, or something of that kind, fastened above the doorway, and allowed to hang over it. This is always closed, and there is no danger or risk attached to its use, as there would be, with a wooden door. The sow and pigs soon learn to push it in or out, as occasion requires.

It is only in extremely cold weather that any door is needed. The house should be set with the doorway in the direction from which comes the least

wind. When the house is made as tight as it should be, the wind driving in at the door will affect the inmates but little, at any rate.

When the surface is rolling, floors to these houses will seldom be needed. The ground is the best floor, under most conditions; but when the weather is very wet and the ground muddy, a plank floor comes in excellent play. The floor should be made separate from the house, and the house placed over it, the floor fitting neatly inside the sills. When a plank floor is used, care should be taken to prevent the wind driving under it. One man can turn one of these houses over on to a sled and move it when desired, which should be done when the ground floor is used and becomes filthy. If disease strikes the herd, the houses can be turned upside down that the sun and weather may disinfect them.

These houses, including carpenter

work, can be built of plank alone for \$5 or less. Painting will cost about \$1. Metal roof will increase the cost from \$3 to \$6 more, according to the kind of metal used, and manner of putting it on. In the great hog-growing sections, these houses can be made to answer an excellent purpose if set on high ground, and

the feeding grounds are protected by a windbreak. A hog does not mind so much eating out in the cold if the wind does not drive against him.

The Maximum Age assigned to the pine is said to be 700 years, to the red beech 215, the oak 410, and to the ash 145 years.

Dairying in Australia.—The production of butter in N.S.W. in the season ended March 31 last, figures for which are just available, was nearly 25,000,000 lbs, or the largest on record. In the past four years the proportion of creamery-made butter has increased from 60 per cent. to 80 per cent. of the total; about a quarter of the output is exported. The production of cheese in 1897-98 was 4,000,000 lbs., a slight decrease from the preceding season.

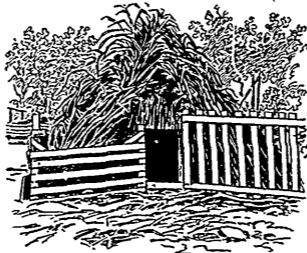


FIG. 2.—HOUSE COVERED FOR COLD WEATHER.

...AT THE...

## Editor's Desk

AT the annual conference of Bank Managers, held recently in Toronto, several speakers referred to our educational system in relation to its production of non-production of youths educationally equipped for the practical part of commercial life. More than one speaker declared that algebra and the dead languages occupied far too much of the time which should be devoted to the simpler but more useful and profitable studies; contending in effect that no amount of erudition in the classics or higher mathematics would compensate for the deplorable defects in the "spelling" of the average applicant for a bank clerkship, fresh from the public or high school.

Of course the speakers did not intend to depreciate the value of the higher courses of study, in their proper place, but in depreciating the tendency in our educational institutions to sacrifice the essential to the desirable but non-essential, they simply bring to bear that sound common sense and keen judgment of relative values which they exercise in the conduct of their business, a domain where such qualifications are the requisites of success.

THIS question of education in its relation to business is of far-reaching importance. When we refer to education as a business asset we use the word "business" in its widest sense, covering all vocations, that of the farmer as well as the bank-clerk; and the mechanic as well as the professional man.

For one and all the principle is the same educationally. In every case the foundation must be a sound knowledge of the rudiments—the three "r's" if you will—although we are not at all disposed to confine "the rudiments" within such narrow limits.

Upon that must be built something of a more specific character, according to the taste or probable vocation of the

scholar; for instance, there are many subjects which would be more profitable to the destined bank-clerk than to the youth whose choice lay in the direction of agriculture, and vice-versa.

Then, in its proper place, comes the superstructure, the higher course of study, offering limitless opportunities for intellectual pleasure, and (remember we are dealing with education as a business asset) for strengthening the faculties of observation, research and concentration which make for success in every walk of life.

It may be, and has been said, that beyond a certain—and a very limited—point, education unfits a youth for the ordinary vocations; that he becomes a mere book-worm, unable to cope with the requirements of a new country in an essentially practical age. Of course every thing may be abused; even the Christian religion is not exempt and affords examples of excessive enthusiasm or fanaticism destroying the practical usefulness of the individual; but in ninety-nine per cent. of the alleged cases of usefulness destroyed by "over education," the fault lies not in over education, but in badly directed education; in placing the coping stones on a poorly built wall with weak foundations.

As a community we in Canada are not a people of leisure, and while there is not the slightest reason why we should not strive to maintain an educational standard as high as that of Old World countries, it is absolutely essential that not only the Government, which has done much good work in this direction, but each individual teacher and each individual scholar should realize that "educational qualifications," which do not include preparation for practical business life—again we use the word in its widest sense—are by no means a source of strength or a recommendation to a youth when seeking to place his foot on the first rung of the ladder which he hopes will lead him to fortune.

Two or three years ago a movement having for its object the dissemination

of the best class of literature in the country districts, where a well stocked public library is an impossibility, was inaugurated in England by the well known journalist and social reformer Mr. W. T. Stead. Like most of the enterprises that gentleman has undertaken, the peregrinating library has proved a success. We have been hoping for a long time that a journalistic or other genius would arise on this side of the Atlantic and follow his example.

\*.\*

Mr. Stead realized, as all observers have realized, that one of the surest means of checking the city-ward migration of the younger generation of the country born, is to bring within reach of the rural population as many as possible of the advantages enjoyed by their friends in town and city. It is a fact established by observation both in Canada and in England, that a large proportion of the exodus from country to city has its genesis in a desire to find greater opportunities for intellectual enjoyment and mental expansion than those obtained on the farm or in the hamlet; coupled with this not infrequently, and sometimes greatly exceeding it in magnetic power, is the feverish desire to travel what is fondly, and how often erroneously (?)—imagined to be the shortest road to riches.

We are not at the present moment going to expatiate upon the fatuous folly of those who think city and success are synonymous terms. Our firm conviction is that ninety per cent. of those born and bred on the Canadian farm will find the brighter future, a more assured competence, and by far the greater measure of contentment, in making the all-producing land the willing servant of their intelligence, instead of seeking to

“Grasp the skirts of chance.  
And breast the blows of circumstance.”

as these prevail in the larger haunts of industry and commerce. The young man who “quits” the farm animated merely by the sordid motive will not be deterred from his folly by a dozen different remedies of the kind we are advocating; he must be allowed to go his way

and learn his lesson in the school of experience. But to the more numerous city-seekers whose discontent is with the scarcity of opportunity they have in their leisure for intellectual pleasures and social enjoyments, the placing of the country district almost on a level with the town or city in the matter of accessibility to books and periodicals, would be a veritable boon and go a long way towards killing the desire to leave a sphere which in so many respects is most congenial to them.

\*.\*

MR. STEAD'S method of operation in brief is this: He makes up a box of 50, 100, 200, or more volumes of various kinds; for instance a “100” box of “A” class may contain 50 volumes of standard works of fiction; 10 volumes of a scientific character; 10 historical volumes; 10 volumes devoted to the arts; 10 dealing with politics and economic questions; 10 volumes for the special use of the theological student. A similar sized box of another class will contain a larger proportion of works of fiction; while the contents of that of another class will be almost entirely educational; so that the predominating literary taste in any village can be satisfied. A box is loaned to ministers, Sunday School superintendents, Y. M. C. A. Secretaries, Mechanics' Institutes, where these institutions exist, or to reliable country booksellers and other storekeepers, for a period of three, six, or twelve months, the cost being from \$6 dollars upwards according to the size of the box and the period for which it is required. In the case of Sunday Schools and kindred institutions, where it is not customary to make a charge for access to their library shelves, the authorities find themselves in a position to maintain a constantly varying supply of the best kind of literature at a cost within their means, and which could only be purchased by institutions more richly endowed than those in most country districts. To the bookseller and other enterprising business men the opportunity is presented for maintaining a really high-class circulating library without the extensive outlay of capital which would otherwise be necessary.

Whether the medium of distribution be the Sunday School, the Mechanics' Institute or the book-seller, the villager or country resident has within his reach the best literary productions, no matter in what direction his taste may lie. That the establishment of travelling libraries in Canada would supply one of the greatest needs of the country districts, and materially assist in checking the flow of population from the quarter where, of *l'il* things, population is the greatest requirement, will not be doubted for one moment by those who have given attention to the causes which have produced the baneful effects at present existing in this new country: the labor market in towns and cities overcrowded, with the necessary accompaniment of large numbers merely existing, under conditions the reverse of healthy, while thousands upon thousands of acres remain in an unproductive state, awaiting only the appearance of man to yield to him generously of the riches of a fertile soil.

\*.\*

THE *Toronto World* has recently had some very trenchant remarks to make upon the possibilities that lie before the enterprising individual who will go into the pickle-making business on a scale and in a manner that will bring Canadian pickles and sauces prominently before the consumers of other countries. The *World* has apparently found the inspiration for its able advocacy of the cause of pickles in the conspicuous and artistically executed advertisement of an American firm which catches the eye of every traveller on the cars of the Toronto Street Railway.

\*.\*

Our contemporary waxes warm over an anomaly, the contemplation of which has often caused our own usually philosophic temperament to become ruffled. It is this: while Canada produces in greater abundance, and at less cost, than other countries the ingredients of certain manufactured articles which are in constant demand, Canadians have to buy the imported manufactured article, or else put up with a home-made commodity of inferior quality.

Pickles are not poetical, certainly, but they afford a very practical illustration of the indifference to the good gifts Providence has bestowed upon Canada, which is not only keeping our producers out of a market, for successful competition in which they have special advantages, but forces Canadians to spend thousands of dollars annually with the manufacturers of other countries, which by right should be left here.

The American firm, whose attractive advertisement we have referred to, manufactures fifty-seven varieties of pickles and sauces. The vegetables or fruits forming the base are, in the case of a few of the varieties, of course the produce of oriental and tropical countries; but the chief ingredients of, probably, forty of the fifty-seven are vegetables or fruits that Canada produces in abundance. Why, then, should this particular or other American firm, or the two or three English firms whose names are household words, command the markets not only of their own countries but of Canada?

\*.\*

It is true there is a small pickle "factory" here and there in Canada, but the connection is merely local. This does not necessarily mean that these manufacturers could not put up an article that would bear favorable comparison with the imported goods, if they chose to do so. Possibly some of them do produce as delectable a commodity as the oldest and most famous English houses whose goods command a ready sale here at three or four times the price asked for the Canadian article. But if there is a Canadian pickle-maker who does this, he so hides his light under a bushel that the faintest glimmer only is seen, and that merely in his own immediate locality.

\*.\*

No matter how excellent an article a man may manufacture, he cannot, in these days in which advertising is reduced to a science or a fine art, expect to secure more than an infinitesimal portion of the possible trade unless he keeps his name constantly before the public. A poor article, well advertised, has a far better chance of success than one infin-

itely its superior, "left," as some manufacturers are apt to say, "to tell its own tale." Of course, the manufacturer of the inferior article will not hold his old trade together; his efforts are directed to acquiring new business which yields him a rich profit. The maker of the superior article, however, will not only hold his old trade but will soon leave the other man behind in securing new business, if he will only advertise his wares as constantly and judiciously as his rival. Without the advertising, his old and new business together will make a very poor showing. In this we believe is to be found one real reason why Canada lags behind in the home and foreign markets in the matter of manufactured produce.

\* \* \*

Years ago, upon making our first acquaintance with Canadian canned fruit—an acquaintance we still value very highly—we wondered why the Canadian fruit growers and canners had kept all these good things to themselves. The old-fashioned jam—the joy of earlier days—was relegated to a second place in our affections. True we had partaken of American tinned fruit occasionally across the water, but at one and fourpence, or thirty-two cents, a tin, it was regarded by the chancellor of the domestic exchequer as a luxury to be indulged in only on those festive occasions which come round with such tantalizing tardiness. But here in Canada, distant from England only a few cents per tin, the luscious morsel was an article in common use, to be obtained at a price less than that previously paid for the now despised jam.

What had the Canadian growers and canners been thinking about all these years to keep their very appreciable wares beyond the ken of the English consumer, and, no less important, the English consumer's very appreciable shillings beyond the reach of themselves?

\* \* \*

This question of supplying the foreign consumer's requirements in the matter of domestic commodities is one of vital interest to the Canadian farmer, and it is one in which he should take a keen and active personal interest. None, we

think, will deny that while we have made considerable progress in foreign markets of recent years, in regard to the matter of which we are writing much has been left undone that could and should have been, at least, attempted. We believe this can be partially accounted for by the farmers having neglected to appreciate the possibilities that were theirs. They have relied upon the merchants or middlemen not only for the sale of their produce to the consumer, which is, of course, unavoidable, but also for "ideas" in the matter of special lines of produce. If the shipper or speculator sees a "good thing," for himself, in entering the market abroad with a certain article, he calls on the farmer to produce it, but if the prospective returns only promise the speculator a moderate profit he holds aloof; or it may be the man of commerce, keen as he generally is, lets an opportunity go by—pickles, for instance; but in either case the direct and permanent loss is the farmer's.

\* \* \*

It seems to us that benefit could not fail to accrue from the frequent discussion of this matter among farmers. Added importance is given to the question by the recent reply of the Imperial authorities to the request that Canadian contractors be allowed to tender for military and naval supplies. It appears that, owing to certain necessary conditions, the Canadian contractor is limited to certain lines of prepared food, including meat, vegetables and so forth. The amount expended annually on supplies for the army and navy aggregates many million dollars, and there is no reason why a fair share of this sum should not ultimately reach the pockets of the Canadian producer.

This, however, only represents a small proportion of the possibilities before that individual if he will but make the supply of foreign markets in manufactured produce the object of his personal attention

## A TRIP THROUGH THE GREAT MASSEY-HARRIS WORKS.

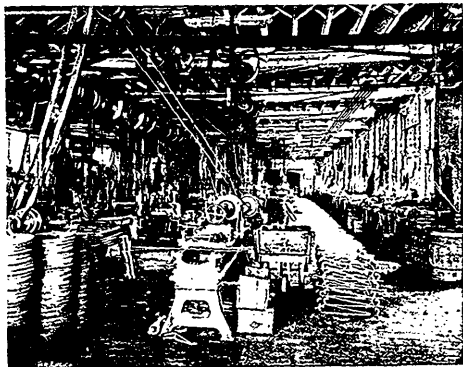


**R**EPRODUCTIONS of snap-shots, and a relation of some of the incidents of the employees' excursion to Niagara Falls, in our last issue necessitated an interruption of our trip

through the great Toronto workshops of Massey-Harris Co., Limited.

The picture at the foot of the page shows a view of one of the implement machine shops, where lathes and drills and special tools of many kinds and sizes do their part in the manufacture of the famous Massey-Harris Implements. It is, of course, difficult to bring up the details in a photo of an interior like this, especially where there is such a net-work of belting and machinery; but the cut will convey some idea of the amount of work which it is possible to turn out of this shop in a day.

In the Experimental and Pattern Room a large staff of draughtsmen, mechanics and pattern-makers—many of whom have spent the greater part of their lives at this sort of work, are constantly busy



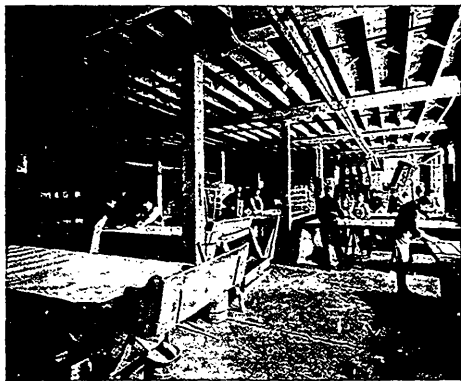
PART OF THE IMPLEMENT MACHINE SHOP





*A VIEW OF THE EXPERIMENTAL ROOM.*

the year through preparing the implements of the future. This is a very expensive department. It sometimes happens that a part on which several men

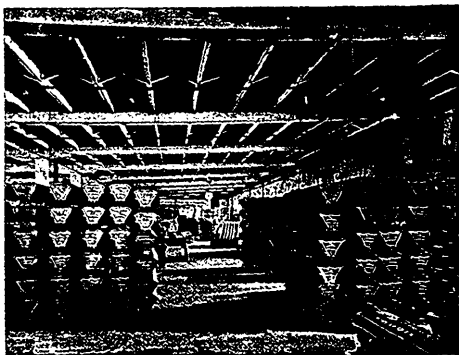


*PREPARING CANVAS APRONS FOR BINDERS.*



A CORNER OF THE PAINT-MIXING ROOM.

have spent weeks and months of labor will, upon application, be found unsuitable for the conditions under which the machine has to work.



SEED BOXES PASSING THROUGH THE PAINT SHOP.



*SOME EXTRAS IN STORAGE.*

The Experimental Staff carefully watch every detail of each new feature, and the knowledge and experience thus

acquired are applied in the construction of the famous Massey-Harris Perfected Implements.



*STORAGE ROOM FOR MALLEABLE PARTS.*



EDITED AND SELECTED BY MRS. JOHN HOLMES.  
Correspondence is invited on all matters pertaining to the Home; questions relating to any feature of domestic life, or of interest to women generally, will be readily answered, when possible, in this department.

### Motherhood.

I WONDER so that mothers ever fret  
At little children clinging at their gowns;  
Or that the footsteps, when the days are wet,  
Are ever black enough to make them frown.

If I could find a little muddy boot,  
A cap or jacket on my chamber floor;  
If I could kiss a rosy, restless foot,  
And hear it patter in my home once more;

If I could mend a broken cart to-day,  
To-morrow make a kite to reach the sky,  
There is no woman in God's world could say  
She was more blissfully content than I.

But ah! the dainty pillow next my own  
Is never ruffled by a shining head;  
My singing birdling from its nest has flown:  
The little boy I used to love is dead.

But now it seems surpassing strange to me  
That, while I bore the badge of motherhood,  
I did not kiss more oft and tenderly  
My little child, who brought me only good.

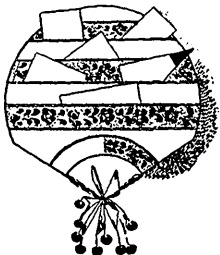
—Er.

### NICK-NACKS FOR THE HOME.

#### A Pretty Card Rack.

CUT a piece of white cardboard to the illustrated shape. Paint it some pretty shade, or, better still, cover it with a whole-colored silk or satin, stitching very neatly round the extreme edge. Now obtain some wide and really pretty and fanciful ribbon, add bands of this across the front of the cardboard fan, alternating them with bands of plain ribbon, but having a picot edge. Fasten each band of ribbon with invisible stitches, and at its lower edge to the satin foundation, leaving the upper edges loose, when they will form a little pocket into which cards and letters

can be easily inserted. A dainty bow of ribbons and pom-poms should be set at the lower edge of this pretty ornament,

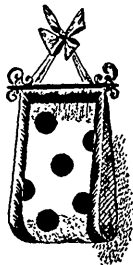


and a ribbon loop by which to suspend it from wall or table may, if desired, be added at the top.

\* \*

#### A Newspaper Pocket.

A NEWSPAPER pocket or holder to hang against the wall is a useful possession. To make, take a piece of strong canvas, about 32 inches long and 12 to 15 inches wide; cover the centre of this with fancy silk or brocade, or with art serge daintily embroidered with a conventional design. Line the inside of



the canvas with a pale shade of silk or sateen that will harmonize with the outer covering, and bind for about two and a half inches all round the outside edge

with velvet ribbon of a dark tone. Sew the pocket together along the top, and fasten it securely to a small brass or iron rod, which should be slightly ornamented at each end, as shown in the accompanying sketch. Add a couple of ends and a

handsome bow of ribbon to match the lining of the case, and hang at the side of the fire-place, or against the writing-table. The lining of this case looks richer if interlined with a thin sheet of wadding and slightly quilted.

## EASY LESSONS IN PLAIN SEWING.

### Run and Fell and Over-Sewn Seam.

In the days of our grandmothers, run and fell was not often used; sew and fell, a much more lengthy performance, being done instead. In all the good needlework of the present time, run and fell prevails, and the seams, if well executed, are very flat and soft, answering all the requirements for strength that are necessary.



FIG. 1.

Turn a fold down of about a quarter of an inch, and creasing it all the way, then open it out.

Put your second piece of stuff so that the upper edge comes a little below the crease, and running quite on a line with it.

Look at Fig. 1, and you will see how we mean.

Next run the two together, placing a back stitch here and there to make your work firm. It is of great consequence to have your running very neat and strong, taking up and leaving three threads as you work. The real reason why run and



FIG. 2.

fell is sometimes objected to is on account of the running. If this is not well done, there are spaces in the seam where there

are no stitches, and these give way in washing and wearing.

Be sure, too, that you take your stitches through both thicknesses of the stuff. The running must be done straight to a thread, and just below the raw edge of the uppermost piece of stuff. Then turn down the fold of the upper piece as if for a hem, flatten it very smoothly, and then hem down as you see in Fig. 2.

Some people turn down the fold of the under piece first of all, the second piece being laid a few threads below the edge.

Always tack your pieces together before running, and tack the hem down as well.

If you are making a run and fell seam where one piece is on the straight and the other on the cross, as in the sides of

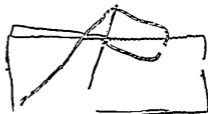


FIG. 3.

a chemise or gore of a skirt, let the bias piece be the uppermost layer and towards you as you run it on the lower one on the straight, and turn the latter over, hemming it down as before directed.

The hem seen in Fig. 3 is much used in France, and is suited for all kinds of table and house linen.

Turn your folds down as if for a hem, and then bend the folds away from you, the material being next to you. Over-sew the hem on the right side of the material.

The stitches should lie in a slanting direction, not taking up more than one thread each, with about three threads between each.

### The Prayer Perfect.

Dear Lord! kind Lord!  
 Gracious Lord, I pray,  
 Thou wilt look on all I love  
 Tenderly to-day!  
 Weed their hearts of weariness;  
 Scatter every care  
 Down a wave of angel wings  
 Winnowing the air.

Bring unto the sorrowing  
 All release from pain,  
 Let the lips of laughter  
 Overflow again;  
 And with all the needy,  
 Oh, divide, I pray,  
 This vast treasure of content  
 That is mine to-day.

—J. W. Riley.

## CHIT-CHAT.

## From Day to Day.

This world at best is but a hash of pleasure and of pain;  
 Some days are bright and sunny, and some all  
 drenched with rain,  
 And that's just how it ought to be, for when the  
 clouds roll by  
 We'll know just how to 'prelate the bright and  
 smiling sky.  
 So learn to take it as it comes, and don't sweat at  
 the pores  
 Because the Lord's opinion don't coincide with  
 Yours;  
 But always keep rememberin' when cares your  
 path enshroud,  
 That God has lots of sunshine to spill behind the  
 cloud.

—James Whitcomb Riley.

## Plain Hands.

IF a plea for plain hands could be written in letters of gold it could not attract too much attention. Why will sensible women, who show refined good taste in many other ways, make jewellery shops of their hands? When the wearer's husband is in the business, it is even worse, for then the custom has a dash of "shop" about it. Some women hide the pretty curves of their hands with six or eight large rings crowded on two fingers. Where one is so fortunate as to own a handsome collection, the wearing of one or two at a time has a touch of novelty and modesty. But it is truly refreshing to see a young lady with shapely hands, or even ordinary ones, given good care, which are conspicuous for the absence of showy adornments.

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## Duties of a Housekeeper.

AN intelligent woman, who has made a study of household economics, and who understands all about gathering up the fragments, that nothing be lost, says that no table is so expensive as the one to which little thought and less personal oversight is given. A servant seldom has either time or inclination to make the remnants which are left into those tempting little dishes which are so useful in relieving the monotony of steak, roast and chop; and, further, that if a "penny saved is a penny earned," a housekeeper can well afford the time which a daily inspection of her cupboards demands, and the thought which must be given to converting what she finds there into palatable dishes. At the end of the year she will see a reduction in her grocer's and her butcher's bills which will be worth saving.

## When Nursing:

Don't read out to a sick person unless you are quite sure that your doing so is desired. Suggest it if you like, but do not press it. When you do, do not select the most dismal parts of a newspaper, such as an account of the latest murder or railway accident, but keep to the bright side of things.

Don't retail all the bad news you hear to the sick person. During the long, weary hours of illness the mind is apt to dwell on what has been heard, and the account of Mrs. A's operation and Mr. B's funeral are not lively subjects for meditation.

Don't talk about the patient before him. Tell the doctor all you have to say downstairs before he sees the patient. In any case, don't talk to anyone just outside his door. The indistinct sounds are most irritating, and he is sure to fancy he is being discussed, even if such is not the case.

Don't let visitors come and see the patient unless you are sure that he likes it, and that the doctor thinks it is good for him. People differ about these matters. Some like to be left alone, and visitors only annoy them, while others get dull if they do not see their friends.

Don't argue with a patient, and never oblige him to decide things for himself. Make the decision, and, if he does not like it, alter it, if you can do so without flatly disobeying the doctor's orders.

\*\*

## Japanese Domestic Simplicity.

THE Japanese housewife does not have the care of an elaborately-arranged bedroom on her mind. When night comes, the bedding is brought out from the closet, where it has been put away during the day. One or two large, thick futons, or cushions, are spread directly on the mats of the bedrooms, and coverings, which look like enormous kimonos, or clothes, are spread over them. Every traveller has told of the pillow made of a wooden box with a little cylindrical cushion on the top, but this kind of pillow has gone out of fashion. Softer cylindrical pillows, made by stuffing a cloth bag with husks of buckwheat, are now more commonly used. In the summer, it is necessary to have mosquito nets, which generally inclose the whole room. The thought of the toy-like rooms, with floors covered with matting, and few places for lodgment of dust, seems delightful to a burdened housewife of the western hemisphere, though we would all feel seriously embarrassed by the sliding paper-covered partitions that seem to take away all sense of privacy in a Japanese house.

## Sultable Sweets for Christmas-Tide.

**An Attractive Jelly.**—Put into a clean pan one pint of water, three-quarters of a pint of claret, a quarter of a pint of lemon juice, the thinly-pared rind of one lemon, four ounces of loaf sugar, half a pint of canned raspberries, or half a pound pot of jam, two cloves, one inch of cinnamon, a few drops of cochineal, and two and a half ounces of gelatine (French gelatine for preference).

Boil all well together; be sure and see that the gelatine is well melted, then strain through a piece of fine muslin or a clean tea-cloth.

Rinse out a mould with cold water. Pour into the top a very little of the jelly. When it is set, put on it tastefully a few preserved raspberries and chopped pistachios, now a little more jelly, and let that set also. Then all the rest of the jelly can be poured in, and put in a cool place, or on ice, till quite cold. Dip the mould into warm water, and turn out the jelly carefully. This looks very pretty if made in a border mould with the centre filled in with whipped, flavored cream. Other fruits may be used in the place of raspberries.

**Orange Jelly.**—Into a clean pan put half a pint of water, three ounces of loaf sugar, the thinly-pared rinds of three oranges, and one ounce of French gelatine. Let all this cook slowly on the fire till the gelatine is melted, and the color and flavor are well out of the orange rinds. Then pour in half a pint of orange juice, and the juice of two lemons. Rinse out a mould with cold water, strain in the jelly, and put to get cold. Whilst it is setting, give it a stir now and then, otherwise the thick part is apt to settle at the top of the mould. This jelly is usually not cleaved, as it loses its flavor.

**Cornflour Blanc-Mange.**—Put a quart of milk on the fire to boil, with one inch of cinnamon, and two ounces of loaf sugar.

Put into a basin four large tablespoonfuls of cornflour, mix it with enough extra milk to make it smooth and thin. When the milk boils, pour in the cornflour, stirring all the time. Let it boil gently eight minutes. Then pour it into a mould that has been rinsed out with cold water. If it will not run in smoothly, it is too thick, and you must thin it down with a little more milk. Let it stand till cold. Loosen the edges with a knife, shake it gently, and it should slip out quite easily. Vanilla, lemon or almond may be used for flavoring. A pretty effect is gained by coloring half the mixture a pale pink, with cochineal, and pouring it into small moulds or cups, so that some will be pink and others white.

**Whipped Cream.**—This is delicious, and can be got ready at a minute's notice. Put half a pint of good cream into a basin, with two tablespoonfuls of sugar. Whisk gently till thick enough to hang on your whisk. Then stir in a flavoring of vanilla, lemon or brandy, and mix well. Serve piled up high in custard glasses, if possible, with a fresh strawberry or a piece of preserved fruit on the top of each, with a circle round the fruit of chopped pistachio nuts. The cream may be colored pink, if liked, and a neat piece of peach or apricot placed in the middle.

**Lemon Custards.**—Pour one pint of boiling water on to two and a half ounces of loaf sugar, add the strained juice of two lemons. Well beat up the yolks of four eggs. When the lemonade (as made above) is cool enough, pour it on to the yolks, mix well, strain into a small saucepan or jug. Place either the saucepan or jug in a pan of boiling water over the fire, and stir till it thickens well, but on no account let it boil, or it will curdle and be quite spoilt. Allow it to get cold. Serve in custard glasses.

**Velvet Cream.**—Put three-quarters of an ounce of French gelatine in a pan, with one gill of hot water. Stir till it is quite dissolved. Then add the grated rind of one lemon, two ounces of castor sugar, and a flavoring of either a tablespoonful of brandy, a glass of sherry, or vanilla, lemon or almond. Whisk till firm half a pint of thick cream. When the gelatine feels only warm to your finger, strain it into the whipped cream. Mix well. Pour into a mould that has been rinsed out with cold water. When cold, dip the mould into warm water. Turn out and garnish with clear, chopped wine jelly, or plainly whipped cream, colored with cochineal, or coffee essence, to a pretty color. If, before pouring in the cream, the mould was decorated with clear jelly, and a garnish of glacé cherries, etc., the effect would be greatly improved.

**Rice Mould.**—Put one quart of milk on to boil. Well wash five ounces of rice. When the milk boils sprinkle in the rice. Put the lid on the pan and simmer very gently till the milk and rice are quite thick. You should be just able to pour them into a mould. When thick, add two and a half ounces of castor sugar, and two teaspoonfuls of vanilla. Pour into a mould that has been rinsed out with cold water; if preferred, small moulds may be used. Leave till cold, loosen the edge, shake gently, and it will turn out easily. Serve with jam or stewed fruit, and a custard poured over.

# A RECIPE

TAKE a doting mother's  
 boy—  
 Father's darling, sister's  
 joy.  
 Take a sponge and wash  
 him clean—  
 Cleaner than he o'er has  
 been.  
 Take a pinafore, snow-  
 white;  
 Put it on this winsome  
 mite.  
 Take a brush and smooth  
 his hair  
 Till it shines like gossa-  
 mer.  
 Take two socks both clean  
 and neat;  
 Put them on two little  
 feet.  
 Take a pair of shiny  
 shoes,  
 And a tucker if you  
 choose.  
 Turn him out all  
 spick-an'-span;  
 Add a puppy—black  
 and tan—  
 And with water,  
 earth, and stick.  
 Make a puddle black  
 and thick:



TURN HIM OUT ALL SPIC  
 AND SPAN  
 ADD A PUPPY  
 BLACK AND TAN



PICK HIM OUT AND THERE YOU'VE GOT

Spread it freely o'er his clothes  
 Rub it well on cheeks and nose.  
 Mix the scapegrace and the dog—  
 Noly-poly in the bog—

A LITTLE PICKLE—HAVE YOU NOT?

Do it well, and season up  
 With muddy gambols of the pup.  
 Pick him out, and there you've got  
 A little pickle—have you not?

[BALLADS FOR BAYERS, THE BITS.]



## AMUSING GAMES FOR CHRISTMAS.

WHO begrudges an extra hour or two devoted to the very little folks at Christmas time? Not the Canadian father and mother, and not the Canadian bigger brother and sister, we are sure, and we shall not apologize to the latter for devoting the bulk of our space in this issue to the wee ones; and let us point out to our older boys and girls that we shall require their assistance in giving enjoyment to the "smaller fry" at Christmas.

Some of the following games will offer lots of amusement to older children, and their presence and participation in the fun will be greatly appreciated by the little folks.

\*.\*

## "Honeypots."

A MASTER for the store and a customer are chosen from among the little players,



FIG. 1.

the rest of whom dispose themselves in a row, sitting on the floor, with their hands clasped together under their knees.

The customer then comes in and asks for a pot of honey, about four or five pounds, or any number he wishes; the storekeeper points out the little boy or girl who is to represent the honey-pot of that weight. Then the customer pretends that he does not believe that the chosen pot weighs as much as it is supposed to

do, so the storekeeper offers to weigh it. He and the customer each take one arm of the honeypot and swing it backwards and forwards as many times as the number of pounds it is supposed to weigh. (Fig. 1).

If the child is able to keep its hands joined under its knees as long as is necessary, the honeypot is carried off by its purchaser; but if the child cannot support the weight of its body long enough for the proper number of swings, the honeypot is condemned, and must afterwards be weighed again for a smaller amount.

It is well to choose the storekeeper and customer from among the older and stronger children.

\*.\*

ANOTHER very favorite game is called:

## "Fool, Fool, come to School."

The children sit or stand round the room, each choosing the name of some fruit, flower, or other object. A master, chosen from among them, stands before them, and calls into the room the fool (also one of the children).

He then says:

"Fool, fool, come to school, and pick me out a rose, or apple," as the case may be.

The fool then endeavors to guess from the faces of the children which one re-



FIG. 2.

presents the object demanded (Fig. 2), and points to some child. If it is the one, the fool carries it off in triumph; if not, the fool retires ignominiously with a chorus of—

"Fool, fool, go to school, and learn your A B C."

The same process is repeated until all the children have been carried off. Sometimes the little players like to take the names of countries or towns.



### "Sowing the Corn."

THE children dance in a ring, singing the above, varying their actions according to the words. For example, when they sing, "Yes, we sow it with the nose,



FIG. 3.

elbow, or chin," etc., they kneel down and touch the ground with their nose or chin, as the case may be (Fig. 3).

The game can be prolonged according to the taste and imagination of the players.

\*\*

Anyone with a Pencil and Paper can amuse the little ones with the following drawings:

First a beautiful pond is drawn (Fig. 1). A man and his wife determine to build near it a little house with a window (Fig. 5).

To make it easy to get to the pond, they build a neat pathway to it (Fig. 6).



FIGS. 4, 5, 6, 7, 8 AND 9.

Next they want a little out-house for their chickens (Fig. 7).

Some beautiful trees are growing at the other end of the lake (Fig. 8).

"Oh, dear!" said the woman one day to her husband, "I am sure I can see two very strange-looking burglars coming towards the lake (Fig. 9).

But her husband says, "My dear, you are nothing but a



## Our Wish...

For every Canadian Home,  
and  
for every Friend, both old and new...

A Happy,  
Bright  
and  
Merry Christmas,  
and  
A Prosperous New Year.



### A Soft Answer.

AN English tramp steamer had just been tied to a wharf. From her dingy hold there leaped upon the dock a man who was evidently a stoker. He was black with grime, reckless of face, eager for release from an almost unbearable confinement, and ready for any animal gratification for which he could find opportunity.

As he emerged upon the main street, looking, probably, for the nearest saloon, he saw a colored woman walking sedately toward him, carrying a basket of apples. Full of mischief, the stoker stumbled against her, upset the basket upon the pavement, and then stood aside to laugh at the invectives which he supposed his trick would bring forth.

But the old colored woman did not even look at her tormentor. She bent and quietly picked up her apples. There was not even an expression of resentment upon her face. She bent here and stooped there, and when she had recovered her last apple she turned upon the astonished man with a pathetic dignity that forced respect,

and said, in tones of simple kindness:

"God forgive you, my son, as I do."

The rudeness that had counted on a bitter berating was softened in an instant. The man's coarse lips parted, his hard eyes fell, he tried to speak; then he thrust his hands into his pockets and pulled out all the silver he had. This he forced upon the silent woman.

"Take it," he said, and then added, as she looked at him in astonishment, "God bless you, mother! I'll never do it again!"

That which is probably one of the hardest sayings of Christ to accept, one that has received the ridicule of centuries, is illustrated by this incident. The principle involved in the command to turn

the other cheek to the smiter is utterly antagonistic to natural human impulse. "A soft answer turneth away wrath," is a form of presentation of the same principle, that, in theory, at least, is somewhat readily acknowledged; and its truth was never more emphatically verified than in the incident we have described. *Youth's Companion.*

\* \*

### Queer Friendships formed by Animals.

ANIMALS occasionally form acquaintances in the most unexpected places. Some time ago a cat actually increased its family cares by adopting a young rat and nursing it for several days, and

surely this is a most peculiar friendship for any member of the feline race to form. The cat in question had a family of four kittens to look after at the time she took a fancy to the rat, but the latter had as much care and attention paid to it as the kittens. She washed it with her tongue most carefully and allowed it to feed with her own little ones. At the end of several days however, the kittens resented the presence of the rodent, and drove it away, but still the



AMBITION DIVERTED, NOT DEAD.

"SNOWBALL GEORGIE," a young gentleman who hopes some day to take a prominent part in South African politics, but whose "strong" point at present is a weakness for grapes.

mother cat had exhibited a most extraordinary friendship in caring for it so long.

Speaking of an animal thus acting the part of a foster-parent reminds one of another case where a cow has stood in that capacity to lambs. This was the outcome of an experiment, and may be regarded as a new way of rearing motherless lambs. A patient cow was selected for the office, and, as she raised no objection to a lamb approaching her and sucking as it would from its own mother, other lambs were allowed to do the same, until the cow had a family of six to look after. It is quite interesting to know that the animals thus fed thrive remarkably well.



AN Irish Judge, who was much annoyed by loud conversation in the court room, cried out: "Silence! Keep a lence in the court! Here I have decided a dozen cases this morning, without hearing what one of 'em was about."

"THIS is the parlor, eh?" tentatively remarked the agent, who was looking over the house. "Yes," replied old man Kildier; "but I usually call it the court-room—I've got seven daughters, you know."

AN old Scotswoman, when advised by her minister to take snuff to keep herself awake during the sermon, replied: "Why dinna ye put the snuff in the sermon, mon?"

PORTMAN: Here's a letter for Mr. Jeremiah O'Flaherty. SEBYANT (IRL. Well 'tis you's the clever man to know his name. Sure he outly kin here last night.

#### NEW VERSION.

Jack Hiss would raise garden sass,  
His wife would raise chickens,  
Betwixt the two, ere they got through,  
They simply raised the Dickens.  
— *Indianapolis Journal*

MAUD: Did you not call for help when he kissed you? MARY: .o. He didn't need any.

FRESHE: You bet, I boss the house. IRVINE: What does your wife do? FRESHE: She bosses me.

HE (before the wedding): You are sure you won't be nervous at the altar? SHE (four times a widow): I've never been yet.

"KATHARINE, you will always find me an indulgent husband." "Do you mean indulgent to me or indulgent to yourself?"

"WHEN a man asserts that he is just as good as anybody else, do you think he really believes it?" "Certainly not. He believes he is better."

"Do not put your feet on the cushions." Is an injunction read occasionally in a railway carriage or you will dirty your boots." was found added the other day by a cynical traveller.

"PADDY, do you know how to drive?" said a traveller to the owner of a junting car.

"Sure I do," was the answer. "Wasn't it I upset yer honor in a ditch two years ago?"

FRIEND: What is the expensive ingredient in your syrup?

PATENT MEDICINE MAN: The advertising.

MASTER: How was it I saw you handing your friends in the kitchen my best chairs?

MARY: I can't tell, sir, for the life of me; for I'm sure I covered the keyhole.

"WHAT a well-informed man Jenkins seems to be! He can converse intelligently upon almost any subject.

"Yes; Jenkins has brought up five boys."

BROWNLET: How surprised we would be if we could see ourselves as others see us!

TOWNLEY: Yes; but think how surprised the others would be if they could see us as we see ourselves.

LITTLE DAUGHTER: Mamma, can folks be put in prison for cheating a baby?

MAMMA: Why do you ask such a question?

LITTLE DAUGHTER: I saw Mrs. Neat-door filling her baby's bottle, an' she put some water in the milk.

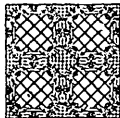
MRS. HASHMORE: You'll have to settle up or leave.

BOARDER: Thanks, awfully. The last place I was at they made me do both.

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A gentleman rang his door bell one evening recently and asked if a Mr. — lived there.

"No," said the intensely musical Henry, pointing to the street; "he lives about an octave—I mean eight doors higher."

"Why, Jimmie, my darling boy, you've got the medal for good behaviour this week!" said the fond mother, noting the little alliver medal on her son's vest.

"Yes, ma," said Jimmie. "Tommy Roland won it, but I told him I'd knock the head off him if he didn't give it to me."

BLINKERS: Why is it your friend Winkers is always down at the heels? Does he lose his money on horse-races?

DINKERS: He never bets on a horse race. He loses his money on the human race.

EH?

He has nine children.

MRS. TRACY: Do you realize, my dear, that you have never done anything to save your fellow creatures any suffering?

TRACY: Didn't I marry you?

YARBLEY: I have always had an idea that after a couple had been married for some time even their thoughts became, to a great degree, identical. Am I right, Peck?

MR. N. PECK (emphatically): You are. About now my wife is thinking what she'll say to me for coming home so late. And so am I.

MAGISTRATE: I seem to know your face!

PRISONER: Yes; we was boys together.

MAGISTRATE: Nonsense!

PRISONER: Yes, we was. We're both about the same age, so we must have bin boys together!

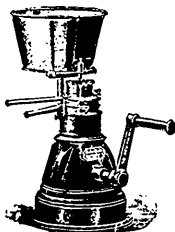


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### A Humano Engineer.

One never knows the value of an amiable deed till he knows all its consequences; and the merit of it is in not knowing them all beforehand.

An engineer of a passenger-train on a Mississippi railroad was driving through a snow-storm, eagerly scanning the track as far as he could see, when, half-way through a deep cut, something appeared, lying on the rails. It was a sheep with her two little lambs.

His first thought was that he could rush on regardless of them, probably without damage to his train; but the sight of the innocent family cowering in the storm touched him, and as they paid no heed to his warning whistle he pulled the air-brake and sent his fireman ahead.

In a few minutes the fireman came back with a terrified face. There had been a landslide, and just beyond the cut the track was covered with rocks. It seemed certain that if the train had gone on at full speed, in the blinding snow, it

would have been impossible to stop in time to escape disaster.

In the absolute sense the incident was providential,—as everything is,—but circumstantially the passengers on that railway train owed their safety, if not their lives, to an engineer who was too tender-hearted to kill a sheep and her lambs.

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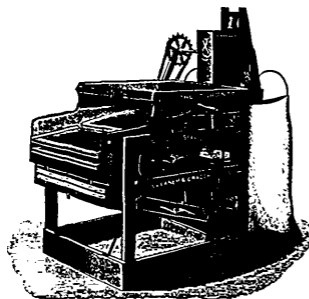
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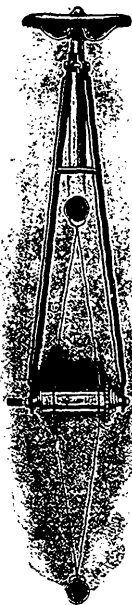
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ESTABLISHED 1886.

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Full Deposit with the Manitoba Government.

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DIRECTORS:

HON. HUGH J. MACDONALD, President, H. H. BECK, Vice-Pres. and Manager.  
JOHN RUSSEL, W. J. TUPPER,  
Freehold Loan Co., Winnipeg. Barrister, - Winnipeg.  
A. M. PATTON, H. S. CROTTY,  
Trust and Loan Co., Winnipeg. Financial Agent, Winnipeg.  
ROBERT HALL, Farmer, Griswold.

**This Company should receive the support of the Insuring Public for many reasons, but the most obvious are:**

1. Because it is safe, is licensed by, and has full deposit with the Government.
2. Because it is a Home Company, and has all its funds invested in Manitoba.
3. Because all the cash received for Premiums is circulated in the Province.
4. Because all honest losses are quickly adjusted and paid.

**Reliable Energetic Agents Wanted in all Unrepresented Towns and Districts.**

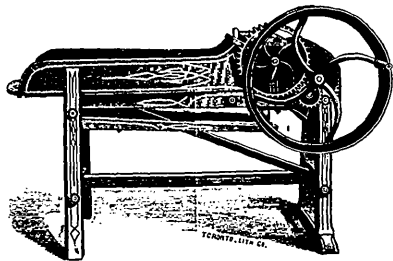
For particulars, address,

**THE MANAGER, HEAD OFFICE,  
WINNIPEG, MANITOBA.**

# Economize

in your Cattle and Horse Stables !

One way to do so is to use an up-to-date Feed Cutter.

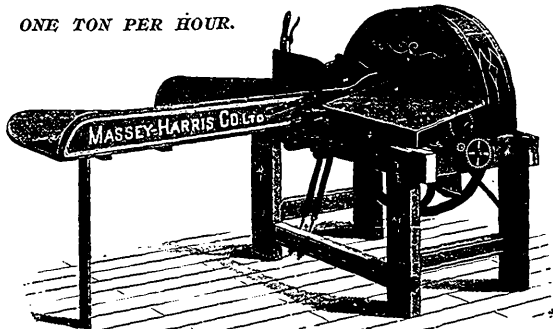


MASSEY-HARRIS CUMMINGS' FEED CUTTER,  
WITH ROLLER BEARINGS.

your animals being kept in better condition.

The machine illustrated below is specially adapted for cutting straw. It has a capacity of ...

**ONE TON PER HOUR.**



NEW MASSEY-HARRIS ROLLER BEARING STRAW CUTTER.

THE...  
**MASSEY-  
-HARRIS**  
Cummings'  
Feed Cutter

will save its cost in  
fodder, and insure



# Facts Worth Knowing



**That Goods Shipped . .** from the **WEST SHORE RAILROAD** Station at foot of Franklin Street, New York City, reach Grand Trunk Station at Toronto, the second morning (36 hours), with the regularity of passenger service.

## THIS IS NO EXPERIMENT.

It has been carried out for three years, and scores of Toronto merchants will substantiate this statement. Merchants at Hamilton, London, St. Thomas, Detroit, etc., will testify that our service is proportionately quick to those points.

**Instruct your New York Correspondents** to mark shipping papers and goods:—"West Shore Railroad, Train No. 57," and deliver at foot of Franklin St., New York, by 3 p.m.

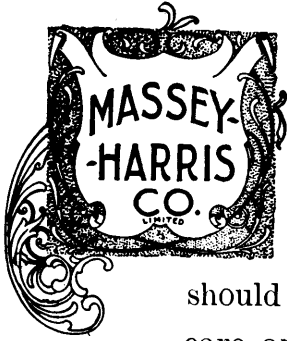
**On East-Bound Freight** to the States or for Export via New York, Boston, or Philadelphia, our facilities are the best.

For rates and detailed information, call on or write,

**J. W. HICKSON**, *Canadian Agent*,  
37 YONGE ST., TORONTO.

**W. A. WILSON**,  
*Division Freight Agent*,  
Board of Trade, BUFFALO.

**FRANCIS LABAU**,  
*General Freight Agent*,  
5 Vanderbilt Ave., NEW YORK.



# Your Cattle

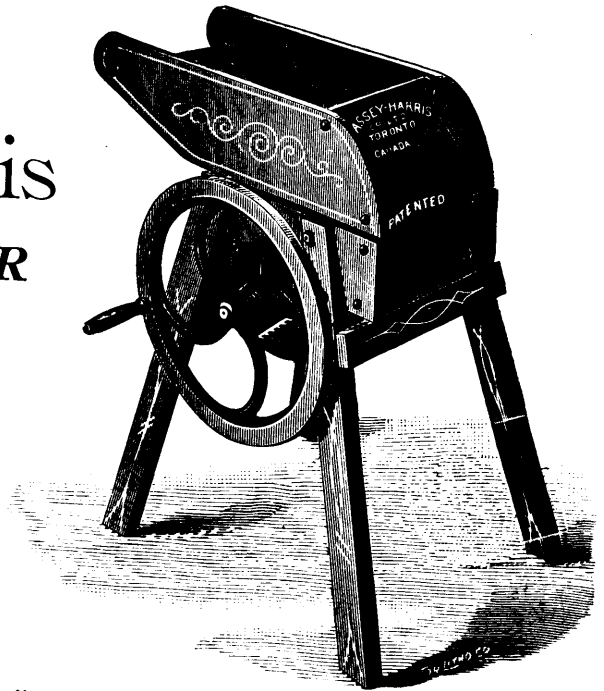
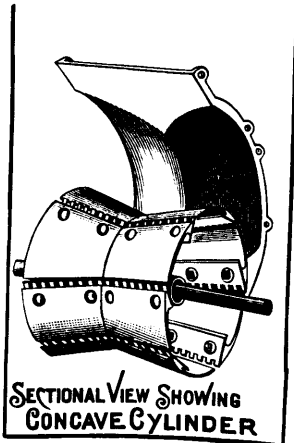
should bring you in large returns if they receive proper care and management.

The secret lies in the feeding. The roots they eat should be well sliced and pulped.

THE ...

## Massey- -Harris ROOT CUTTER AND PULPER

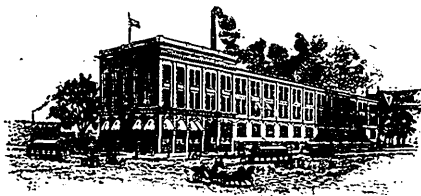
with Concave Cylinder is a very popular machine for this purpose, and does its work well.



No 1 ROOT CUTTER AND PULPER, CONCAVE CYLINDER.

Well-fed cattle are scarce, and the man who brings the condition of his stock to a high state of perfection is undoubtedly repaid for it in the price he receives when selling.

The Concave Cylinder on the MASSEY-HARRIS makes the Roots feed regularly and smoothly without clogging or scattering. It will not choke, and does its work with surprising rapidity.



\* \*

*The  
Largest  
Lithographing  
Establishment  
in the  
British  
Colonies.*

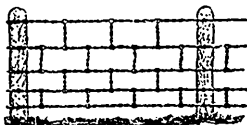
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Manufacturers  
and . . . . .  
Importers of  
Advertising .  
Novelties . . .

*The Toronto  
Lithographing Co'y*

*Cor. King and Bathurst Sts., Toronto.*

Limited

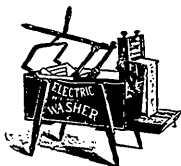


We can cut your 1888 fence account just in half. We claim we have the most practical fence on earth. Four miles of it in use at the Experimental Farm, Guelph. Send for prices.

**Toronto Picket Wire Fence Co.**

221 River St.

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Makes no mistake and handle the

**ELECTRIC  
WASHER.**

Tried and proved, no experiment, you are sure to be satisfied, time is money.

If not represented in your district write us and we will send an Agency before too late.

**SEMMENS & SON,**

174 York St.

- - HAMILTON, ONT.

THE HOME MONEY MAKER



## HOME WORK.

We want the services of a number of families to do knitting for us at home, whole or spare time. We furnish \$20 machine and supply the yarn free, and pay for the work as sent in.

Distance no hindrance. \$7 to \$10 per week made according to time devoted to the work. Write at once.

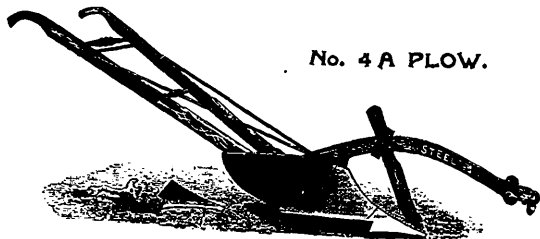
Name references.

**CO-OPERATIVE KNITTING CO.**  
TORONTO, ONT.

# Farming For Profit . .



was by many looked upon as a lost art until this new era of prosperity seemed to dawn upon us. Are you taking advantage of it? Indifferent farming can never succeed in the best of times. Farm *well* if you want good returns. The basis of all good farming always was, is now and always will be **THE PLOW**. Begin right and use *good* Plows. The Verity Plows are the best.



No. 4 A PLOW.

**HOLDING or WALKING** VERITY PLOWS **SULKY or RIDING.**

are made in various sizes and styles to suit all kinds of work on all kinds of land.

MASSEY-HARRIS AGENTS SELL THEM EVERYWHERE.

Verity Plow Co. <sup>Limited</sup>  
BRANTFORD, CANADA.

## Encouraging Results Follow Proper Feeding



There is a wide diversity of opinion about what constitutes a good cow but none about the beneficial effects resulting from the use of

## Dick's Blood Purifier

as a tonic, appetizer, blood purifier and aid to thorough digestion for cows, sheep and horses when they are put on dry fodder in the Fall. It assists the organs of the stomach to extract all the nutriment from the food and puts them in good strong healthy condition for the spring time.



50 cents a package.



LEEMING, MILES & CO.  
Agents, Montreal.

DICK & CO.,  
Proprietors.

## ...COMMON SENSE EXTERMINATOR... KILLS EVERY TIME.



Cleans out Roaches, Bed Bugs, Rats, Mice and Ants, guaranteed to leave no offensive odor. Harmless to human beings and domestic animals.

COMMON SENSE MFG. CO.,  
381 Queen St. West, Toronto.

## "Mower and Reaper Knives

Are easier, better and cheaper sharpened, by our Reaper File than by any other process. A few cents expended in a special File for the purpose is the only outlay you require."



THE GLOBE FILE MANUFACTURING CO.  
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## YARMOUTH DUCK AND YARN CO., LIMITED.

MANUFACTURERS OF

COTTON DUCKS, WIDE DUCK, SAIL DUCK, GUNCE DUCK. DRYERS FOR PAPER MILLS. ALL GOODS WARRANTED FREE OF SIZING.

Send orders and enquiries to

YARMOUTH, N. S.

Extract from Annual Report for 1897,  
of the Consulting Chemist of the

ROYAL AGRICULTURAL SOCIETY  
OF ENGLAND.

Published in their Journal, 31st Dec.,  
1897, page 732.

"It has been necessary to call attention to the fact that under the name of 'slag,' and sometimes even under that of 'basic slag,' have been sold refuse materials of a very different character, and having little or no manurial value. These have not been the product of the well-known 'Basic' or THOMAS-PROCESS of iron or steel making, and have contained little or no phosphoric acid such as basic phosphate has. In several instances the purchasers believed that they were buying the true basic slag. It behooves one, therefore, to be careful to stipulate for THOMAS-PHOSPHATE, and to have a guarantee of phosphoric contained and of fineness of division."

We handle the only true

## THOMAS-PHOSPHATE POWDER

Sold in Canada.

And to be sure of genuine material, see that the bags have our name and address.

## WALLACE & FRASER,

MASONIC BLOCK,  
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CANADA LIFE BUILDING,  
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## The Wehrle Brush Mfg. Co., LIMITED, 112 King St. East, Toronto.

BRUSH MANUFACTURERS.

Brushes for Manufacturing purposes a speciality.

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| Foundry Brushes | Paint Brushes | Stable Brooms |
| Machinery "     | Artists "     | Warehouse "   |
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| Jewellers "     | Horse "       | Steel Wire "  |
| Dental "        | Mill "        | Cheese "      |

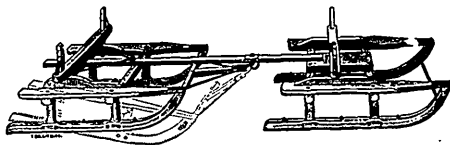


“BAIN”



SLEIGHS  
and WAGONS

have an established reputation for strength and wearing qualities.



BAIN IMPROVED ONTARIO TWO KNEED SLEIGH.

☼ A 50.—2 in. Runners, Two-Kneed Sleigh, with Bolsters, 38, 40 or 42 inches. ☼

A 51.—2½ in. Runners, Two-Kneed Sleigh, with Bolsters, 38, 40 or 42 inches. ☼

“BAIN” SLEIGHS are made to suit all conditions and territories.



IMPROVED ONE-BEAM SLEIGH.

☼ A 60.—2 inch Runner with Bolsters, 38, 40, or 42 inches. ☼

A 61.—2½ inch Runner with Bolsters, 38, 40, or 42 inches. ☼

A 62.—3 inch Runner with Bolsters, 38, 40, or 42 inches. ☼

Handsome Catalogue, with cover executed in three colors, by new process, will be sent on application.

**MASSEY-HARRIS CO., Limited,**  
are SOLE AGENTS of the BAIN WAGON CO., Limited.



IF YOU WANT FIRST CLASS

## Malleable Iron Castings,

PURCHASE THEM FROM THE

Smith's Falls Malleable Iron Works.

SMITH'S FALLS, ONT.

## Toronto Incubators.

Best hatching machines built. Awarded silver and bronze medals. For circular, address—

T. A. WILLITTS, 514 Dundas St., Toronto, Ont.

**1000 BICYCLES FREE** for securing orders from your friends, for our celebrated teas, etc. Apply London Wholesale Tea House, Drawer 546, London, Ont.

THE

## FINCH WOOD PRESERVATIVE

AND PRESERVATIVE PAINT.

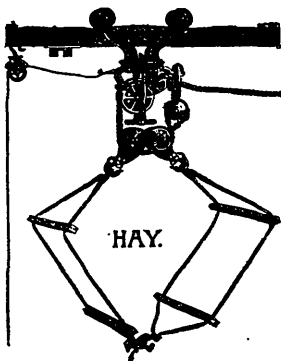
(TWO KINDS)

One suitable for Foundation Timbers, Silos, any timber in or on the ground; the other for Roofs, Sides of Buildings, etc., used and tested 27 years. Wood treated with these preparations have never shown the least sign of rot or decay. Write us for Circulars.

THE FINCH WOOD PRESERVATIVE & PAINT CO.,

Box M, 870 Queen St. W.,

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The above represents our No. 5 Malleable, Swivel, triple purchase Sling or Fork Carrier, which allows bundle to run into mow when high enough to pass over beams. A full line of Haying Tools always in stock. All orders by mail promptly attended to.

**EMERSON & CAMPBELL,**  
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**TORONTO ENGRAVING CO.**  
CUTS FOR ALL PURPOSES  
BY ALL PROCESSES  
**92 BAY ST.**

## CREAM SEPARATORS

### THE ALEXANDRA

Hand and Power. - Capacity—160 to 2,200 lbs  
\$50 to \$350.

### THE MÉLOTTE

Hand Style only. - Capacity—330 to 850 lbs.  
Price, \$100 to \$185.

UP-TO-DATE DAIRY MACHINERY AND SUPPLIES

AGENTS WANTED.

**R. A. LISTER & Co. Ltd.**

18 ST. MAURICE ST., MONTREAL.

## THE GREAT SAFETY

### CANDLE LANTERN.

Handsome, Handy,  
Safe and Sure.

No wind will blow it out. Send 25c. and get sample frame, post paid, and secure the agency for this and our other first-class specialties.

The SAFETY LANTERN CO.  
34 Adelaide St. W., Toronto.

Agents wanted in every village. Exclusive territory given. Liberal commission. Rapid money maker.



Have we a Branch in your Town?

If not, write us.

**THE Rolston Laundry Co.,**

187 & 189 PARLIAMENT ST.,

Toronto, Ont.



AGENTS WANTED.

## PUREST and BEST.

**WINDSOR** Please remember the name "WINDSOR" when you require to order Salt. Best for all purposes.

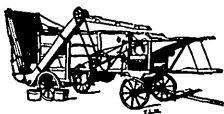
TABLE SALT CHEESE SALT DAIRY SALT  
ORDINARY FINE SALT

THE WINDSOR SALT CO., LIMITED, WINDSOR, ONT.

The —————  
**Superiority**

OF THE

**THRESHERS, ENGINES,  
HORSE POWERS and  
ROAD MACHINERY**



MANUFACTURED  
BY .....



**SAWYER &  
MASSEY**

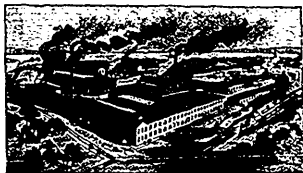


**COMPANY,**  
Limited,

In their long established (1836) works at Hamilton, Ontario, has been proven by the steady increase of orders from all parts of the Dominion

Since the organization of Sawyer & Massey Co., Ltd., the development of the Company's business has been phenomenal.

Sawyer & Massey goods are famous all over Canada.



**If you desire to have an outfit that is perfectly reliable, see the Agent in your section for Sawyer & Massey machines, or write direct to**



**Sawyer &  
Massey Co.,**  
Limited,

**HAMILTON.**



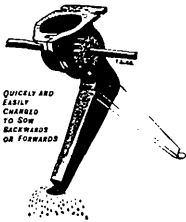
The **RIGHT SOIL**,  
 The **RIGHT SEED**,  
 The **RIGHT DEPTH**,  
 The **RIGHT QUANTITY**

ARE NECESSARY  
 TO INSURE

A \_\_\_\_\_

# A GOOD CROP

**T**HE MASSEY-HARRIS COMBINED HOE DRILL AND BROADCAST SEEDER is the right machine for the progressive farmer. Either as a Drill or a Broadcast Seeder it stands without an equal. The depth of sowing, as well as the quantity sown, is under absolute control.

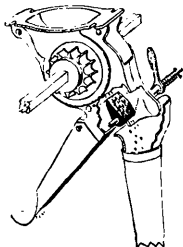


QUICKLY AND EASILY CHANGED TO SOW BACKWARDS OR FORWARDS

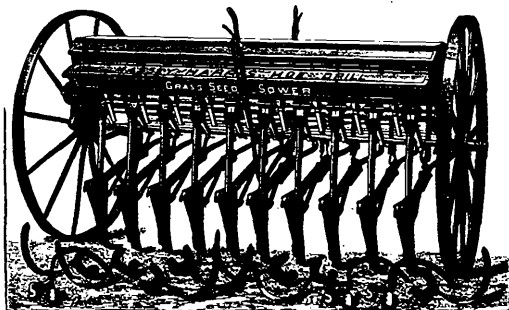
GRASS SEED DISTRIBUTOR.  
 IT DOES EXCELLENT WORK.



This is the lightest, the strongest, and in every way the best Combined Machine ever built.



THIS CUT SHOWS THE METHOD OF INSTANTLY CHANGING FROM DRILLING TO BROADCASTING OR VICE VERSA AS SIMPLE AND COMPLETE AS POSSIBLE.



The above is a rear view of the machine set up as a Drill. The Spring Teeth, so readily interchanged with the Hoecs, are shown loose on the ground.

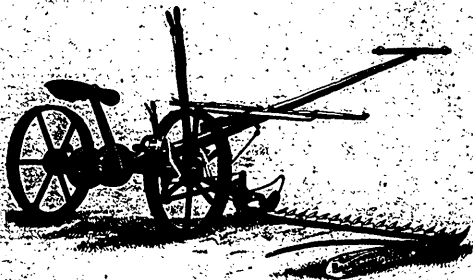
THE

# WINTER EVENINGS



Provide an excellent opportunity for the Farmer to decide on what new Implements to buy for the coming season's work.

To procure good results, it is essentially necessary to have the best of Tools. There are many reasons why Massey-Harris Machines are the best. The new Catalogue, which will be sent you on application, will explain some of them.



THE BRANTFORD NEW No. 3 MOWER (FRONT-OUT).  
(17 3/4" OR 21" 24" SECTIONS.)

The above cut illustrates the product of a great many years of study and experimenting. The success of this light running Machine has been marvellous. In Europe alone, the orders for Brantford Mowers have doubled during the past year.

**MASSEY-HARRIS CO., LIMITED,**  
**TORONTO.**



MASSEY-HARRIS SHOE DRILLS AT WORK ON A PRAIRIE FARM.

N.B.—This illustration shows the different sizes of machines, viz., 15, 19 and 25 Shoes, requiring two, three and four horses respectively.

## MASSEY-HARRIS SHOE DRILL. . .

HERE no longer exists a doubt but that in many sections of country the Shoe Drill is the most profitable to use. The Shoes work and clean nicely in soil, the nature of which forbids the use of a Hoo Drill. The MASSEY-HARRIS improvements in Shoe Drills have brought this method of seed sowing to a high state of perfection. The Shoes and Draw Bars are so shaped and connected as to pass over obstructions readily.