

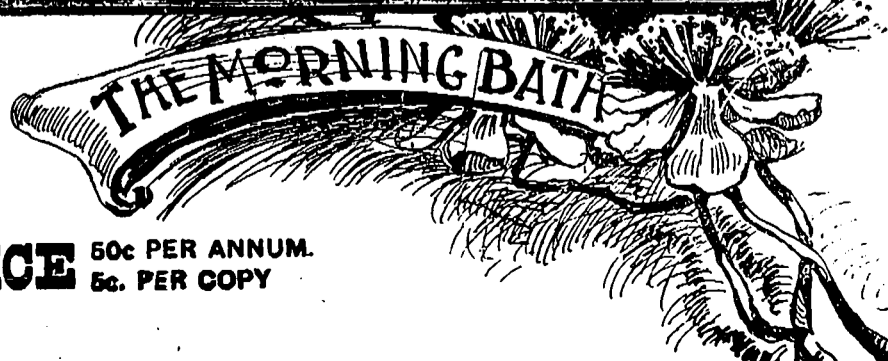
# • Massey's Illustrated •

(PUBLISHED MONTHLY.)

## May Number

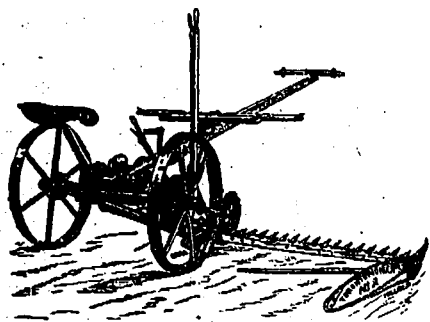
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Toronto, May, 1895.



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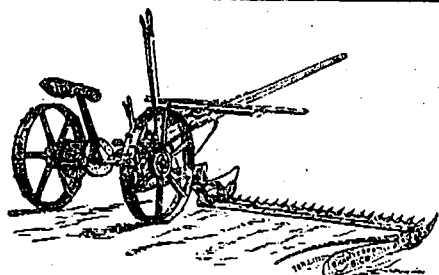
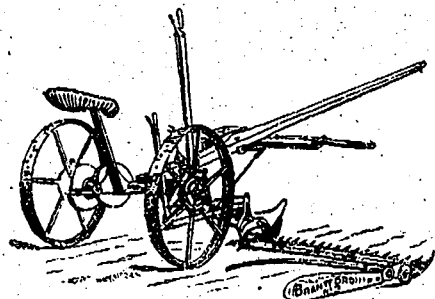
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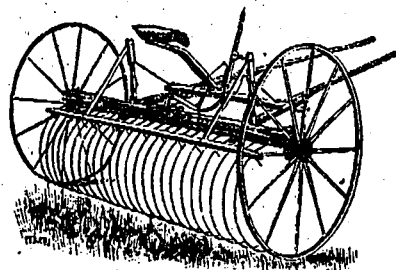
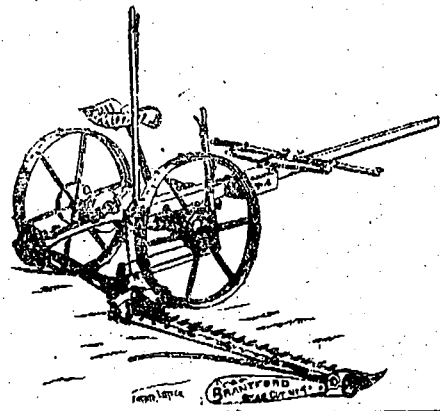
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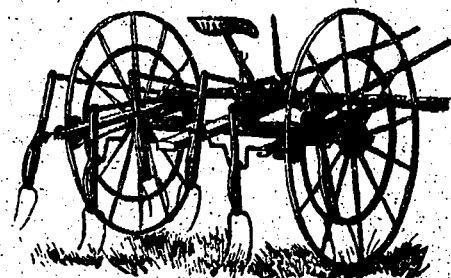
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# • Massey's Illustrated •

(PUBLISHED MONTHLY.)

## A Journal of News and Literature for Royal Homes

NEW SERIES.]

TORONTO, CANADA, MAY, 1895.

[Vol. 7, No. 5.]



BY J. D. PATTERSON.

**C**OASTING eastward along from the Cape in the swift and splendid ship "Norman," which had made the passage from England in fifteen days, we were throughout the daylight hours almost constantly in sight of land. After the grand headland of the Cape of Good Hope had been rounded, the coast line was in most places not severe enough, and not sufficiently broken to be particularly interesting.

We sighted Mossel Bay, and passed quite close to the high sandstone cliffs marking the entrance to the good harbor at Knysna. There we would gladly have gone ashore for a better glimpse than we could have from the sea of the fine forests for which the country along the Knysna River is celebrated. At the present time a profitable business is carried on in the timbers of this forest. Shiploads of sleepers for the Cape Government Railroads, props for the mines in the gold fields, posts for farm fencing,

and lumber for cabinet work and cart building are insuring to the little town scattered along the harbor no small degree of wealth. There are in the district many saw-mills with modern machinery, but there is room for yet more. Forests throughout South Africa are very scarce, and there must continue to be a ready market for all the timber, posts, etc., this district will produce. The government with great forethought is doing its best to encourage the planting of trees where the virgin forest has given way before the lumbermen.

We touched first after Cape Town at Port Elizabeth, anchoring some distance out in the harbor. Shortly afterwards we were taken by one of the many smart tugs alongside the splendid jetty. On account of the open harbor, and the consequent liability to rough water steamers seldom go alongside the jetties, but anchor within easy distance, and transfer their passengers and cargo to the tugs and lighters. A massive granite wall protects the shore from the action of the sea. The scene along the water front is animated in the extreme, but with all the hurry there appeared to be not the least confusion. The loads from the lighters

to the railway cars thickly lining the three tracks on the principal jetty are rapidly transferred by huge hydraulic cranes, and these cars, when loaded, are dispatched to the warehouses, extending for more than a mile along the water front, or direct to the towns of the interior.

Port Elizabeth dates from 1820 when 5,000 emigrants were landed in the Bay under charge of the acting governor, Sir Rufane Donkin, in honor of whose wife, Lady Elizabeth, the town was named. To each family was allotted 100 acres of good land. As a great part of the supplies for the Eastern Province of Cape Colony, the Orange Free State, and the Transvaal, go through this part it is not hard to account for its gradual transformation from a little coast trading town into the splendid city of to-day. It is aptly called "the Liverpool of South Africa." The customs dues during the 15 years including 1893 reached £7,277,500 sterling as against £5,643,000 sterling received at Cape Town over the same period.

The business portion of the city lies on a gentle sandy slope, and on this not a tree will grow, but the private residences crowning the hill above, protected from the force of the strong winds from the sea, are surrounded with splendid trees, and luxurious vegetation. A narrow belt of fertile land following the coast line does much to insure to Port Elizabeth a good local market.

Indian corn and Kaffir corn (millet) yield an abundant harvest. A little wheat, dark, flinty and of poor quality is also grown. Better varieties of wheat owing to the prevalence of



ZULUS IN WAR DRESS.—NATIVES IN THE REAR.

rust are not planted, and even an indifferent crop of the poorer grain cannot be counted on.

Oats sown to be cut while green for fodder do reasonably well. Immediately north of this belt the country is broken and covered with a dense growth of small scrubby trees, but 20 miles inland a forest belt is encountered, and in the kloofs or deep valleys there, large trees are abundant. This forest affords magnificent shooting, well stocked as it is with bucks of the larger kinds, Cape Buffaloes, elephants, leopards, pheasants, partridges, Guinea fowl, etc. Nowhere in Cape Colony except in this forest, and in the Knysna before referred to, are Cape buffaloes and elephants to be found.

It is dangerous to attempt to penetrate these forests except in the company of a thoroughly trustworthy guide. The trees are festooned with a pendant of grey green moss, and thickly laced with hop-like creepers. It was most amusing to see from the car windows the small monkeys watching us from some small grassy opening springing away when we came too near to run nimbly up the monkey ropes, leaping from tree to tree, perching recklessly at last at a giddy angle on some topmost branch as we rushed by. The baboons, much larger, were less confident, and preferred to observe us from the comfortable security of the projecting rocks on the steep hill sides. At Grahamstown, 30 miles from the sea, though 120 miles by rail from Port Elizabeth, we secured seats in the mail cart, and enjoyed the swift drive of 90 miles to King William's Town. Both these towns have a considerable population, and an extensive trade with the country around them. Grahamstown is prettily situated in a pocket in the hills, and though warm from being protected on all sides from the winds, is celebrated for its healthful climate. The hillsides have almost a forest growth from the planted oaks, limes and eucalyptus trees. Fruit trees thrive, and it is altogether a very pleasant place.

Leaving Grahamstown our road at first led through the valleys and between steep wooded hills. The plumbago shrubs were in their full perfection of delicate blue blossom, while the fragrant white Cape jasmine twined everywhere through and over their branches.

Such glimpses do much to make one forget the rocky, dreary, treeless stretches too often encountered in a journey throughout South Africa. Twenty miles to the east of Grahamstown we crossed Fish River, at one time the eastern boundary of Cape Colony, and the scene of many fierce battles with the Kaffirs from 1819 until their final defeat in 1835. On the fertile hillsides of the country east of this river small groups of Kaffir huts built now as before the advent of white men began to appear. These huts are very primitive both in design and construction, much resembling the old time straw beehives. They are perfectly round, from 12 to 18 feet in diameter, built of poles planted in the ground and sprung to a common centre at the top. This frame is stoutly laced together with slender branches, and over all, roof and sides, is neatly woven a substantial thatch of grass or rushes. Primitive as these huts are they seem well adapted to the climate, and to a people of such simple habits. A small door not more than 30 inches high forms the entrance not for the people only, but for the

light and the air as well. It is the only opening—there are no windows. The native dress is not more complex than the lives of the people, and not less well adapted than their houses to the dry and sunny climate. The children up to the age of 10 or 12 years are "clothed in all their native nothingness," while their elders assume the dignity of loin cloths and blanket. These people cultivate small patches of Indian corn (mealies) their staple food throughout the year.

They grow as well small quantities of Kafir corn, from which is brewed a cooling native beer, but slightly an intoxicant. Each family has its herd, however small, of cattle, sheep or goats, but as the several families of a village have a common grazing ground the flocks are usually together and cared for by the smaller boys.

These herds in the aggregate are often quite extensive. Under good headmen the communities are thrifty and the people contented. The clothing of these Kaffirs is invariably dyed to a dull reddish color with an Ochre found in the hills. The festive young men and the younger women daub their faces with the same pigment; the belles sometimes varying this monotony of color by leaving regular sections of their black skins exposed, or by working intricate patterns over the red, with a gray white clay. The women are quite as fond of ornaments as their white sisters; rings, girdles, necklaces, armlets, ankle bangles of ivory, beads or brass constitutes their usual adornment. It is not uncommon to see the arms of the young women from wrist to elbow highly incased in rings of brass, which although entirely covering the flesh preserve the outline and admit the free movement of the arm. Some of these ornaments are exceedingly pretty and represent long weeks of patient labor. The bead beits, necklaces and bangles are worked in strange patterns and not infrequently a surprisingly happy effect is secured. Dull color tones rather than bright are most often chosen.

The work of the Kraals or in the fields is usually done by the women, who carry all burdens, no matter how light or how heavy, on their heads. Last year (1894) owing to the unusually long drouth, the smaller streams dried up and the water supply for the villages had often to be carried a distance of three or even four miles. To see in the early evening these women in their dull red garments coming in single file down the winding path of some steep hillside, each with a jar of water on her head gave an effect at once picturesque and particularly pleasing. It would be hard to imagine anything more graceful than the erect and easy swinging motion of these women under their burdens.

Much of the very best land adjacent to King William's Town has been allotted to the Kaffirs, and it is pleasing indeed to notice how carefully their small farms are worked, and to learn of the undoubted prosperity of the natives of this section. The country north and east of King William's Town above Kie River, to the Orange River, one of the southern boundaries of the Orange Free State, is very largely given up to sheep farming. The sheep are small, and the flocks on the whole evidenced great neglect on the part of the farmers, or boers. Many of

them were suffering from "scab," the peculiar pest of most sheep countries.

At Queenstown and Molteno a considerable quantity of wheat has been grown, and each year a larger acreage is put under cultivation. At Molteno and Cyphergat coal is found in sufficient quantities for the operation of the railroads, and for the working of the diamond mines in the Kimberley district. The coal, bituminous, is of a fair quality only, but when the mines are worked to a greater depth cleaner and better coal no doubt will be produced.

The eastern division of Cape Colony, say from Grahamstown, is divided into three terraces, separated by mountain ranges running parallel to the coast. In a very general way the land may be said to gradually rise in a series of plateaus or table lands, varying in altitude, as the distance from the ocean increases. The coast plateau at Port Elizabeth attains an altitude of 180 feet. The midland plateau at Grahamstown rises to 1800 feet, while the plateau at Aliwal North is 4330 feet above sea level. The average rainfall in these districts is about 20 inches, 29 inches, and 23 inches respectively. The difference in grass and shrub growths in the various plateaus is necessarily very marked, and there is of course also a marked difference in the temperatures. In the higher altitudes, although through the daylight hours in the summer months the heat is unusually oppressive, when evening comes a light top coat may more often than not be worn with comfort.

Leaving the main line at Burghersdorp, a spur of the railway runs north east to Aliwal North, a pleasant little town on the Orange River, with a good flour mill and a good market. A great deal of the wheat and wool of the south part of the Free State and of the Basuto Land comes to this market.

Crossing the river into the Orange Free State, my way lay through the rich grass country to Wepener, near the Caledon River, which forms the south eastern boundary of the Free State and divides it from Basuto Land. The country seems of a character entirely different from that of Cape Colony. The land is richer, more free from stones, running streams are more frequent, while the grasses are more luxurious and more nutritious. In the 80 miles to Wepener but little of the land has been broken, as on account of the irregularity of the rainfall dams must be built and the fields irrigated at intervals to insure a good crop of cereals.

The section of the Free State between the Orange and Caledon Rivers is, however, particularly adapted to sheep and cattle grazing. The sheep, mostly Merinos, were large and in splendid condition; the cattle sleek, splendid creatures, seemed much more able than the Cape cattle to draw the heavy transport wagons, and one could not help believing that they would make much more tender beef. Little wonder that in the earlier days the Boers were content to live their quiet, restful lives in that genial climate, with such flocks and such herds to yield them a generous living, without undertaking the labor attendant on the cultivation of the land. But things now have changed.

In 1874 South Africa exported 80,000,000 pounds of wool valued at £3,000,000 stg., while in 1893 83,000,000 pounds were exported, (an in-

crease in 20 years of but 4%) realizing only £1,800,000 stg. Had the ratio of production increased correspondingly as the price decreased the Boers would not have felt so much the necessity of depending on produce other than wool for their living. With the rapid development of the diamond and gold mines the inrush of people has created an excessive demand for bread stuffs. The total amount of wheat grown in South Africa in 1893 hardly exceeded 5,000,000 bushels, while in the same year her imports were, 5,600,000 bushels of wheat, 700,000 bushels of Indian corn and 4,700,000 pounds of flour. This condition of affairs enables the Free State farmer to get for his grain, all of which goes to the mining centres, the proper price with duty, ocean and inland freight added, say about 14s. per bag of 200 pounds (net) or in round numbers \$1 or \$1.15 of our money per bushel. It is astonishing that the farmers do not secure to themselves the entire trade in wheat and corn while the country's conditions warrant such prices. South Africa could easily make good the deficiency represented by these imports and more. That portion of the Free State adjacent to Basuto Land lying along and north of the Caledon River from Wepener to Bethlehem, is the very

choicest wheat land in South Africa. Rains usually are abundant, owing to the influence of Basuto Land mountains. The land is generally level, while the soil is very fertile and easily worked. The area under crop in 1894 exceeded by a very considerable acreage that of 1893, and it is confidently hoped that a still greater area will be cultivated in the coming season. The work done by the Boers leaves very much to be desired, but now that Englishmen and Germans are farming extensively in the Free State, they are enabled to see the better results obtained through farming as the older countries have learned to farm, and they are not slow in following an example which leads to much more substantial return for the labor expended.

The best farming is done in what is known as the Conquered Territory of the Free State, especially at and near Lady Brand and Ficksburg. Some of the farms there are as carefully worked as they would be in any grain country. I have seen as many as 1,600 acres on one farm under wheat, all of which had been so well prepared that it was in perfect condition for the self-binder with which the grain was being harvested. Another farm equally well worked had 900 acres of wheat, while fields of

200 to 400 acres were not uncommon. On all this and where water for irrigating may be had excellent fruit, cherries, peaches, pears, plums, apricots, nectarines, and similar fruits may be grown in abundance. In small pockets sheltered by the hills good oranges, lemons and figs are grown. Grapes do not thrive so well.

The fences in the section of the Free State which I have been describing are unquestionably the best I have ever seen in any part of the world. All the posts are made of quarried sand stone about ten inches square, and on these posts barbed wire is properly stretched and secured. As the the country is open and fairly level, and the farms usually from 2,000 to 10,000 acres in extent, you will readily imagine the splendid stretches of boundary fencing.

Over the Caledon River to the south lies Basuto Land, hilly and splendidly watered—a country magnificently adapted to mixed farming. The narrow fertile valleys produce cereals and fruit in abundance, while the green hillsides provide a luscious living for the sheep and cattle. This, however, is native country under the protection and direct control of England, and in it white men are not permitted to settle.

Basuto Land already produces more grain



CUTTING SUGAR CANE—DURBAN, NATAL, SOUTH AFRICA.

than her people consume, and their surplus finds a ready output through the mills of Cape Colony and the Free State. It would be misleading while writing of the resources of this midland grain belt to omit a reference to the unseasonable rains often prevailing through the harvest months, to the frequent hail storms, to the seasons of drouth, and to the occasional ravages of locusts. After all these drawbacks have been carefully considered, one must believe that while anything approaching present prices prevails, an abundant balance on the right side will invariably reward the careful, hard-work-Free Staters.

On Christmas day I was in Bloemfontein, the seat of Government for the Orange Free State, a city of some 5,000 people, 290 miles from the coast. It is built on a plain sheltered by hills rising to about 300 feet from the surrounding general level. With its altitude of 4,500 feet it should be a desirable residential section, but, unfortunately, owing to the lack of proper sanitary measures, typhoid fever, diphtheria, and similar diseases are prevalent. The town is well laid out, and has many good buildings, the principal of which are, of course, the Government buildings, the Governor's residence, &c., but there are as well good churches, handsome private residences, and substantial business blocks. With its advantages of situation, and otherwise, under proper municipal administration, Bloemfontein would doubtless expand into a considerable town, but just now it seems all but lifeless. The fencing of the south and east of the Orange Free State has practically driven its game away, but in the country between Bloemfontein and Johannesburg the beautiful springboks may still be seen, even from the train, in large numbers. Other bucks as well are abundant, and away from the line of railway during the open season the shooting must be magnificent.

The day after Christmas I arrived at Johannesburg after accomplishing the journey from Bloemfontein very comfortably on one of the well appointed trains of the government railroad. The land in the north-eastern part of the Free State and in the Transvaal is better adapted to grazing than to the raising of cereals. The country is treeless, bare for the most part even of small bushes. Many sections are unquestionably fertile, and if water in abundance could be had they would produce good grain and fruit, but it is not regular, coming not often in quiet showers, but usually in terrific downpours of short duration. On account of the hard baked surface of the ground but a small percentage of this water is absorbed, the most of it rushing to the "sluits," or water courses in the small valleys. When, however, this rush of water is checked and conserved in properly constructed dams it may be led at will over the fertile land to the very best results. The trouble at the present time is that individual farmers have not enough capital to warrant their undertaking the construction and maintenance of dams of any considerable extent, and they must usually be content with reservoirs, large enough to furnish for themselves, their cattle and their flocks, sufficient drinking water. If a denser population is eventually secured to South Africa, and if the farms are divided into 100 or 150 acre holdings, small communities might then for

their mutual benefit construct dams sufficiently extensive to furnish water for the irrigation of their lands.

Some idea may be formed of the possibilities of the reservoir system if I bring to your notice the dam at a flour mill it was my pleasure to visit. The mill has a capacity of 150 barrels in twenty-four hours. The dam backs the water up a distance of five miles, and furnishes power enough to keep the mill running night and day to its full capacity, and it must be remembered that this water is simply the arrest of rain water which through falling so rapidly the ground is unable to absorb.

Wheat is grown in a very small way in the Rusten district east of Pretoria, and tobacco also just south of this wheat section.

It is very doubtful, however, if in the near future the Transvaal will, except in a very limited way, become an agricultural country. She depends at present almost altogether on her vast mineral resources. Almost every mineral known in commerce has been found in its hills, but its gold in great abundance has all but entirely monopolized the attention of the fast increasing population.

Although the precious metal is found at intervals throughout the Transvaal, it is at and near Johannesburg that the richest and most easily worked mines exist. The district is known as the Witwatersrand. The main reef extends from east to west, a distance more or less of 30 miles, and along this are scattered the works of the various mining companies. Johannesburg is about midway in this distance on the southern edge of the gold fields, and adjacent to the richest mines. In 1886, when gold was first discovered, a few poor miners' huts were scattered along the richest part of the reef, the owners then unaware that about them would quickly spring the largest city in South Africa. The situation, exposed and bleak in the extreme, the ground fit hardly for grazing, had so little value ten years ago, that the large farms changed hands for the most trifling considerations, a few pounds ready money, sometimes for a score or two of cattle. Much as I had read of this city, much as I had been led to expect through talking with travellers whom I had met in my journey, I was altogether unprepared to find Johannesburg enjoying the advantages, comforts, even the luxuries of the cities of our oldest countries. Its growth has been unprecedented. At first hundreds of miles from the sea, or from any railway, the rush to the fields once started swiftly poured in. The buildings, necessarily temporary structures in the early times, have given way to the grand business blocks of to-day. Johannesburg with a population of more than 40,000 people, besides being the largest city in South Africa, is well and regularly laid out. Here streets are wide and well kept, the business places and public buildings large and substantial, her homes commodious and comfortable, while many of them are costly in the extreme. Some of the streets are well shaded with eucalyptus and other quick growing trees, while around many of her private homes, fine garden shrubs and shade trees have sprung up. Large plantations of blue gums and similar trees cover the near hillsides. Tramways, electric lights, pure water, good hotels, the necessary adjuncts of

modern cities, are not wanting. The very numerous mines, some of them within five or six minutes' walk of the post office, are equipped with the finest machinery the world can produce.

In Europe, in America even, such a growth would seem marvellous, but there literally away from all the world, one cannot comprehend it even when the actual gold output is known, for Johannesburg had her railway completed but eighteen months before my visit (Dec. 1894.) Previous to that time her building material, her provisions, and her heavy machinery, had crawled along in transport wagons drawn by oxen through a rough, roadless country. The cost of transport ranged from 6c. to 2c. per lb. The Boers reaped enormous profits through "transport riding" before the railroads were completed.

Perhaps the subjoined figures of the actual quantity in ozs. of the gold produced on the Rand between 1887-1894 may not prove uninteresting:

1887.....	34,897 ozs.
1888.....	230,917 ozs.
1889.....	379,733 ozs.
1890.....	491,801 ozs.
1891.....	729,213 ozs.
1892.....	1,210,903 ozs.
1893.....	1,478,473 ozs.
1894.....	2,024,164 ozs.

or say an increase from \$593,249.00 in 1887 to \$34,410,788.00 in 1894.

It seems impossible that Johannesburg will not have a vigorous and healthy growth through many years to come. Conservative people estimate that at the present rate of production, the reef adjacent to Johannesburg will not be exhausted in thirty years. As before stated this reef runs from east to west. Its general tendency is toward the south at an average angle of forty-five degrees. It is not only very regular, but it is clearly defined. In some of the workings the reef has been followed to a depth of more than 1,000 feet. The main reef is a conglomerate mass of soft stone, and harder quartz like gravel. The upper or hanging wall, and the lower or foot wall, both richly gold bearing, are composed of a formation dull grey in color resembling soft sand stone. The reef and walls might not be inaptly illustrated through holding a book in the hands at an angle of 45 degrees. The upper cover would represent the hanging wall, the lower cover the foot wall, and the centre of the book the conglomerate mass of the main reef.

I had the pleasure of going down two celebrated mines, the "Salisbury" and the "Robinson," and of visiting the stamping mills and cyanide works of the "Crown Reef" mine.

The greater part of the work underground is done by Kafirs, under the direction of white men, and consists largely in the first instance of drilling holes for the blasts of dynamite or giant powder, and subsequent to the explosion of collecting ore and sending it to the mouth of the mine in cars drawn above the surface by machinery, which, being automatically dumped, are again sent underground. The hanging and foot walls vary in thickness from a few inches to two or even three feet, while the main reef varies from eighteen inches to eight or ten feet, and in places it is even more.

The ore when taken to the surface is sorted

and sent to the stamping mills, where it is reduced to a very fine powder. Streams of water rushing into the mortar boxes under the stamps carrying this finely powdered stone over the copper plates coated with mercury, which collect the gold from the muddy stream and allow the dross or tailings to float away. The copper plates are scraped daily and the amalgum formed of gold and mercury is separated through being roasted in retorts. The mercury or quicksilver passing off in vapor is afterwards secured by condensation, while the pure gold is retained in the retorts. At first this was the one method of retaining the gold, but during the last three or four years valuable discoveries have been made, whereby it is possible by the use of Cyanide of Potassium, in solution, to extract from the tailings almost as much gold as was in the first instance secured in the form of amalgum. It is needless to say that all the accumulated tailings of former years have recently been worked over, realizing magnificent profits to those who secured them from the mining companies before the value of the Cyanide process was fully understood. Coal of good quality for working the mines is found in large quantities within thirty miles of the city.

In addition to the railway completed in 1893 connecting Johannesburg with Cape Town, Port Elizabeth and East London, within three months the road from Delagoa Bay has been completed, and by the middle of March, 1895, the road from Port Natal, already operated as far as Charlestown, on the border of the Transvaal, will be completed.

Before this letter will be in your hands Johannesburg will enjoy good railway connections to all the coast ports.

Rich alluvial deposits of gold are found in the DeKapp goldfields, and had time permitted I should gladly have spent a day or two at Barberton. Many rich finds of pure gold have been made there, single nuggets weighing from 40 to 63 pounds, but then the return is very uncertain, and while a few operators have made much money, hundreds of poor fellows, after months of hard and patient work, have been compelled to abandon the diggings without a single coin to show for what they have done. Pretoria, the capital, lies in a sheltered valley thirty-two miles from Johannesburg, and 1,100 feet lower. The climate is consequently much warmer, and it is at times very humid. Beyond the Government buildings there is little in the city to interest visitors. Best of all it now enjoys a good supply of perfectly pure water. Quite near the town some silver mines are operated, while the the Albert mine, forty miles north of Pretoria, yields exceedingly rich silver and copper ore. Leaving Johannesburg for Durban, Natal, the 130 miles to the railway at Charleston was made in two days by mail coach. Old time "Yankee" swing coaches are used, and these are drawn by eight or ten horses, which are changed every two hours. The journey through its novelty alone was interesting, as the country itself is monotonous and almost altogether uncultivated. Just before coming into Charlestown we could see the famous battle grounds, on which the Boers had secured to themselves the valuable Transvaal country. The final battle took place on the summit of Majuba Hill, where, for the loss of a single man, the Boers

inflicted on the English a loss of more than 300 men out of a total command of 600.

Natal may be called the garden of South Africa. Its verdure and its trees indeed were welcome after weeks spent in a brown and treeless country. Natal produces a little wheat, but it is of poor quality and very subject to rust. In the sections adjacent to Pietermaritzburg, Indian corn is extensively grown. Near the coast, sugar cane, arrowroot, tea and fruits are the principal products. Coal of a good quality is found in the northern part of the Colony.

My journey was broken at Pietermaritzburg, where Natal's Government buildings are located. The land there is in the hands of good farmers and evidently carefully cultivated. Sugar cane is grown in a small way. The town itself, with a population, white, black and Indian, of 17,000, is open and straggling, but its situation in the bottom of a rich valley, walled about with forests, has been well chosen. The drives through the shaded streets, past good houses, splendid gardens, public and private, and through the fine park, are very beautiful. Maritzburg is in the centre of the most picturesque part of Natal, and is one of the most delightful residence places in all South Africa. The vegetation is not as tropical as at the coast, but its altitude of 2,200 feet makes it much cooler, and all the tropical fruits may be had daily from the port 70 miles away. The journey through the partly wooded hill country to the sea is delightful and all too quickly made.

Durban, Port Natal, is a good city with a rich tributary country and a fine harbor. To a stranger it is particularly interesting on account of being so entirely different from the other cities of Africa. More than half her population is black, and more than half the black population is composed of coolies from India, striking in their white turbans and spotlessly white clothing. The negroes, mostly Zulus, are as a rule splendid fellows, with magnificent physique, tall, muscular and active, and they are in every way superior to the Blacks of the Colony, the Free State and the Transvaal.

They whirl you along at a great rate in the jinrickshaws, the small, cosy two-wheeled rubber-tired carriages, adapted from Japan and universally used in Durban. Their usual clothing, a loose white sleeveless shirt and white kneebreeches, makes them at least appear to be clean.

The Durban native police are a fine body of men and look very natty in their dark blue helmets, jackets and tight knee breeches. For weapons they carry a "knobkerry" and a stick or two. The Zulus do not daub their faces with color after the manner of the Kafir women. More comely they are, as well as more cleanly, and rub their faces, arms and bodies with oil until they shine like polished bronze.

The way in which they dress their hair, of which they are by the way most proud, is often unique and not unfrequently becoming. Their ornaments are very elaborate. The men, fond of taking snuff, usually carry their snuff box, made of bamboo or ivory, in the slit in the lobe of the ear; to balance matters the ivory snuff spoon is carried in the other ear. A favorite ear ornament is the brass shell of an exploded cartridge. The Natal teas, while not to be compared with the teas of India or Ceylon, are very

palatable, and as new varieties more suitable to the soil and climate are introduced, it is probable that tea-growing will shortly become an important industry, adding largely to the wealth of the colony. The extensive sugar plantations in the Mount Edgecombe district are well worth a visit. The climate is not sufficiently hot to give a yearly crop of cane, but a bountiful harvest is gathered every eighteen months. Pine apples, custard apples, greendillas, bananas and similar tropical fruits grow in great abundance, all of which may be had at moderate prices. Berea, Durban's beautiful residence quarter, is a very bower of foliage and blossom. To one accustomed to the modest vegetation of our northern country, this place seems little less than fairy-land. The climate of Durban is humid and trying. From October to March the average maximum temperature is a little more than 85 degrees Far., but withal it is healthful, and people who have become acclimatized have nothing that is not good to say of their city and of their country.



THE  
BATTLE  
OF  
MAYUBA HILL

THE bravest battle that ever was fought,  
Shall I tell you where and when?  
On the maps of the world you will find it not,  
'Twas fought by the mothers of men.

Nay, not with cannon or battle shot,  
With sword or nobler pen;  
Nay, not with the eloquent word of thought,  
From mouths of wonderful men.

But deep in a walled-up woman's heart  
Of woman that would not yield,  
But bravely, sternly, bore her part—  
Lo! there is that battlefield.

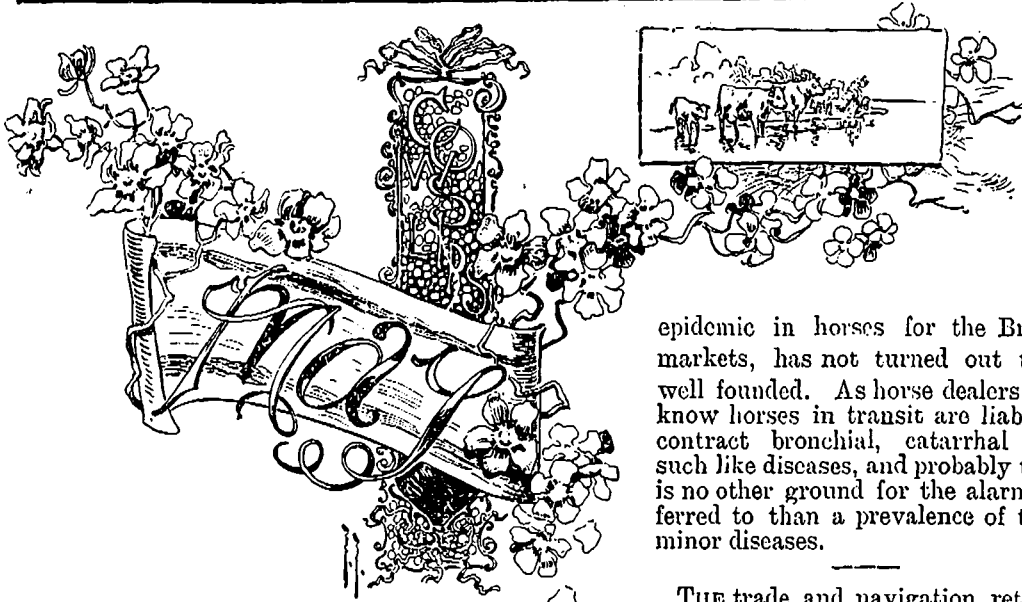
No marshalling troop, no heroic song,  
No banners to gleam and wave!  
But oh! these battles they last so long—  
From babyhood to the grave.

Yet faithful still as a bridge of stars  
She fights in her walled-up town—  
Fights on and on, in the endless wars.  
Then silent, unscathed—goes down!

Oh! ye with banners and battle shot,  
And soldiers to shout and praise!  
I tell you the kindest victories fought,  
Are fought in these silent ways.

O spotless woman in a world of shame!  
—With splendid and silent scorn  
Go back to God as white as you came  
The kindest warrior born!





**THE PERFECT DAYS HAVE COME**

I MIND me of a perfect day,  
Dropt from autumnal skies,  
What time the glad earth and the heavens  
Wrought in their harmonies;  
The storm, which late had vexed the world,  
Had moaned itself to rest,  
And radiant life came forth anew  
From the clear sparkling west.

Oh, strong is Nature in her might,  
And fearful in her wrath,  
When warring winds go sounding on,  
Along their stormy path;  
When earthquakes rend the solid hills,  
Or thunder-bolts are hurled,  
To topple down the massive towers,  
And awe a trembling world.

But when God shines a perfect day,  
Celestial airs descend,  
And all the warring elements  
In loving concord blend;  
Then heat and cold and gentle wind  
Make one harmonious whole,  
To whisper winning words of peace,  
And charm the waiting soul.

Then if the heart be free from guile,  
And moved with thoughts of love,  
We drink in joy, as angels do  
On heavenly height above;  
'Tis blissful but to walk abroad,  
And breathe the breath of life,  
And feel our spirits borne away  
From earthly noise and strife.

God gives to us these spotless days,  
That mortals here below,  
May catch some glimpse of those bright fields  
Which heavenly dwellers know;  
May learn what outward things can do  
To make our spirits blest,  
And set our weary souls at length  
To their eternal rest.

Such heaven-born hours come dropping out,  
Now in the flowery June,  
When air and earth and sea and sky  
Are strung to perfect tune;  
They come when summer heats are gone,  
But summer flowers abide;  
While yet the forests stand arrayed  
In all their wealth and pride.

They come in autumn's golden reign,  
When, from the rising sun,  
The hours move on in holy calm,  
Until the day is done;  
Then gentle nights fill out the day,  
And at the night's high noon  
Earth sleeps like some celestial land,  
Beneath the full-orbed moon.

If this poor lowly earth of ours  
Can bring forth scenes so fair,  
To wrap our souls in blissful ease,  
And banish pain and care,  
What map it be in those far lands  
That know no taint of sin,  
And where all outward nature blends  
With purity within?

—Increase N. Tarbox.



It has been decided to hold a Fat Stock Show in Guclph in December next.

The fear that septic pneumonia had become

epidemic in horses for the British markets, has not turned out to be well founded. As horse dealers well know horses in transit are liable to contract bronchial, catarrhal and such like diseases, and probably there is no other ground for the alarm referred to than a prevalence of these minor diseases.

The trade and navigation returns for Canada published a few days ago show improvement in exports. Trade with the United States has had a decided upward tendency. Ontario's exports to United States for past year show an increase of \$128,399, and those of Quebec an increase of \$506,357, or an increase in both provinces of \$934,000 for 1891.

There is still no disclosure with respect to the federation of Newfoundland, the papers not having been made public. Opinion is increasing that the recent conference may not result in union. The value of Newfoundland's trade to Canada is considerable. The island's trade is valued at about twelve and a quarter millions, the imports being \$1,500,000. It buys abroad 850,000 barrels of flour, the greater portion of which comes from the United States. Besides this it imports 50,000 barrels of pork for the use of the fishermen, all of which comes from the United States. Yet in the face of these facts Newfoundland is the fourth best customer Canada has. How far the trade of this country with Newfoundland may be developed is a question that has an important bearing on the present negotiations.

ALTHOUGH spring was late in opening up in Ontario, not for some time has the warmth of sunshine been greater and vegetation more advanced at the end of April than this year. It is true that there has been a dearth of rain, which, it is hoped will be even yet made up for by genial and heavy May showers, but on the whole the latter end of last month has been most favorable for farm work and that work is in a pretty advanced stage notwithstanding the rather late start on account of frost and snow continuing longer than usual.

CATTLE dealers interested in ocean rates will do well to obtain through their members of parliament the report of the Commissioner appointed to enquire into charges that the rates are too high. The Commissioner was appointed as the result of complaints as to the rates but the dealers interested seem not to have followed up their complaints by appearance before the Commissioner and the production of evidence. The enquiry went by default and those to blame ought to be taken to account.

It is satisfactory to note and to give publicity to the fact that the report that contagious cattle disease in Cape Breton has turned out to be foundationless. It appears that a farmer lost a bull and it was feared the sickness was a sort of pleuro-pneumonia. The government expert, Mr. Jakeman, of Halifax, made an exhaustive examination and found that the animal had died from impact of the third stomach. The animal had been fed on meadow hay and water. This incident is mentioned in order to show from what causes reports of contagious disease among cattle will sometimes arise.

A WELCOME concession has been made by the United States Government to shippers of Canadian cattle to Britain. It is in the form of a relaxation of the embargo so far as to allow them to pass in transit from Island Pond to Portland, the intention, of course, being that such cattle shall be shipped to Britain. It will follow that Canadian cattle shipped from an American port will have the status of American cattle on arriving in England. Under quarantine rules the status of an animal shipped always follows the country from which it is shipped. It is supposed that this concession may be the precursor of another, entirely removing the embargo on Canadian cattle by the United States. The United States authorities will require the certificate of Professor McEachern of Montreal, as to the healthiness of the cattle shipped through their territories.

A COMMUNICATION from Mr. Larke, commercial agent in Australasia, contains a caution to Canadian exporters. He says that in Fiji, as in all the Australian colonies, amounts ranging from 5 per cent. in Fiji to 10 per cent. in New South Wales are added to the invoiced value of goods when they are appraised for Customs, to cover the cost of freight. Consequently, when goods are sold to be delivered at the ships' side the invoice must be made out at the cost in Canada, otherwise the importers will have to pay duty twice on the value of freight, insurance, etc. Where packages are shipped, the actual weight should be invoiced, and not the reputed weight, for specific duties are always levied upon reputed weight, when it is greater than actual weight.

NOR for four years has the outlook been brighter for the farmer than now. There is a hopeful spirit abroad, business seems to have taken an upward start, and enterprise is buoyant. In the lumbering districts new mills are being established and old mills re-opened. Mining operations are awakening to a more lively tune, there is some railroad construction, iron smelting is attracting the attention of capitalists, in the cities the building trade is brightening, merchant have been making good sales and receiving prompt payments, and generally it would appear that the tendency of business is in the right direction. That the farmer will share in this movement of prices and business is certain and it is to be hoped the share will not be a disproportionate one. The price of wheat has been fair, and that for cattle is well-maintained in the British market.

The following interesting table has been furnished by the Department of Agriculture: The exportation of live stock for the calendar year 1891, to the United Kingdom, as reported by the inspectors, and shipped entirely from Montreal, was:—

Cattle.....	82,217
Sheep .....	121,301

The following tables gives comparisons for the last ten years of shipments to the United Kingdom:

	Cattle.	Sheep.
1881.....	61,848	67,197
1885 .....	69,158	38,534
1886.....	64,555	94,298
1887.....	64,621	35,473
1888.....	60,828	46,167
1889.....	85,058	58,983
1890.....	122,182	43,780
1891.....	118,917	32,157
1892.....	98,755	15,932
*1893.....	80,899	1,870
1894.....	82,218	121,301

\*For ten months only.

It will be noticed that the number of sheep exported has been very largely increased, evidencing the fact that Canadian mutton is finding a largely growing favor in the markets of the United Kingdom.



A most valuable report has been issued by the statistician of the Department of Agriculture on the forest wealth of Canada. While the data from which to compile a complete report is not extensive, there is much information regarding this great source of our wealth. At one time, it is estimated that there were 315 million acres of forest from the Atlantic seaboard to the Lake of the Woods, on Canadian soil. Thirty million acres have been cleared for agricultural purposes. Twenty million acres have been reduced for other purposes. The lumbermen, fires, etc. have further encroached largely until now the estimate is that 45 p. c. of the old area is still under forest. Many interesting passages will be found in this report which ought to be studied. The value of trees to the farmer will be easily gathered from the tables furnished, and replenishing the forests is a work the Provincial Governments might well give attention to in the interests of the country.

THE Bureau of Mines has just issued statistics bearing on the mineral production of the Province for 1894. During the year 1894 the total revenue derived from mining lands amounted to \$17,942,56. Patents were issued for 3,271 acres of mining land, and 7,050 $\frac{1}{2}$  acres were leased for mining purposes. The following figures show the total mineral production for 1893 & 1894:—1893—Value, \$6,120,753; employees, 7,162; wages, \$1,985,590; 1894—Value, \$8,088,758; employees, 6,075; wages, \$1,840,289. Illuminating oil brought in the largest returns, 11,349,472 gallons of petroleum being sold, valued at \$1,337,040. Common brick came next; 131,500 thousand were used, valued at \$3.90. Cement was manufactured extensively; 85,903 barrels were consumed, valued at \$109,804. The gold output amounted to \$32,776, and nickel brought \$612,724. One peculiar feature in the table is the absence of iron among the mineral products, for, although there are extensive deposits of hematite and magnetic iron ore in various parts of the Province, there is not a blast furnace in operation.

THERE has just appeared a blue book on the scheduling of Canadian cattle, containing the report of the Board of Enquiry in Britain, references to correspondents between the Dominion and British Governments, and reports from the veterinary surgeons who traced the cases complained of to their sources in Canada, and who in every case found that the diseases were other than contagious pleuro-pneumonia. The blue book shows that Canada is unjustly treated by the schedule, and also that the efforts necessary to its removal ought to be strenuously persisted in. In this connection Professor McEachran reports that during 1894 not a single animal exported showed any sign, in the least degree suspicious of contagious disease. The inspections before shipment were rigidly carried out. 80 cattle and 17 sheep were either detained or rejected by the inspectors; 16 of which were lame or injured in the land transport, 2 were in poor condition from age, 2 were affected with tuberculosis, one with mange, and 59 with lumpjaw. The sheep rejected, were lame or injured. The animals collected for shipment from all parts of the Dominion, with the exception of British Columbia, and the fact of their freedom from lung disease is an evidence of the healthy state of Canadian cattle. The inspection was, in every case, made by daylight. Mr. McMillan, V.S., who is empowered to inspect stock shipped from Prince Edward Island, reports that 629 cattle, 161 horses, and 718 sheep were duly inspected by him prior to shipment, and all were found to be in a thoroughly healthy condition.

THE condition of the British market is an ever interesting subject to the Canadian farmer. The following picture is woefully dismal, yet drawn by a reliable pencil, not that of a

pessimist:—"This has been one of the most disastrous seasons ever experienced by farmers in England, or at any rate by those who cultivate arable land. The crops were badly injured by wet weather before and during harvest, and, although they proved bulky, a great deal of the grain is unmarketable, and nearly all has to be sold as more or less damaged. The weekly average price of wheat fell to 17s 6d a quarter of eight bushels a few weeks back, and although there has been a partial recovery, the latest average known at the time of writing was 19s 11d, which is bad enough. Cattle, sheep and pigs have been selling well this year, consequent on having been reduced in number by the spring drought of 1892 and the prolonged drought of 1893. Reports of very severe depression in many parts of the country keep on appearing, some of them being issued by the Royal Commission on Agriculture. In most English counties they tell of reductions of rent from 20 to 75 per cent. as one of the results of the depression. The dairy industry is least affected among all the branches of agriculture, and in the dairy districts the fall in rents is much smaller than those just mentioned. On arable land there is very little profit to the farmer unless grain crops pay. Breeding may yield a direct profit, but grazing on arable land barely leaves any profit beyond the manure, and that can only be realized in the grain crops. Therefore, if the latter do not pay, the farmer and grazier has no profit at all as a rule. To add to the misfortunes of agriculturists the autumn has been one of the wettest on record, and very extensive floods have prevailed, doing an immense amount of damage to arable land and farm property. The wet weather, too, stopped wheat-sowing when it was about half finished, and the acreage is likely to be the smallest on record.

THE Canadian Horse Show was a pronounced success, so much so that there seems to be little doubt that it will become an annual event as well established as the Industrial Exhibition. It was held under the auspices of the Agriculture and Arts Association and the Country and Hunt Club of Toronto with Messrs Henry Wade and Stewart Houston as capable secretaries. The show has proved itself to have been a good thing for horse breeders who will do all in their power to make its regular recurrence certain. Some of the very best blood in the country was on exhibition and some of the best judges in the United States came to see the horses. The bringing together of purchasers and sellers face to face was a feature of the show of great importance. Canadian bred horses hold a high place in the United States, but so many are the intermediaries through which they must pass in finding owners, that the Canadian birth is often lost sight of. For instance, a dealer buys a good Canadian horse which he sells to another dealer in New York who sells him to a Philadelphia dealer where he may be purchased by one desiring to possess him. But in this course of turning over the "calf-country" of the animal is lost sight of. What is wanted is credit for Canada for what she is able to produce. This can be quickest obtained by bringing gentlemen who buy for themselves, to our stables. A great horse show with social functions is just the place for such a meeting, and Toronto centrally situated and populous, can furnish the social side, and the crowd whose fees make a good show possible. The new armouries where the show was held, proved too small for the requirements of the exhibition and of the public. There has been, consequently, a well-defined demand for the erection of a special building for show purposes. Such a building it is supposed would enable breeders of horses and farmers to develop their business as it is not possible for them to do now, and if erected by the assistance of the government and the city would pay interest on the investment meantime, and finally liquidate the debt. The proposal merits thoughtful consideration for the possibilities of the horse trade of Canada are many and great.



- 1st.—Right Hon. Viscount Hill died. . . . Prince Bismarck celebrated his eightieth birthday. . . . The deaths of Sir Charles Mills and the Very Rev. Dean of Canterbury took place.
- 2nd.—A serious outbreak of fire took place in Toronto, burning down a factory on Lombard Street. . . . Mr. Swift, Republican, elected mayor of Chicago.
- 3rd.—Ontario Jockey Club decided against entries of horses running on outlawed tracks. . . . The annual convocation for conferring diplomas and degrees by Trinity College, Toronto, took place. . . . Annual meeting Canadian Pacific Railway held.
- 4th.—Mrs John MacKeehan, one of the oldest residents of Hamilton, died. . . . Canal regulations for current year issued. . . . Meeting of Canadian freight agents at Montreal decided to make no changes on existing schedule of rates.
- 5th.—Adam Cantelon, treasurer of the township of Goderich, died, aged 75 years. . . . American capitalists arranged for erection of blast and steel furnace at Kingston.
- 6th.—A Board of Trade organized at Flora, Ont. . . . Newfoundland conference sat at Ottawa. . . . Jubilee of Knox Church, Toronto, celebrated.
- 8th.—Disquieting rumors of a war between Norway and Sweden. . . . William Henderson, last surviving founder of the "Anchor Line" died. . . . The unconstitutionality of the income tax Act declared by the United States supreme court.
- 9th.—Several motions of want of confidence in the Ontario government were defeated. . . . Hugh Armstrong nominated as Conservative candidate for Selkirk, Man., in the Commons.
- 10th.—Nominations for the Commons made in Haldimand, Vercheres, west of Quebec, and Antigonish. . . . Mr. Gully elected Speaker of the British House of Commons. . . . Convent and church at Fort William destroyed by fire.
- 11th.—The unemployed at Melbourne held a demonstration. . . . Price of footwear increased at Montreal. . . . Ontario Legislature closed. . . . Professor Behring, of Halle, discoverer of anti-toxine resigned his professorship.
- 12th.—Ross McConkey, banker, Goderich, died. . . . Panic reigned in Pekin. . . . Vigorous search resumed at Fort Erie for Mayor Buck's gold hidden in 1812. . . . Rev. Robert Johnson inducted at London, Ont.
- 13th.—Important astronomical discovery announced by Prof. Jas. E. Keeler of the Alleghany observatory. . . . A plot for the assassination of the Russian ambassador Schouvaloff discovered.
- 15th.—Severe earthquake shocks felt at Trieste and Krausberg. . . . The St. Lawrence channel free of ice.
- 16th.—Annual meeting of the Dominion Educational Association opened in Toronto. . . . Annual meeting grand camp Sons of Scotland convened at Niagara Falls, Ont.
- 17th.—Alanson H. Baldwin, pioneer lumberman of Ottawa, died. . . . Dr. Montague elected in Haldimand by a large majority.
- 18th.—Lieutenant-Colonel Campbell, Milton, elected grand chief of the Sons of Scotland in Canada. . . . First annual banquet of the Young Men's Bible League of Central Methodist Church, Toronto, held.
- 19th.—Primrose day observed in England. . . . Professor Lishley gave evidence before the Toronto University commission.
- 20th.—Main street of Tamworth, Ont., reduced to ashes. . . . Canadian Horse Show closed most successfully. . . . Annual church parade of St. George's Society, Toronto, held on Sunday 21st.
- 22nd.—Sir Robert Hamilton, who draughted Mr. Gladstone's first Home Rule Bill, died. . . . Archdeacon Farrar appointed Dean of Canterbury.
- 23rd.—McGreevy declared on recount to have been elected for West Quebec. . . . Civic electric lighting will be submitted to the popular vote in Toronto.
- 24th.—Mr. W. W. Ogilvie elected a director of the Bank of Montreal. . . . Col. B. Booth has applied for naturalization papers in the United States.
- 25th.—Press report circulated that Edward Blake will shortly re-enter Canadian politics. . . . Mr. A. F. Gault, Montreal, gifted \$100,000 to the Diocesan College.
- 26th.—Fourth annual meeting of the Canadian Fraternal Association closed at Toronto. . . . Broker Allen of Buffalo arrested. . . . Dairy keepers of Quebec interviewed the local Government there for an appropriation of money for the development of their industry.
- 27th.—Quo warrant proceedings instituted against Mayor Kennedy of Toronto. . . . Convocation of Victoria University begins on the 28th inst. . . . Toronto young Conservatives held a district party banquet.
- 29th.—Estimates brought down in the Dominion House of Commons. . . . Judge Barry, Montreal, died.
- 30th.—Convocation of Victoria University took place. . . . Report of the Commission of Enquiry into the affairs of Toronto University published. . . . Convocation of McMaster University, Toronto, held. . . . The Clara Ford murder trial began at the Toronto Criminal Assizes.



### Potato Sorter.

THE illustration here given of a potato sorter shows a simple contrivance of strips and boards and straps, which can be easily made, and will be found useful. The frame is made of 2 x 4 stuff bolted together. Narrow boards at the sides prevent the potatoes rolling off. The potatoes roll down over narrow strips, with edges upward, fastened perhaps two inches apart. The distance apart will depend on the size of the potatoes to be sorted out. Narrow strips of leather are fastened cross-wise of these wooden strips, nailed at each intersection. To cover the nail heads and thus prevent them from bruising the potatoes, narrow strips of canvas are fastened to the tops of the strips after the leathers are nailed in place. As shown in the picture, a bag may be hung at the bottom of the sorter to hold the potatoes as they come down. Really, such a machine should be called a "sizer," rather than a sorter, for all it does is to separate the small potatoes from the larger ones. The wooden strips and the leathers make a series of holes through which tubers of a certain size must fall, while larger ones roll over.

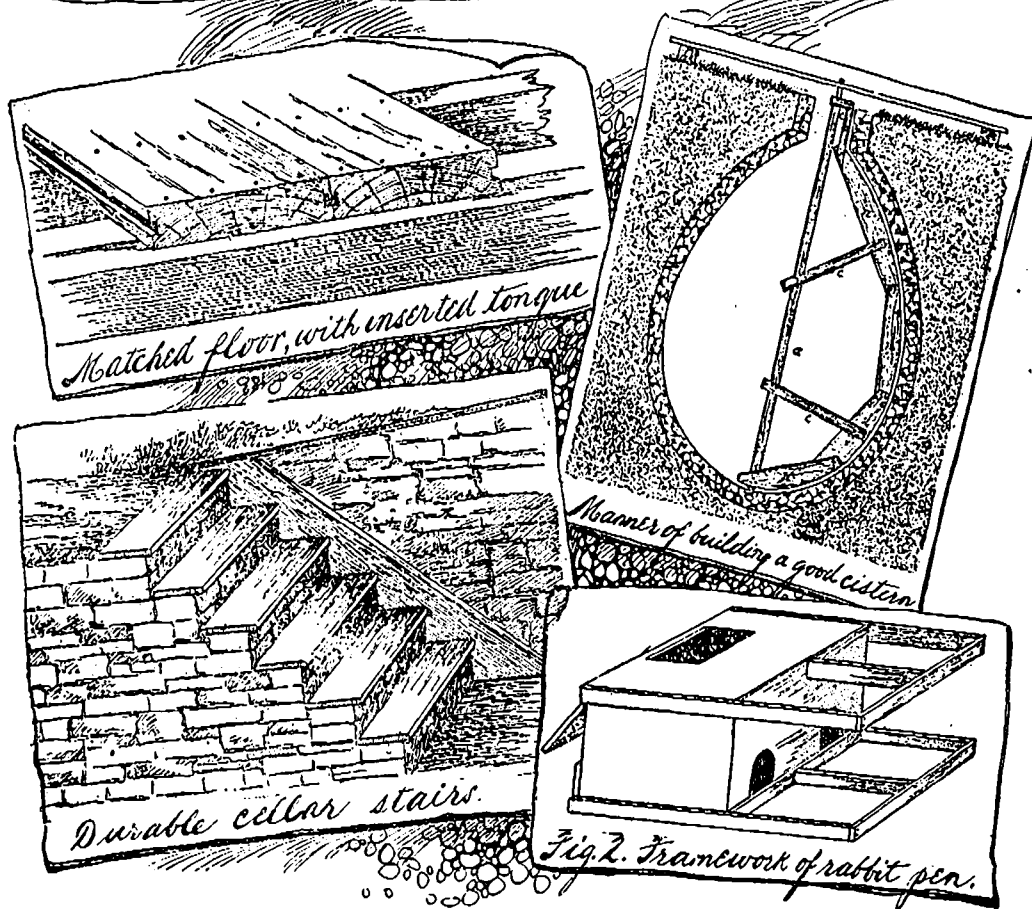
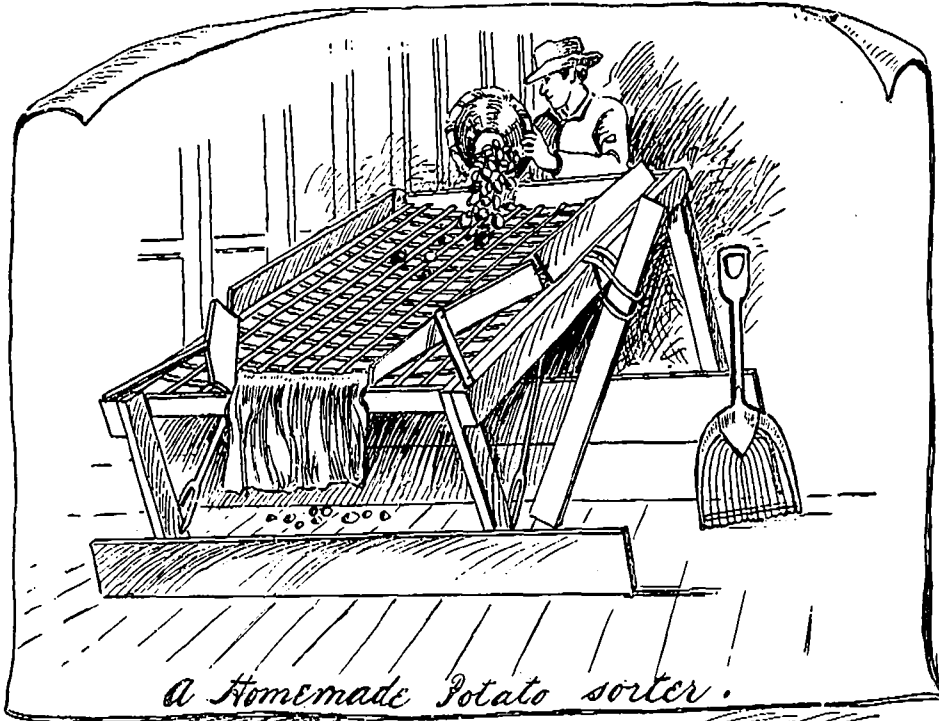
### Barn Floors.

THE floors of a barn are a very important portion of the structure, and considerable care should be exercised in choosing the material and placing it in position. For durability, non-liability to warp, and one on which the team can get a foothold, there is nothing better than the common white pine. Most of the hard woods will warp when the sides are unequally dampened, and horses find it difficult obtaining a firm foothold to haul in heavy loads. The plank upon the driveway floor should always extend crosswise. It makes but little difference about the direction of the portion under the remainder of the building. If the joists are heavy, and placed two and a half feet apart, two-inch plank will be strong enough. However, if possible, use those two and a half or three inches thick, and be certain that they are well seasoned. Obtain them a year in advance, pile up under shelter, and as far from the ground as convenient. Both edges of plank should be jointed and grooved, and a tongue of some soft wood used, as shown in the engraving. The manner of laying the floor is clearly shown. The ends of the planks should be spiked, unless there is some doubt about their shrink-

ing, in which case lay them loose, driving them firmly together during a dry time. If not practicable to obtain thick plank lay the floor double. The lower course may be of well seasoned inch boards. For the upper one use one and a half inch plank, jointed, but not grooved, being nailed in place when thoroughly shrunken. The joints or cracks in the two floors should not match.

### Outside Cellar Stairs.

As usually constructed, the outside cellar stairs become very much dilapidated after a few



each step, and place them on top of the stone step, as shown in the accompanying illustration. Upon each side fit a retaining board, and the result will be steps that are durable and generally satisfactory. If possible, make the steps from two-inch pine plank, covering the whole with folding doors, in the usual manner.

### Constructing a Cistern.

CISTERNs that are built in the ground are usually of a round form, as they are more durable and less liable to cave in than those of a

square or octagonal form. To make a round cistern in the usual manner requires a man with a correct judgment of distance, unless a proper framework is used as a model. The accompanying illustration, from a sketch by L. D. Snook, shows how this frame is made and used. After the excavation is made, and the bottom laid with brick or cobblestone, the center of the bottom is found, and a hole is made, in which is inserted the lower end of a standard, *a*, the upper end of which revolves in a hole in a plank, the ends of which rest upon the banks of the excavation. To this standard has previously been nailed a skeleton frame of boards, *c*. The outer sides of these represent the form and inclination of the cistern walls. It is plain that as the walls are laid up, and the guide is brought into position by revolving it, the workman can place each brick or stone at the right angle. To make all easy working an inch space should be left between the wall and the outer edge of guide. For a common house cistern a diameter of eight feet inside the walls will prove large enough and would be a proper guide in the formation of the walls. If possible fill in the space back of the wall as the structure progresses, tamping the soil firmly in position. If it be dry weather, it should be made wet and firmly pressed, that the inside pressure when filled with water will not cause the wall to crack or give way. An egg-shaped form is best, with the top or small end long drawn out or slongated, as shown above. This guide is not expensive, and when the walls are up it is knocked to pieces and thrown out.

### Pretty Rabbit Pen.

To encourage my boy in learning the use of tools, writes J. L. Townshend, in the *American Agriculturist*, I designed and helped him make an ornamental rabbit pen (Fig 1.) A box of inch stuff two by four feet and sixteen inches deep was procured, the top taken off and the open part placed on the ground. Four strips, each one by two inches and four feet long were nailed to the box, a cross strip of the same size

years of use, and many serious accidents occur by falling or slipping from and upon the decaying steps. If stones of the right length can be obtained, they are the best possible material for the steps, the next best being plank, though neither can be depended upon unless the whole space underneath the steps, down to the level of the cellar floor, be laid up in masonry. Where only small stone, either round or flat, is at hand, lay up the stairs of this material thoroughly embedded in mortar, making the steps of the needed height. When this is done, cut a plank step of the proper width and length for

two feet long being nailed in across the center to complete the framework of the foundation (Fig. 2.) A part of one side of the box was removed and fitted with hinges to be used as a flap door, and two round-topped holes were cut in the front part of the box for doors between the back and front of the pen. On the foundation in front, a floor of four foot boards was nailed, projecting a little beyond the framework. Strips like those used for the foundation were nailed in the same manner about the top of the box and floored over. On this framework five pairs of one by two-inch rafters, cut for one-fourth pitch, and projecting four inches, were securely nailed. Four strips of one and one-half by one inch stuff were bored at intervals of one and one-half inches with a one-fourth inch bit, and of these the front cage was constructed by inserting one-fourth inch round iron rods cut to fourteen inch pieces, the strips being securely nailed at top, bottom and corners. The middle pair of rafters supported a partition in the roof with a hole between the compartments. Another hole for ingress to the attic was left in the floor in the back room. The roof was sheathed with three-fourths inch boards, and a cornice fitted on eaves and gable. It was then shingled and a neat cresting added to the comb. The back gable was boarded up with vertical pieces, and fitted with a small hinged door. The front gable was finished by nailing on vertical slats with pointed bottom ends, made of one-half by three-fourths inch pine. A pit was dug one-half by three feet in size and two feet deep, and lined with boards around the sides. The back part of the pen was placed directly over the pit. (Grown rabbits could jump easily from the pit into the front cage, and the little ones remained in the pit until too large to get through the wires. Rabbits dig down in the pit and construct their own breeding places in burrows beneath the pen. The pen proved to be warm in winter, cool in summer, and well adapted for keeping rabbits. With a long-handled shovel all refuse could be easily removed from the pit through the trap door, and the pen never became offensive. With a pair of white rabbits and their young, the pen was a pretty sight at the back of the lawn, and was always attractive to visitors. It was painted with dark red mineral paint and trimmed with white, which harmonized well with the bright green lawn and the dark foliage of the shrubbery.

#### Improved Farm Gate.

In making a gateway for a fourteen-foot roadway the gate should be twenty feet long. This allows for six feet to balance that part of the gate over the roadway, and in opening, a person merely takes a portion of the weight of the gate and slides the same a couple of feet, when it is balanced and can be opened as easily as if swung on hinges. This arrangement is shown in the illustration from a sketch by F. C. Farnham, of Washington. It is best to make a little roller with a three-fourth inch bolt, over which to run the gate. That part of the gate which slides on rollers should be made of double thickness of inch stuff. The gate should shut in between two posts set far enough apart to admit the end of the gate readily. This prevents the wind from moving the gate, which is as solid as any part of the fence. Make the rail of the gate, which runs on the roller, one foot longer than the others; and nail to the two posts last mentioned a cross-piece, so that when the gate is shut the latch end will hang clear of the ground on this supporting piece.

#### Pasture Springs.

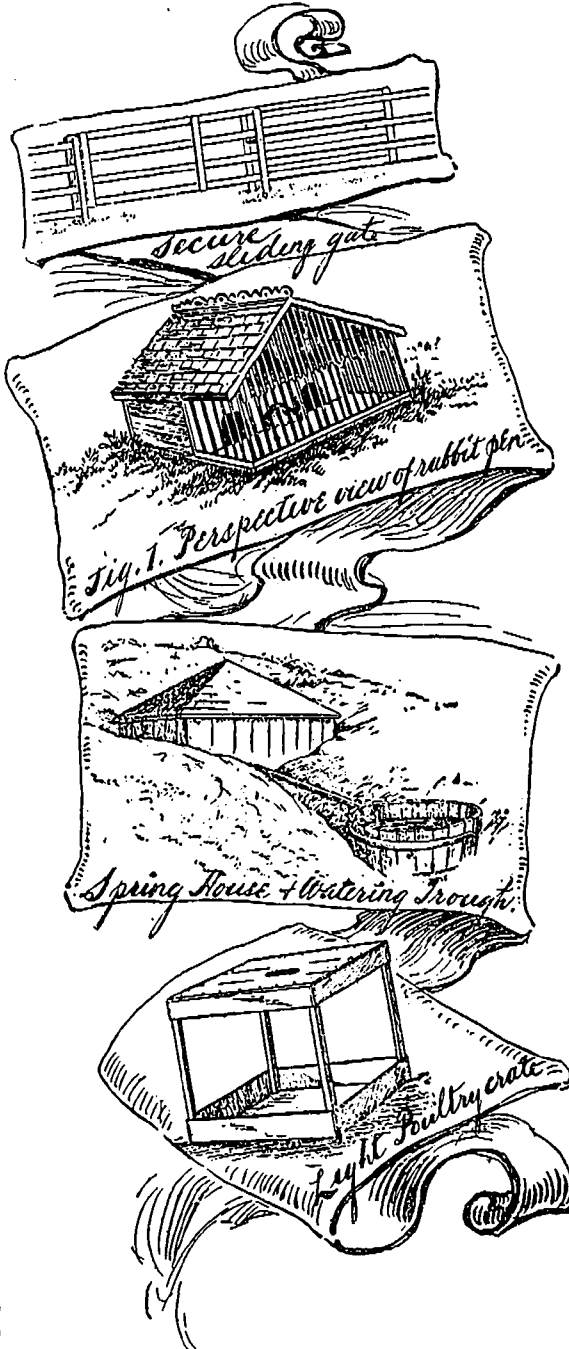
ONE of the vexing questions which confront the farmer is how to keep the pasture spring pure. Contaminated water is injurious to stock, and especially so to dairy stock. To keep a spring pure it should be completely closed and roofed over and the water conveyed in a trough as shown in the accompanying illustration. Such a plan serves to keep the water cooler in summer and warmer in winter.

#### Pig Stock.

A GOOD brood sow is either suckling a litter or growing a litter to be farrowed; be liberal in the treatment of them. Hold on to the old ones, and breed but one or two young sows at a time if you are making a business of pig raising.

BECAUSE the retail beef and pork trade in the large cities has fallen off materially to dealers and butchers during late years, they have been compelled to supplement their sales with mutton; therefore the mutton has grown in favor all the time.

Use well matured sows for breeding purposes,



and keep them as long as they are good breeders; a profitable sow should produce a large number of pigs and raise them.

In feeding, remember that a hog attends to his wants first, and lays on fat afterward. Do not make the mistake of carrying more than can be well fed; do not try it at all without good shelter.

A HOG pen often becomes a source of disease to the hog and the owner because it is not kept properly clean; cleanliness has much to do with the character of the meat, for filth taken up with food must injure the quality of the flesh produced.

DIVIDE the hogs into different lots, according to age and size; less feed will be required and better results procured. If wheat is fed, soak thoroughly for 24 hours and scatter on a tight floor, that they may eat slowly and masticate better.

UNDER the caption "Honesty the Best Paying Policy," the *New York Tribune* reprints from *Hoard's Dairyman* the following paragraph: "Take note that not a single 'filled cheese' or skim is cheese made in Canada. This is the reason why the Canadian cheese has beaten us in the English market and now it is rapidly absorbing our best home market. There are so many factorymen and patrons who would rather get one dollar by cheating than ten honestly, that honest consumers who don't wish to be cheated must go elsewhere for their cheese, it seems. It is a galling shame that this is the case, but the facts stare us in the face. There will be no cure for this state of affairs until the cheese factorymen and patrons 'right about face' and stop this idiotic business of cheating the customer, and thus destroy their own market in the end. Congress has reduced the tariff on cheese and we shall see what we shall see."

#### The Poultry Yard.

##### Shipping Crate.

It is desirable, in order to keep down expenses of transportation, to make the crate in which poultry is shipped, as light as is consistent with strength. The illustration shows a capital framework for such a crate. An empty grocery box of the requisite size may be sawed in its middle making the top and bottom of the crate, though if the box is at all high some three or four inches only, of the top and of the bottom should be taken. The corner post of inch and a half pine should be well nailed to the box, and the sides and ends then covered with burlap or cotton cloth. The top may be of slats or of boards, as shown in the sketch. If of the latter, a hole should be cut both for ventilation and for convenience in handling. Straw should be placed in the bottom for the comfort of the birds.

THERE is a greater demand than ever for White Fantails.

LIME water in the loft and feeding from clean boxes is a preventative of cancer in pigeons.

A LITTLE sulphur sprinkled on soaked stale bread will help your pigeons to feather well.

TOBACCO stems put into hen nests are good to keep them free from vermin.

ANOTHER very popular remedy for roup is kerosene and lard rubbed on the fowls heads and pushed down their throats.

FEED your fowls a hot breakfast and after that make them work, and you will have healthier hens and more prolific layers.

DRY earth sprinkled plentifully under the roosting perches daily is deodorizer and also preserves and increases the value of the manure made.

YOUNG turkeys are more likely to die the third day after being hatched, and when they throw out what is called red head which happens when they are about six or eight weeks old.



### Commanded by a Tiger.

It is not often that a tiger takes command of a vessel, but that is what happened in Delaware Bay some time ago. The captain of a Philadelphia tug-boat which had been forced to lie to near Lewes, by a heavy wind, was awakened early in the morning with the intelligence that a schooner, with her sails set, was drifting broadside on, toward the tug. As she came nearer, it was seen that there was no one on the deck. The captain hailed her, and half-a-dozen men answered from the rigging and from a yawl astern, with pitiful cries for help. The tug's anchor was got up, and she was started in chase of the schooner, which, still drifting in shore, soon grounded. The captain of the tug tells the rest of the story:

"By that time I made preparations to board the vessel and capture the mutineers, who, I supposed, had possession of her. I shouted to the men in the yawl to cut adrift and come on board of us, but they had only one oar in the boat. As we got near the schooner I mustered the five men on board the *Hercules*, and counted our weapons. We had three revolvers and a shotgun.

"Now let her go for the schooner," I called to the pilot as I reached up for the signal rope and blew three shrill whistles. The last shriek had hardly died away when a terrific, blood-curdling roar that almost took us off our feet came from the schooner's deck.

We were almost alongside, and I had barely time to pull two bells to back her when the vessels touched. There was a jar, the schooner trembled, and as tug slowly drew off, another terrific roar drowned the noise of escaping steam.

"Hold on, boys," I said; "let us make up our mind what is best."

The schooner's crew, who were perched in the rigging, cried to us to shoot low and kill the beast. I pulled one bell and stopped the tug. By this time the men in the yawl boat had cut adrift, and they clambered over the side of the tug. They were Captain Pettit and the mate and the cook of the schooner.

There was no time for explanations. We had to work sharp, for a sudden veer of the wind might blow the schooner off, and start her adrift again. Captain Pettit had a heavy navy revolver with him, and we now slowly steamed around the stern of the schooner and crept up alongside as close as we could with safety.

His majesty the royal Bengal tiger lay on the star-board side of the galley house. As I pulled the gong to stop the tug, he raised his head and I gave the word "aim!" He looked at us for a moment, and as he opened his mouth to roar, I shouted "fire!"

The contents of four revolvers and a shotgun were poured at the tiger, and with a roar of rage and pain the animal rose on his haunches. One of his forepaws hung limp. The beast tried to gather himself up for a spring, but he couldn't manage it; he had been shot in the legs.

"I don't want to kill the tiger," said Captain Pettit, "if we can get him to go back between decks, where his cage is. I am afraid the consignees won't pay freight on him if I make away with him."

"After that we threw chunks of coal, clubs, boards, anything we could get hold of, at the tiger, but he only got wilder and roared louder. We were no better off than at first, unless we killed the beast. I then had the fire hose gotten out, and gave the order to pump hot water from the boilers.

The boiling water shot out of the muzzle of the hose, and, when it struck the tiger, he

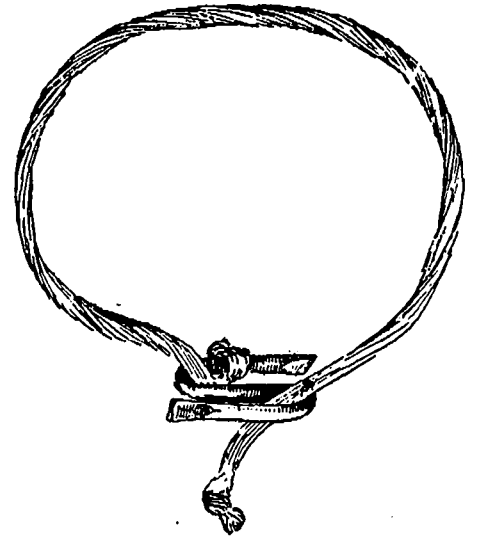
jumped ten feet into the air, and sent forth a roar that fairly shook the vessel. Again the water struck him, and he jumped and roared. We followed him all over the deck, giving him the benefit of the hot stream at every pause. He climbed halfway up the fore rigging and nearly put the man up in the foretop into a fit. But he dropped back on deck, and, as a fresh spurt of steam struck him square in the face, he turned tail and jumped down the main hatch, where his broken cage lay.

In two seconds we were on board the schooner, the hatches were on, and the tiger was secured. For an hour after Captain Pettit sat in my cabin, and told me and my crew how he managed to get into such a fix. Last Thursday he took the tiger on board at Richmond. He had been sold by Adam Forepaugh to the trustees of Roger Williams Park, in Providence, R. I., to be placed in the menagerie there.

In the blow on Friday night, coming down the river, the cage broke adrift from its fastenings, and was so damaged that the beast managed to crawl out. The hatchway over his cage had been left open for air, and the tiger took possession of the schooner's deck. They had been drifting for nearly three hours when we sighted them."—*Baltimore American*.

### Corn Tie.

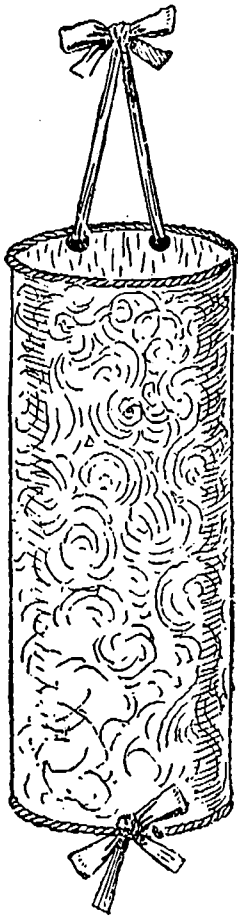
The following cut illustrates a corn tie which has been found to work well by those who have used it. It is home made, easy of manufacture and strong. It is made of galvanized wire.





### Novel Pen Holders.

THIS article is doubly attractive because useful. It is a waste paper holder, a hanging one and made on a new principle. The foundation is a square of stout card measuring about 18 inches, lined with sateen, covered with a bright cretonne and joined into a ring. Further, a circle of the same card, similarly lined and covered, is needed to serve as the bottom of the case and of equal diameter—that is, six inches. This circle is to be joined into the cretonne ring with a tape hinge about an inch long. On the opposite side to the hinge is one string of gay ribbon on the bottom of the holder, and another,



HANGING WASTE PAPER BASKET.

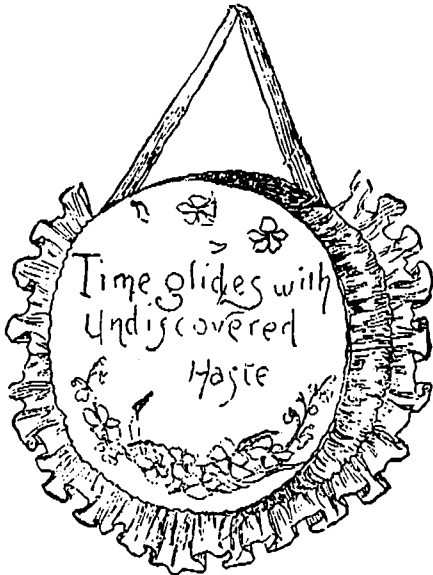
about half an inch above it, on the cylinder. These, when tied, keep the bottom and contents in the holder. When untied, the waste paper falls out, and the holder is emptied without being moved from its place. A fine cord, of colors to accord with those of the cretonne and sateen, is carried away to conceal the seams, and a loop at the top serves as a means of suspension.

### A Serviceable Watch Pocket.

WATCH pockets seldom serve the end they have in view. More often than not they are a hindrance rather than a help. For a first few days they may be put to use, but sooner or later they fall into disrepute and hang idly on the wall. The one great advantage of the one given here is its adaptability to the service required of it. If you need a safe depository for your own timepiece, or if you wish to make an acceptable offering to a friend, you can hardly do better than make one like or similar to it.

First cut two disks of cardboard about the size of a silver dollar, or larger if the watch be large. Then cover them both with pale grey suede and line them with soft silk. Leave one of the disks plain, but on the cover of the other one embroider, before stretching over the board,

sweet blue forgetmenots in their own tender color and couch the lettering with gold thread. Cut a straight strip of fine flexible cardboard about two-thirds the length of the circumfer-



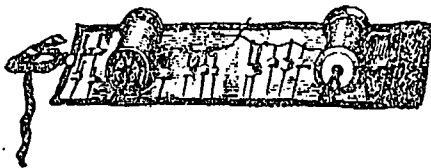
ence of the disk and one inch wide and cover it with a full puff of grey satin the exact shade of the suede. To this sew fast the two disks, one at either edge, so as to leave the extra space free at the top. Then, when that is done, make a full frill of gray satin ribbon and overhand it neatly to the edge of the plain disk, so as to form a finish when it hangs against the wall. To the puffed rim sew a band of ribbon, one end at each extremity, and you will find that the pocket will hang steadily in its place, a convenient receptacle and a decorative object at one and the same time.

### Convenient Sewing Case.

A SEWING case that meets the requirements of travellers is described by Modern Priscilla as follows:

It may be of kid, chamois or cloth.

It is cut a little wider than the spool, which

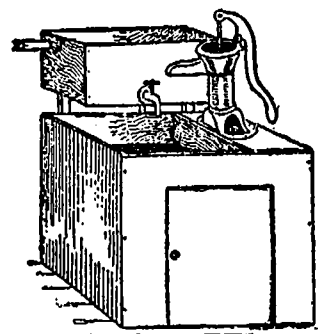


SEWING CASE FOR TRAVELLERS.

are held in place by a cord run through them and fastened by a loop to a button sewed to the edge of the case. Provide a flannel lining for the needles and turn up one end of the case, thus making a pocket of buttons, which should be sewed on cards. Bind the case with silk or worsted braid and attach strings of the same for tying, shut.

### Water in the Kitchen.

AT a comparatively small expense, every farmer can have well water in his kitchen the year round, thereby saving a great deal of labor and can have it pure at all times. A force pump and a little extra piping will be all the expense.

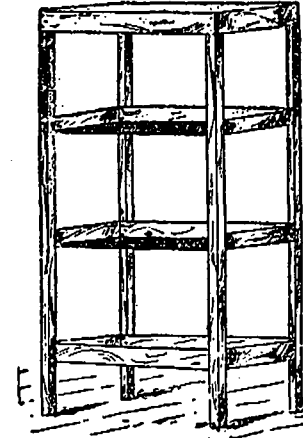


Instead of laying the piping directly to the tank, run it through the house to a small tank over your sink. The pipe should come up through the bottom of the small tank, and it is better to have a stop valve at this point to hold the water in the tank should the water leak back in the well pipe. Near the top of the tank have the overflow pipe. This should run

to the cattle tanks, then all water pumped passes through the kitchen, keeping the water in the house tank fresh. In summer this tank should be packed with some heat-resisting material. Of course it should have a cover at all times. A faucet near the bottom is very convenient. Whatever is spilled drops into the sink and does no harm. Every farmer's wife would appreciate such an arrangement.

### A Vegetable Rack.

THIS rack is designed to accommodate vegetables and the fruit intended for early consumption. We happen to have a shed attached to the house and it is here in a dark corner our



rack stands, to be laden with succulent edibles, including pears, apples, etc. Such a rack, ample enough for a full supply of the various vegetables, is a great convenience to the housewife, to say nothing of its excellence in aiding to preserve these articles from decay. I will say of the

rack from which this drawing was made, that the sides of its shelves are not deep enough. The construction is simple and it occurs to me that a series of ordinary, clean soap boxes in which the bottoms have been replaced by woven wire of any kind, securely fastened, might answer the purpose better than the carpenter-made structure many persons may consider desirable. Try it. The corner supports need be nothing more pretentious than narrow boards nailed to the boxes arranged one above the other. If the large ones were prepared for vegetables in quantity the bottoms of the boxes would have to have slate nailed across beneath the wire bottoms to support the greater weight.

### GREENS.

As the spring comes gently creeping on, the blood, made sluggish by the confinement and the hearty heavy food of winter, demands a change of diet; and so prudent country housewives hie themselves forth in search of "greens," finding in the tender spring herbage a variety of which the city epicure little dreams, but which results in renewed energy and activity and an arousing of somewhat dormant faculties.

Very valuable indeed is the dandelion which is most toothsome; the liquor in which the plants are cooked should be religiously kept, and with the addition of yeast and molasses, made into a most enticing beverage.

### REVIEWS.

*Harper's Weekly* is always up to the times in readable articles on interesting subjects, and its illustrative work is of a high grade.

A contribution to the April *Harper's Magazine* is a brilliant paper on "Venice in Easter," with illustrations from sketches made on the ground—or was it on the water?

*Scribner's* for April is an essentially Easter number. Its striking Easter pictures are of remarkable decorative value. The fiction of the number is good.

"The Progress of the World" in the April *Review of Reviews* is a chapter of running comment on the important events of the past month. It is graphic and interesting.

*The Monthly Illustrator* has in its April number a richly illustrated article on "The Castles of Old England." Some telling pictures of G. A. Reid, a Canadian artist, are produced.

In addition to the Napoleon History the April *Century* contains several unique articles. The most notable is one treating on the latest inventions of the electrician Tesla.

All the above first class magazines are on our Clubbing List. Send for our List.



**THE AVERAGE CITIZEN.**

Mr. Wool Jobber—It's an outrage the way the authorities allow these paving blocks to litter up the sidewalk! I'll write a complaint in the morning.

Politics are full of uncertainties. To-day a man is on the stump and next week he may be all up a tree.

Poet—"I have here a little poem 'To Philys.'" Editor—"Sorry, but there is no one on the staff by that name."

"Your sealskin sacque is the finest I have ever seen." "Well, it ought to be, it was made from one of the educated seals."

Fogyduff—"I have no money to spend in advertisements." Pacer—"Of course you haven't, and that's just the reason."

Uncle—"Tell me frankly, Fred, what is the amount of your debts?" Fred—"Oh, my dear uncle, just as much as you please."

"This," said the bachelor, who paid for sewing on a button, "is what is meant by a single tax."

He (angrily)—"Do you take me for a fool?" She—"No; I wouldn't take you under any circumstances."

Author—"I have a little idea here." Editor (after reading)—"Yes, the idea is all right; now please carry it out."

"Japan says she proposes to demolish China," said Mr. Blykins. "She ought to have our servant girl," replied his wife wearily.

"There's a bonnet," said the editor's wife, "that is a perfect poem." "Yes," he replied, absent-mindedly, "but we never pay for poetry."

"Don't talk to me about compulsory vaccination!" exclaimed the man who had his arm in a sling. "I'm sore on that subject."

First Burglar—"Sh! There's a cop on the other side of the street!" Second burglar—"Lay low, then! There ain't enough in this job to divide."

"My," said the bald-headed man, looking over the hairy heads of the football team, "how secure I would feel with a few Yale locks."

"How do you feel about the income tax?" "I am in favor of having a law passed giving every man an income large enough to be taxed."

Clara—"Dear me! Those toilet things I ordered haven't come." Maude—"Then I don't suppose you'll have the face to go to the ball to-night."

Mrs. Smith (who is reading a humorous paper)—"I don't see any fun in these jokes about big big bills for ladies' hats." Mr. Smith—"I don't either."

"I may tell you at once that I can put up with everything except answering back." "Oh, madam! sure that's just like myself. We shall get on splendidly."

Coroner—"You swear positively that you were not to blame for the man's death?" Dr. Tyro (haughtily)—"Certainly, sir: they did not call me soon enough."

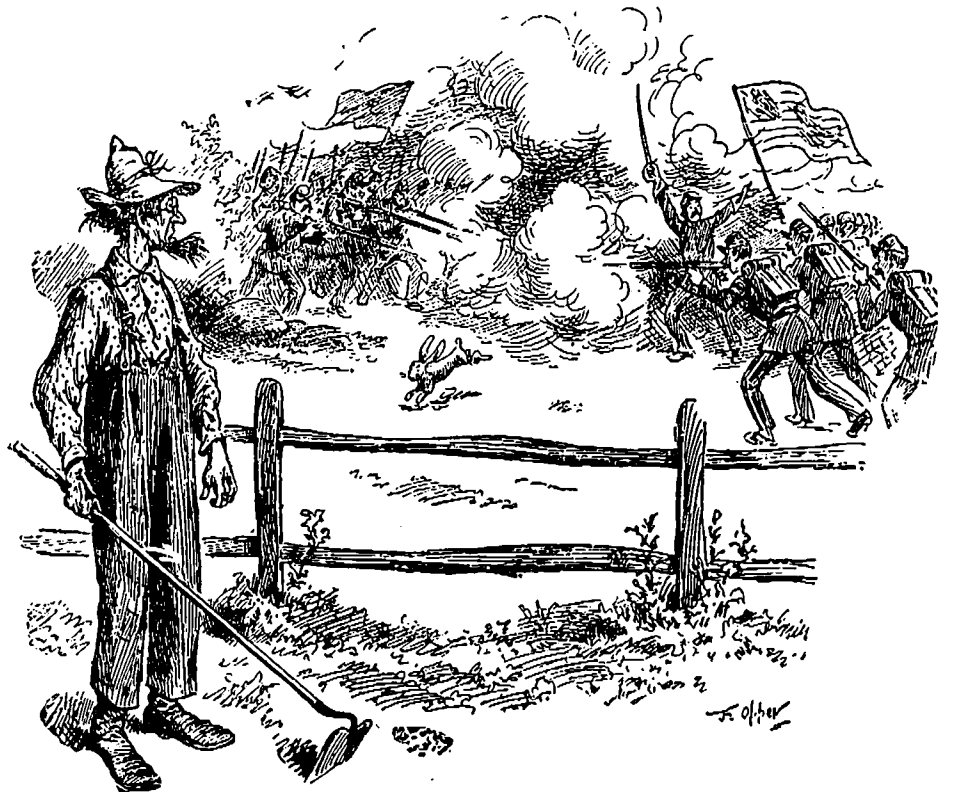
Mr. Bacon—"When is the cook to be married?" Mrs. Bacon—"Oh, she's not to be married. She's broken her engagement." "What, broken that, too?"

Mrs. Querie—"I understand you had a narrow escape coming across?" "Yes, indeed; the coal ran out and the captain had to split the ship's log to keep the fires going."

Willie—"Maw, we're going to have a little masquerade party over at Tom Stapleford's. How'd I better fix up so they won't know me?" His mother—"Wash your face, dear."

DRIVER—Say, boss, where do you want these boxes; in the cellar?  
MR. WOOL JOBBER—Cellar? Certainly not! Leave them on the sidewalk.

Burglar Ben—"We might as well skip right out o' here, there's no dust in dis job." Burglar Biff—"How do you know?" Burglar Ben—"I jist found de card o' de feller dat lives here; he writes for de funny papers."



**THE SPRING MANOEUVRES.**

UNCLE OATFIELD (looking at the sham battle)—Wa-al, I'll be darned!—all them fellers shootin' at that there rabbit, an' never touched him!

**IRRESISTIBLE.**

Book canvassers should take courage from a story told by an English lecturer on "The Art of Bookbinding." A man of their profession had called at a house, whose occupant met him with a growl.

"It's no use to me. I never read."

"But there's your family," said the canvasser.

"Haven't any family—nothing but a cat."

"Well, you may want something to throw at the cat."

"The book was purchased."

Tit Bits recently offered a prize for the most amusing "bulls" and the competition has produced the following: A certain politician, lately condemning the Government for their policy concerning the income tax is reported to have said—"They'll keep cutting the wool off the sheep that lays the golden eggs until they pump it dry."

"The glorious work will never be accomplished until the good ship 'Temperance' shall sail from one end of the land to the other, and with a cry of 'Victory!' at each step she takes, shall plant her banner in every city, town and village in the United Kingdom."

An Irishman, in the midst of a tirade against landlords and capitalists declared that "if these men were landed on an uninhabited island they wouldn't be there half an hour before they would have their hands in the pockets of the naked savages."

Only a few weeks ago, a lecturer at a big meeting gave utterance to the following:—"All along the untrodden paths of the future we can see the hidden footprints of an unscen Hand."

"We pursue the shadow, the bubble bursts and leaves the ashes in our hands!"

An orator at one of the University Unions bore off the palm of merit when he declared that "the British lion, whether it is roaming the deserts of Canada, will draw in its horns nor retire into its shell."

Teacher—"What is one of the greatest sources of discontent in this world?" Pupil (whose parents live at a boarding house)—"Prunc sauce."

Cholly—"Ethel Knox told me last night I wasn't over half-witted." "Susie—"I shouldn't feel badly about that; she never did know anything about fractions."

Little Girl—"How did you scratch your nose?" Wheelman—"Bicycling." Little Girl (thoughtfully)—"You should not ride with your nose so close to the ground."

A little girl's father had a round bald spot. Kissing him at bedtime not long ago, she said, "Stoop down, Popsy; I want to kiss the place where the lining shows."

"Do you think Skinner can make a living out there?" "Make a living? Why, he'd make a living on a rock in the middle of the ocean—if there was another man on the rock."

Visitor—"I suppose you have a great deal of poetry sent in to you for publication?" Editor—"No, not very much poetry, as a rule; some of it is verse, and some of it is worse."

"O, papa, see these lovely opals! I don't believe opals are unlucky. Do you?" "It will be very unlucky for you take a fancy to a high-priced one, Ethelinda. You won't get it."

"What are you here for, George?" "I's been tuck up, suh, fer raisin' hogs." "Why, there's no law against that?" "Dat's what I tell um, suh; but dey sorter found out dat I raise de hogs over de fence."

"How would the aspect of the eastern world be changed if a negro should drop a platter of turkey?" Answer—"Greece would fall, Turkey would be overthrown. China would be broken in fragments and Africa humiliated."



Nor rural sights alone, but rural sounds  
Exhilarate the spirit, and restore  
The tone of languid nature. —Cowper.

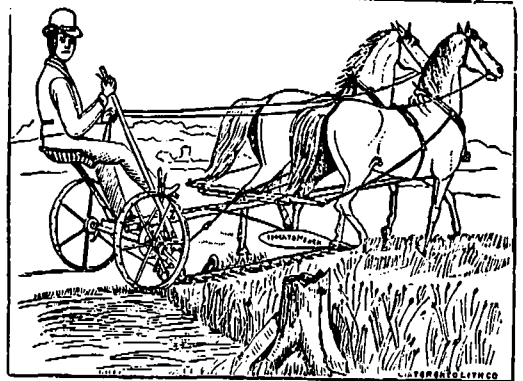
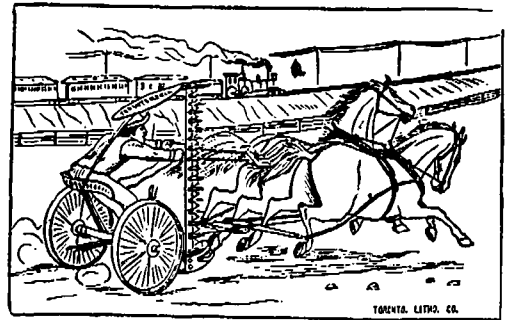
## SCIENTIFIC HAY-MAKING.

WHAT can be more pleasing on a summer day in June when the air is fragrant with sweet clover blossoms and new mown hay, to hear the hum of the mowing machine at work in the meadow; so suggestive of thrift, of enterprise, and of promise. We do not refer to that rattle-bang of the clap-trap machine with its noisy gear and loose joints, but to the gentle music of an all but noiseless "Toronto" or "Brantford" Mower—its smooth running gear seeming by the steady hum to be at play rather than work. Cowper's poetic lines were a prophecy of the present day as well as a truth of the time when he lived a century ago. Art has made its impress on recent mechanical implements. Crude and ugly looking mowing machines of the early type must give place to mowers in which much thought has been put on the design and appearance. The latest MASSEY-HARRIS mowing machines are models in beauty and symmetry of design and are finished in good taste. So, too, the noise and rattle of poorly made and loosely-fitting gearing and the crash of an unbalanced and miserably constructed pitman and knife are no longer tolerable in the face of the smooth and light running "Toronto" and "Brantford" Mowers.

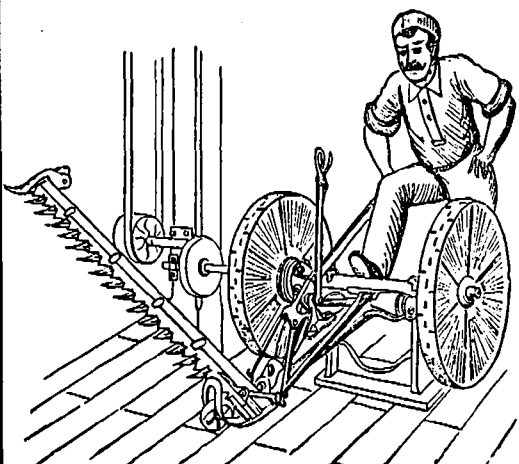
But all this is sentiment, you say. Yes, but artistic sentiment has only been satisfied by the highest mechanical perfection. That machine which is neatest and lightest in appearance, and which runs with the least friction and noise, is bound to be lightest in draft, is sure to be fitted with the greatest care and consequently will be longest lived.

There is no grass cutting machinery or hay making tools made just as good as "MASSEY-HARRIS." Don't be deceived on that point. The MASSEY-HARRIS Co., Ltd., are originators—their staff of inventors set the pace and other makers try to follow.

### THE TORONTO MOWER



### THE TORONTO MOWER



Testing the "Toronto" at the Works.

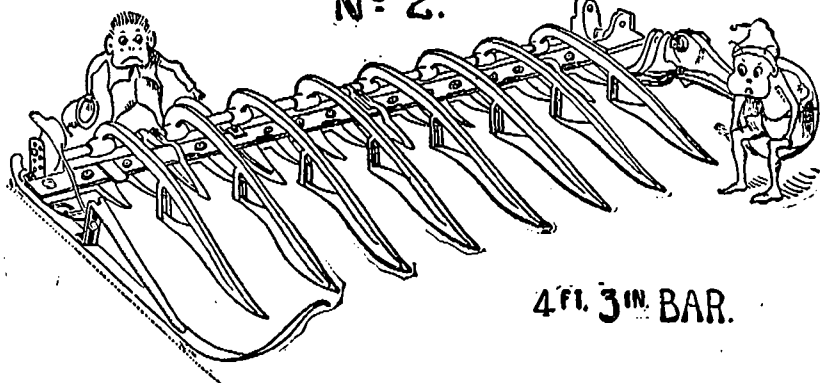
HERE we see the "Toronto" being "run off" at a very high rate of speed, and undergoing a most severe testing and inspection. Every mower made by MASSEY-HARRIS Co., Ltd., is similarly tested and inspected.

### THE GENUINE TOLTON PEA HARVESTER.

THOUSANDS NOW IN USE.

No. 2.

Patented May, 1875-  
80-85 and 1893.



4 FT. 3 IN. BAR.

Also greatly Improved  
for 1895.

The oldest, best, most efficient, durable, and successful Pea Harvester manufactured. Will harvest all kinds of peas and is suitable for all kinds of mowers. It can be attached without drilling holes in mower bar. Send in your orders early and secure one. Be sure to state what kind and make of mower you want it for

TOLTON BROS., GUELPH, ONT.

# BINDER TWINE!

## CONSUMERS' CORDAGE CO., LTD.

MANUFACTURERS OF

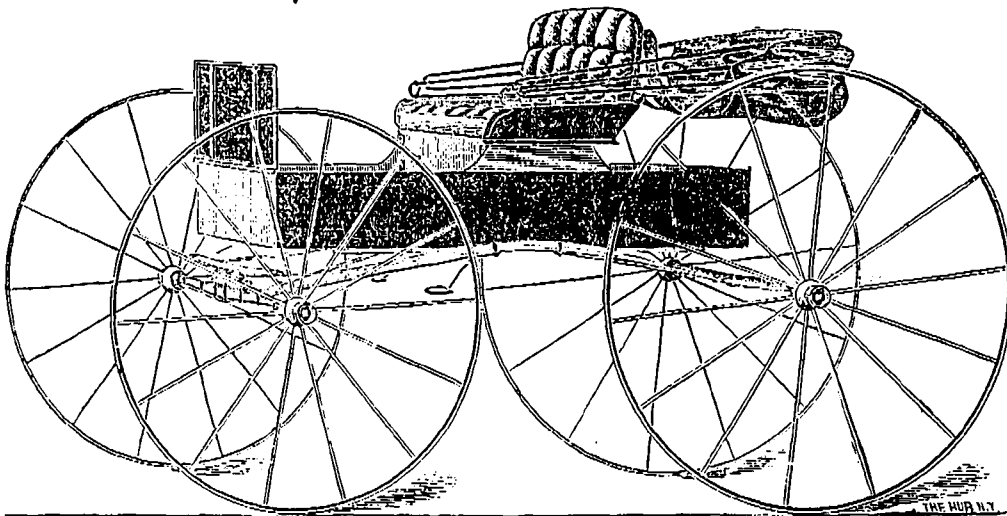
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### BRANDS OF BINDER TWINE.

These Brands are acknowledged by the Farmers of Canada to be ahead of all others and this year's output will be equal, if not superior, to that of former years.

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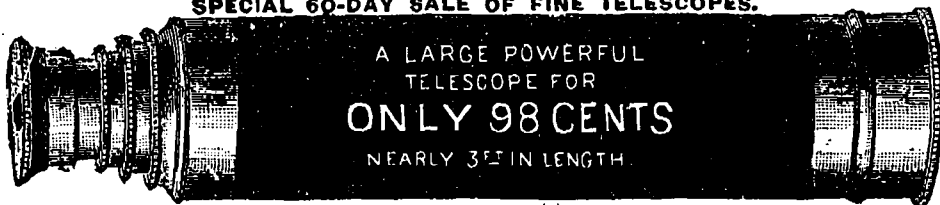
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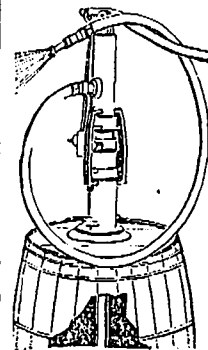
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**IDEAL SPRAY PUMP**



**SIMPLE, EFFECTIVE,  
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Botanist, Central Dominion Ex-  
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In reply to your favor of the  
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the pump you sent me last spring  
for trial, with great satisfaction,  
both for spraying fruit trees, and  
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MENTION THIS PAPER.

PAISLEY, April 11, 1895.

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Sprayer is just to hand. I must say  
that I am highly pleased with it. I  
was quite surprised, for it was al-  
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although I had every confidence in  
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and would simply say that it is  
immense. I have been looking for  
a good Sprayer for five years back,  
but was lucky that I did not get one  
until now. J. B. MCARTHUR.



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This paper is published weekly now at only \$1.00 a year  
and it is the biggest bargain at the price that we have ever  
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**Manufacture the Best Threshing Machine Belts in America.**

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

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**BELTING**

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When placing your order for a Wagon this Spring see that you get one of the  
**LIGHT RUNNING BAIN WAGONS.**

**NONE BETTER.**

THOUSANDS IN USE

ALL SIZES OF ARMS.

ALL WIDTHS OF TIRE.



**NONE MORE POPULAR.**

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ASSETS, \$54,200,752.

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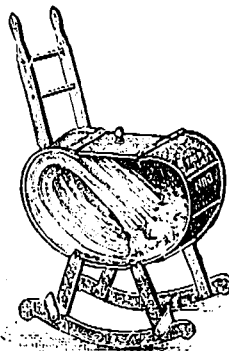
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Is Always in Order.  
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Churns with Half the Labor required by any Revolving Churn.

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The reason is obvious: "Fibreware" is the lightest, tightest, most durable and satisfactory ware known, and besides being economical, eliminates to a great extent the worry and labor always attendant upon "wash-day."

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2000 sold 1886  
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4000 sold 1890  
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More than have been sold by all the factories in Canada put together & doubted.

I manufacture and solicit orders for Perforated Zinc, all sizes of holes, for Threshing Machine and Clover Mill Riddles. Also Wire Cloth for all purposes.

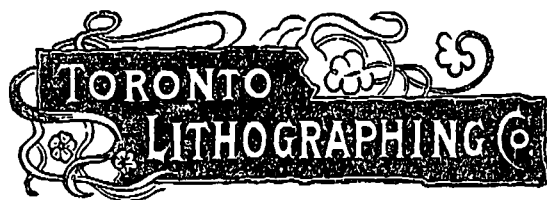
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Over 14,000 Bagging Attachments now in use.  
Bagging Attachment is run with a chain belt that cannot slip. The Elevator Clips are also attached to endless chain belt that cannot slip nor clog.

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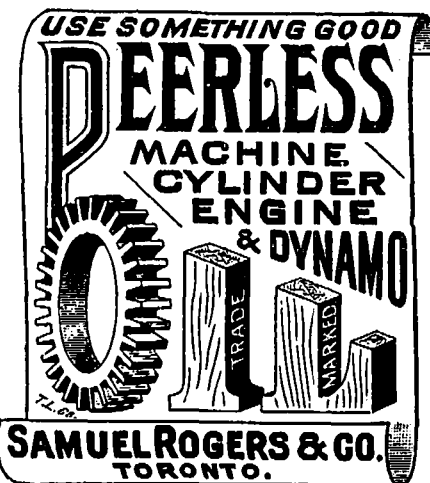
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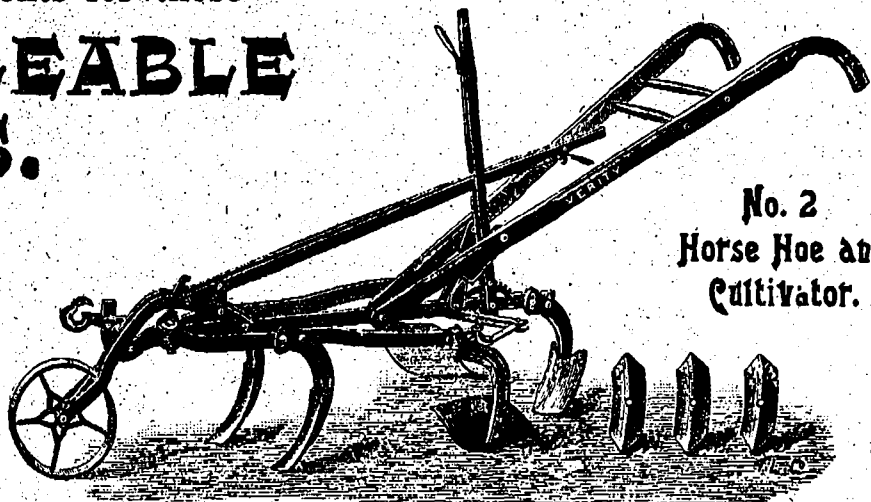
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MASSEY-HARRIS CO., Ltd., are Sole Agents for these  
**STEEL AND MALLEABLE  
 SCUFFLERS.**



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 Cultivator.

They are  
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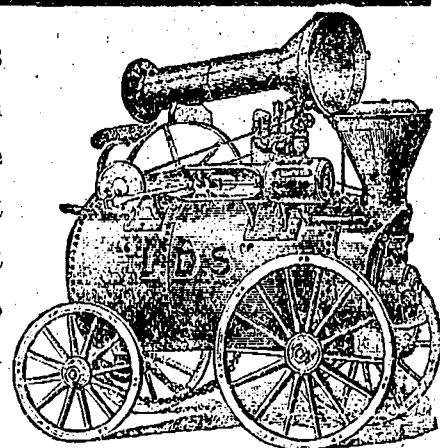


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 Cultivator.

Every Desirable Adjustment.  
 Very easy to handle.  
 Complete in every particular.  
 Provided with every needed facility.  
 Thoroughly practical when at work.

# VERITY PLOW Co. LTD.

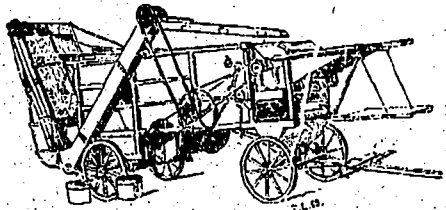
**THRESHERMEN** who are about purchasing new outfits will have to consider that no one can do good threshing without a first-class outfit, and a first-class outfit cannot be built without first-class facilities and by using the very best materials, and that these facilities and high grade materials mean money. Hence honestly built Threshing Machinery and Engines cannot be sold cheap. They cost money to start with, they cost good money to build, and they must be sold at a reasonable price.



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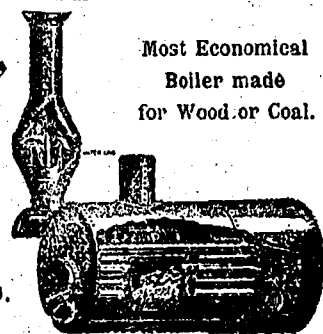
RELIABLE,  
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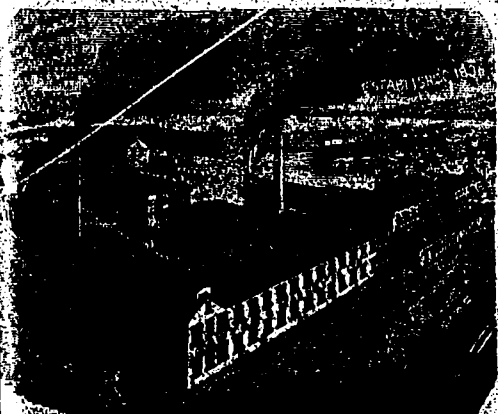


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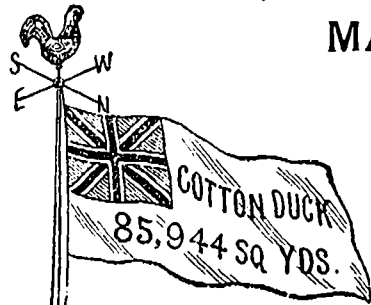


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MASSEY-HARRIS CO., Ltd.

\_\_\_\_\_ FOR THE Season of 1894.

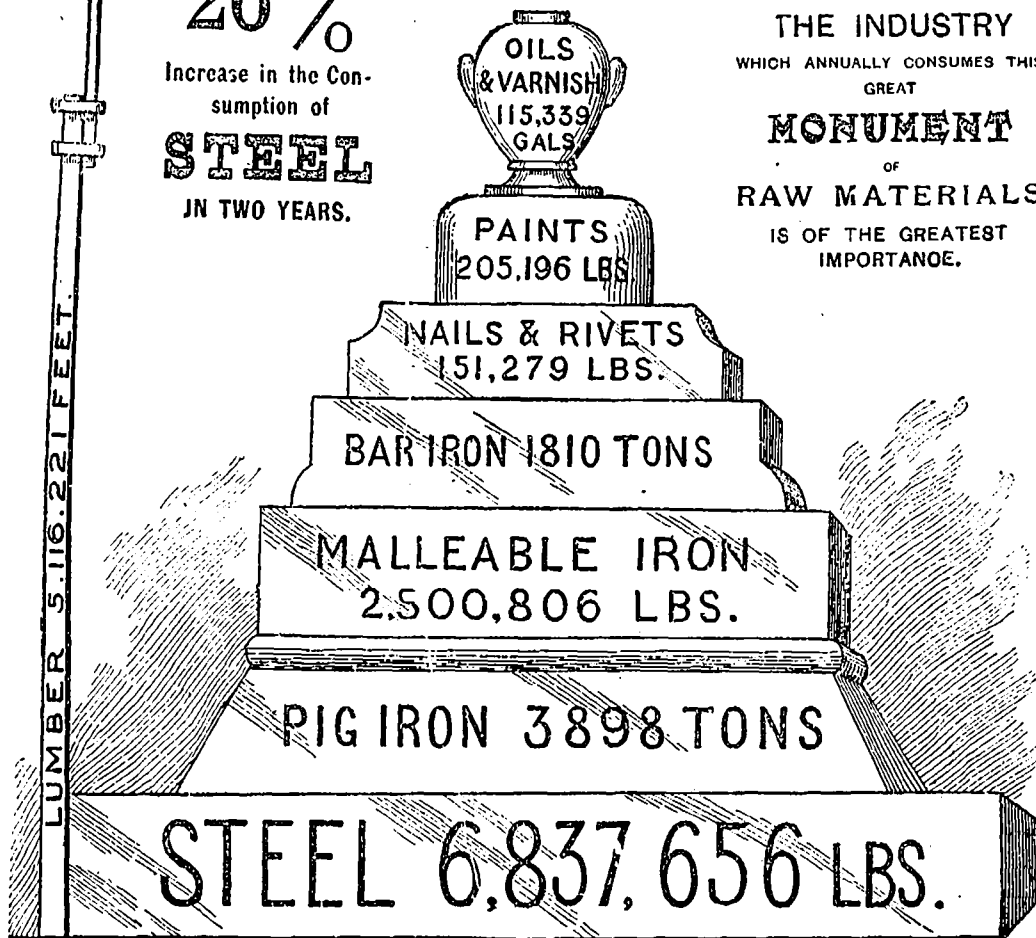


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Increase in the Consumption of  
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IN TWO YEARS.

THE INDUSTRY  
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OF  
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IS OF THE GREATEST  
IMPORTANCE.



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