

• Massey's Illustrated •

(PUBLISHED MONTHLY.)

November Number

New Series, Vol. 2, No. 11.]

[Toronto, November, 1890.



And we, to-day, amidst our flowers
And fruits, have come to own again
The blessings of the summer hours,
The early and the latter rain;

To see our Father's hand once more
Reverse for us the plenteous horn
Of Autumn, filled and running o'er
With fruit, and flower, and golden corn!

—WHITTIER.

SUBSCRIPTION PRICE 50c. PER ANNUM.
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THE MASSEY-TORONTO MOWER.

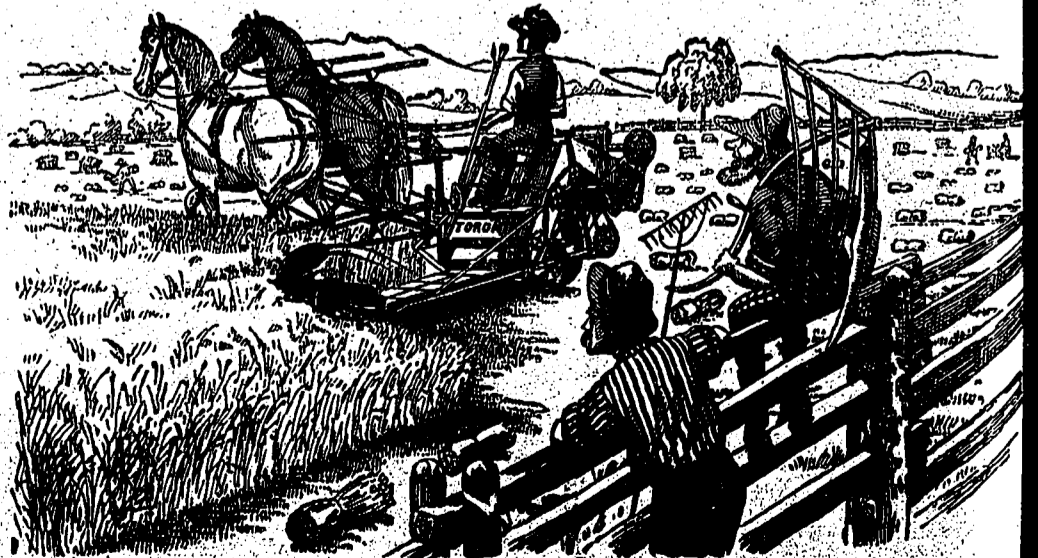
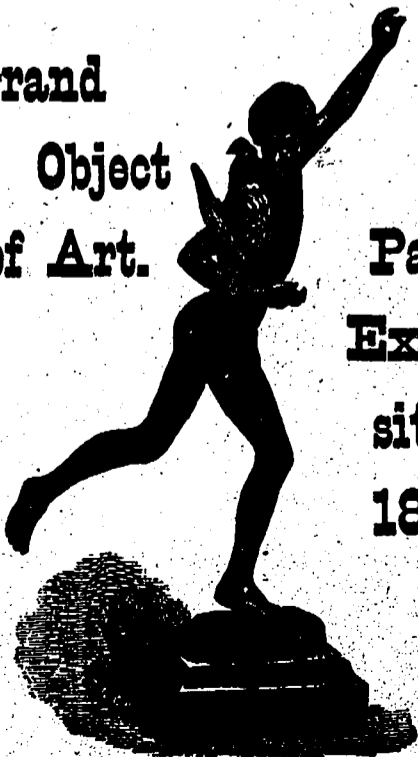
HONORS UPON HONORS

- 1888-9.—**19 Different Prize Trophies** won at the Australasian International Field Trials by the Toronto Light Binder in the following places: Little River, Bridgewater, Nhill, Charlton, Stowell, Murchison, Geelong, Ararat, St. Arnaud, Ballarat, Albury, Whittlesea and Ramsay, in the Colonies of Victoria and New South Wales; and at Oamaru, Temuka and Invercargill, New Zealand.
- 1889.—**Silver Medal** (Highest Award) awarded **The Toronto Light Binder** at Cape Town, Cape Colony, South Africa.
- 1889.—**Grand Object of Art** (Highest Award) at the Great Noisiel Trials, Noisiel, France, July 19, 20, 21 and 22.
- 1889.—**Gold Medal** at Paris Exposition
- 1889.—**Gold Medal and First Diploma of Merit** at Melbourne Centennial Exhibition.
- 1889.—**Gold Medal** (Highest Award) at Clunes' Victorian Exhibition.
- 1889.—**Gold Medal** (Highest Award) at Tungawah, Victorian Field Trial, Australia, Dec. 14th.
- 1889.—**Silver Medal** (Highest Award) at Royal Cornwall Agricultural Society's Show at Helston, Eng., June 19.
- 1889.—**Silver Medal** (Highest Award) to Toronto Mower at Royal Manchester, Liverpool and West Lancashire Agricultural Society's Show, Wigan, Eng., July 25.
- 1889.—**Silver Medal and 50 Francs** (Highest Award) at the Argentan Trials, France, Aug. 18.
- 1889.—**Silver Gilt Medal**, Highest Award, at the Rethel Field Trial, France, July 28.
- 1889-90.—**Gold Medal** (Highest Award) at Southland Field Trial Invercargill, New Zealand, 1889, and again won in 1890.
- 1889-90.—**Thirteen Different Prize Trophies** won at the Australasian International Field Trials by the Toronto Light Binder in the following places: Pyramid Hill, Warracknabeath, Nathalia, Numurkah, Kaniva, Charlton, Stowell, Kerang, Ballara, Romsay, Ashburton, Oamaru, and Nhill.
- 1890.—**Gold Medal and 400 Francs** (Highest Award) at Saintes, France, July 20.
- 1890.—**Gold Medal** (Highest Award) at Sens, France, July 27.
- 1890.—**Gold Medal** at Cape Town, Cape Colony, South Africa, Feb. 1st.
- 1890.—**Silver Gilt Medal** (Highest Award) at Muisson, France, July 31.
- 1890.—**Silver Medal** awarded the **Toronto Light Binder** at Oamaru Trials, New Zealand, Jan. 27.
- 1890.—**Silver Medal** (Highest Award) at Cape Town, Cape Colony, South Africa, Feb. 1st.
- 1890.—**Silver Medal and Special Diploma**, only one awarded at Bucharest, Roumania, July 3.
- 1890.—**Silver Medal** at Field Trial, Chalons-sur-Marne, France, July 13.
- 1890.—**Silver Medal** at Field Trial, Clermont, France, July 26.
- 1890.—**Silver Medal and 200 Francs** at Field Trial, St. Po France, August 10th.
- 1890.—**Bronze Medal** (First Prize) at Chalons Exhibition, France, June 1st.
- 1890.—**Bronze Medal to Toronto Light Binder** at Royal France, June 29th.
- 1890.—**"Highly Commended"** for **Toronto Giant Mower** at Royal Manchester, Liverpool, and Lancashire Agricultural Society, July 25.

Grand

**Object
of Art.**

**Paris
Expo-
sition,
1889.**



THE MASSEY-TORONTO LIGHT BINDER.

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(PUBLISHED MONTHLY.)

A Journal of News and Literature for Royal Homes

New Series.]

TORONTO, CANADA, NOVEMBER, 1890.

[Vol. 2, No. 11.]

Cliff and Cave Dwellers.

AN EXPLORER'S WANDERINGS THROUGH THE FASTNESSES OF THE MOTHER MOUNTAINS OF MEXICO.

By Frederick Schwatka.

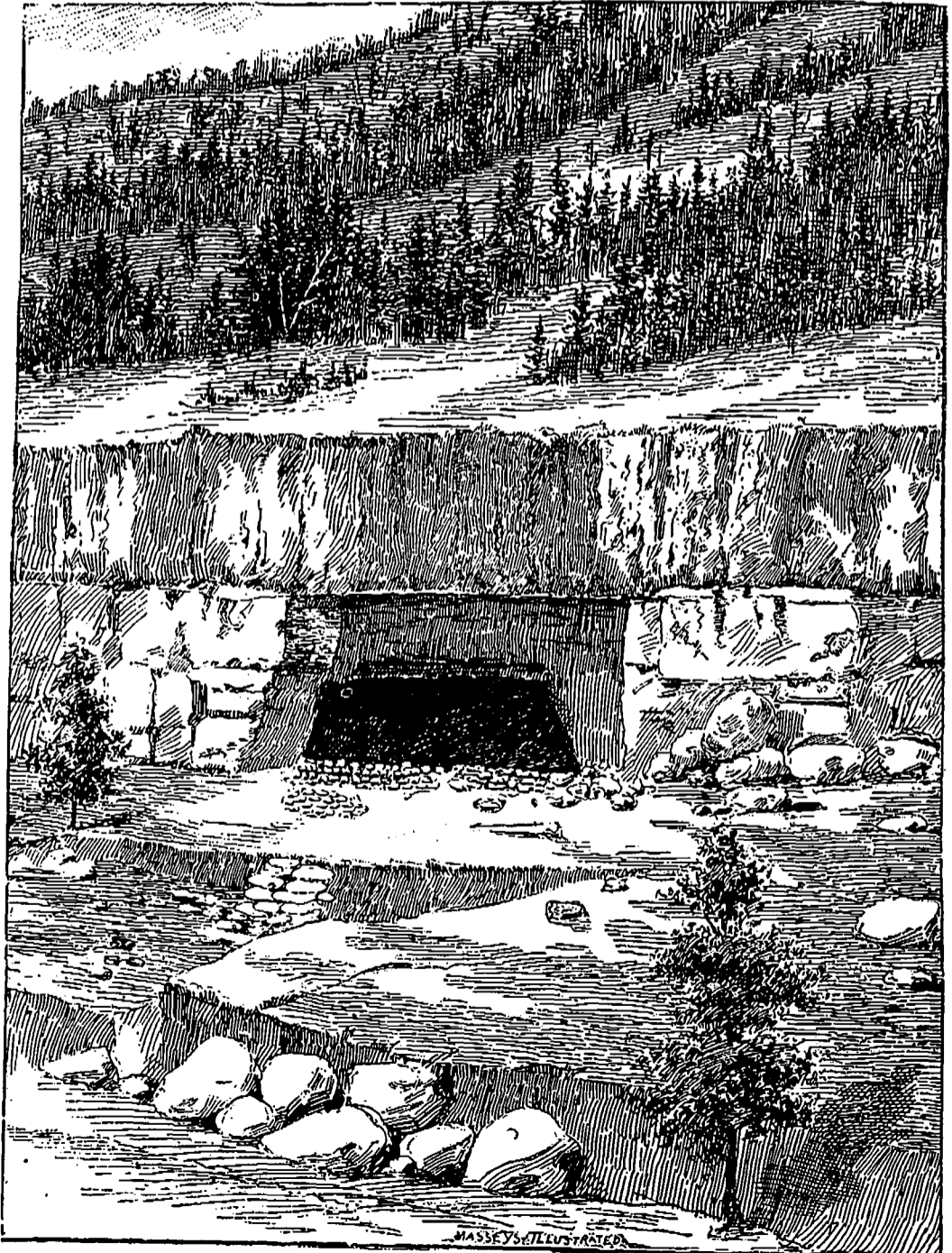
THE expedition to secure a number of living cliff and cave dwellers from the Sierra Madre of Mexico left Chicago in the latter part of last year over the Santa Fé and Mexican Central railroads for the city of Chihuahua, where it may be said its labors began. From here a Mexican diligence is taken to the village of Carichic. The first day's run is seventy miles, which brings us to the Mexican town of Cusiuhiriachic, a place of about seven thousand people. This portion of the route is uninteresting, being timberless, but many fine streams are crossed, in the valleys of which the Mexicans raise much produce for the mining markets.

At Cusiuhiriachic we first begin to see traces of the Tarahumari natives, the wild portion of which tribe, still deeper in the Sierra Madre, we are in search of. These are called the civilized Tarahumaris, and are that portion of the tribe converted by the Jesuits between two and three hundred years ago. While called civilized, they wear but little more than the wild natives of the mountain, and with their bare legs and breasts and a rough serape thrown over their shoulders they have all the appearance of the savages we see on the plains around agency buildings or gathered at railroad stations nearest their reservation. Probably in Cusiuhiriachic a dozen may be found, but they become more numerous as we proceed westward. The Mexicans use these so-called civilized Tarahumaris somewhat after the manner that peons or slaves used to be used, rarely giving them over one-half, or even only one-third, what Mexicans are given for the same work. It is said that when Mexico was under Spanish rule the people called "gente de razon"—that is, intelligent people of the upper classes—were even more severe upon these poor natives, and forced them to run as couriers, for which their swiftness of foot well adapted them, and perform other services without any compensation whatever, the only incentive for the service being the fear of punishment if they did not perform it promptly and successfully. It is said that this is the reason that there exists to-day so many of the Tarahumaris who have not been converted, and who are called gentiles by the catholic Indians. It is among these gentiles and among their lowest classes that we find the cliff and cave dwellers, the rest of the gentiles living in brush houses and wandering from place to place like nomads.

The next stage made by diligence is about forty miles to the village of Carichic. Timber is now seen in plentiful quantities, although hardly serviceable for lumber, and the country passes from an agricultural to one where grazing only can be had,

but of the very finest quality. Here the Tarahumaris people—for I do not care to call them Indians, so radically different are their habits and appearances from those I have been used to all my life in the western states and territories—begin to be more numerous. In fact, Carichic can almost be called a Tarahumari town, although the predominating influence and power are Mexican. Of course these are the civilized Tarahumaris, so-called. Not over five miles from Carichic can be found cave and cliff dwellings, although they are now abandoned or used only as store-houses for the storage of corn and such material as the civilized Tarahumaris raise in the very limited valleys of the Carichic and Bachochic rivers, which come together near here.

We can now say that we are on the borders of Tarahumari land and our labors become more interesting. We are also on the foothills of the Madre Mountains and the diligence is left behind and pack and riding mules are taken. From Carichic a number of trails radiate toward the west leading to the various Tarahumari towns and to the great mining camps still further west on the Pacific slope of the mountains. All of them are picturesque in the extreme. It is the one toward Guajoichic, one day's march from here, that we take after our pack train arrangements are made. Within an hour after leaving we cross the Bachochic River, a beautiful stream coming from the north. It was on its banks near the Urique trail from Carichic that,



CAVE DWELLING IN ARROYO DE LOS IGLESIAS.



SEMI-CIVILIZED TARAHUMARI DWELLING, WITH CAVE DWELLINGS ON EITHER SIDE.

in 1888 I saw my first half-cave, half-cliff dwelling in Mexico. Here at its mouth are also found some deserted cliff and cave dwellings, but that on the Urique trail was occupied. At the time I thought it was only some ancient dwelling taken up by a thriftless Indian too lazy to construct a log cabin of his own, and that it was an isolated case not unlike those we see sometimes on the suburbs of some of our big cities, where worthless hermits have been known to live in caves if they could be found. I was yet to learn the fact that these cave and cliff dwellers were to be numbered by the thousands when I penetrated deeper into the mountains. The owner of this subterranean building was at the bottom of the cliff, stark naked except an animal skin around his loins, a pair of rawhide sandals on his feet, bow and arrow in hand, skulking around the nearest bend of the river to get out of sight of my little pack train.

After crossing the Bachochic a steep mountain side is ascended by the usual method adopted by the Mexicans under such circumstances. This is a series of windings backward and forward until the top is reached. In this manner they will ascend a mountain of thirty degrees greater inclination than the steepest wagon road in existence. The turns are seldom over twenty to thirty yards in length, and at a distance the trail looks like a huge spiral drawn on the face of the steep mountain. So steep a grade will they ascend in this way that, when at the top, if the mountain is high, the novice to mule-back riding will invariably be dizzy if he looks toward the bottom. In passing over these corkscrew trails the Tarahumari courier invariably cuts off from ten to twenty feet of each end by placing his hand on the ground and jumping to the trail below, instead of running around the corner which the mule has to follow. In fact, it is by these cut-offs and also by many on the main trail that the Tarahumari courier, probably now the best mountain courier in the world, makes such phenomenal time as that with which he is often credited, for a speed of seventy-five or even 100 miles a day is not unusual with him, a distance that will require a pack train four or five days to make.

Once on top of the mountain the trail leads through beautiful groves of mountain oak and madrona trees, with an underbrush of manzanita or wild apple brush. In the spring of the year this madrona, or strawberry tree, as some people call it, is one of the most beautiful, if not the most beautiful, trees on the North American continent. It is seldom over fifteen to twenty feet high, but has a very large trunk. This trunk is a vivid crimson, not unlike a polished wood, or one carefully varnished, while the leaves are an intense green, and the blossoms, which are quite as numerous as the leaves, are a beautiful pure white like the strawberry blossom, from which the tree gets its name.

Could one be transferred to one of our cities' parks it would attract more attention than all the flowers and forestry planted there. During the remainder of the day the trail leads up steep mountains by winding trails and across pretty mesas or table lands until Guajochoic is reached, some thirty miles from Carichic. Crossing La Chalaca River, between the two points, we get our first idea of some of the sculptured rock of which we are to see so much, and which in many a canon makes it seem like an enchanted place, so beautiful is the sculpture and so weird and fantastic are the designs which nature has thus cut out. At Guajochoic we find a rude log cabin and camp for the night. The scenery along this mountain stream is most beautiful. The hillsides are from three to four thousand feet high, and cut and sculptured both up and down the river as far as the eye can reach. Near here is a Tarahumari town of much importance, the Naquereochic Pueblo. In this town lives the fastest runner of the Tarahumari nation, so it is said. At Carichic last year, at their great festival of games, he made one hundred Spanish miles in eleven hours and twenty minutes. To anticipate our story somewhat, now that we are back in civilization with a



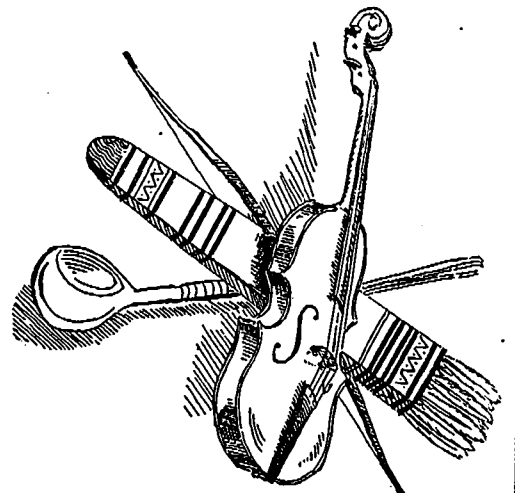
CAVE AND CLIFF DWELLINGS IN TARAHUMARI LAND.

party of these people, it might be remarked that he was a member of one of the parties that I secured, and which awaited me on the Guajochoic, but which "stampeded" when they heard that I was coming to take them to the distant and somewhat mysterious United States of America.

About this distance inland from the foothills of the mountains, that is from twenty to forty miles, I think the greater number of Tarahumari towns exist, and if a person travelled about this distance and parallel with the foothills there would hardly be a night that they could not stop in a Tarahumari town. North of here but a short distance is the important town of Sisiguichic, probably the largest in the nation. It is most beautifully situated in a deep canon, and probably contains six hundred souls, all of them Tarahumaris, no Mexican official living in the village. Numerous as the Tarahumaris are in this part of the mountains, very few of them are ever seen, as they generally disappear from sight upon the approach of a stranger. This they are able to do easily, owing to the great noise made by the average Mexican pack train when it is en route. The only way to see them is to travel far ahead on one's mule, and then the person is liable to get lost on the many divergent trails with which the Sierras abound. I have had one or two unpleasant experiences of this nature, and have since

preferred to remain with the pack train. Some of the great trails are, however, so well marked that only a "tender-foot" would ever get lost on them. But along those great trails nearly all the natives, except those grouped in villages, have long since disappeared and made their homes farther away in the deep recesses of the mountains. The so-called civilized Tarahumaris are, of course, the easiest to encounter, while it is among the cliff and cave dwellers that we find it almost impossible to get a sight of their persons; in fact, along the great trails deserted cliff and cave dwellings are very numerous. This is particularly true of the cave dwellings on a level with the trail, but if the cliff dwellers high up on the canon side are nearer the top than the bottom, and they have an outlet by that way, they will continue to occupy them despite the abandonment of the lower buildings.

The second day's journey takes us to a point called Pilarcitas, or the little pillars—referring to sculptured rock in the vicinity. Here springs from the ground water cold as ice the year round. Between the two camps we pass through a canon called the Arroyo de las Iglesias, or the "Canon of the Churches." It is so called on account of the sculptured rock which here abounds, and in the many spires, columns, flying buttresses, and every form of architecture which the imagination can conceive and which often resemble the sides and fronts of so many of our leading churches and cathedrals we get a reason for the name. This extends for fourteen miles between the two camps and is probably one of the best examples of sculptured rock in the known world. Not only are churches well represented in the carved stone, but nearly everything that has any form at all. Perched high upon a column of rock, probably one hundred and fifty feet from where it springs from the side of the canon, is a well-defined bust of the Roman Emperor Hadrian, the bust being fully three times the diameter of the column on which it rests, thus giving it unusual prominence. On another column is a spread eagle, and on another such a good representation of a turkey that even the natives recognized it when I called their attention to it. Just as the "Canon of the Churches" is entered, or at least within a mile of the entrance, cliff dwellers are found on the right hand or northern side. I think the highest cliff dwelling can be safely put at three hundred feet above the level of the stream, although the occupants do not have to descend this far to reach comparatively level ground, as by an inclined trail to the east they can reach a gentle slope on a canon which enters here. These cliff dwellings of the *Arroyo de las Iglesias* are not built in caves as many of them are, but upon ledges of rocks not unlike those near Flagstaff in Arizona



CIVILIZATION AND BARBARISM.

Territory, but of course much smaller in size. They are reached by notched sticks, or monkey ladders, as white people call them here. Sometimes a dozen ladders are needed to reach the highest dwellings, although they will ascend cliffs which, as viewed by a white man from below, would seem impossible of ascent. The Mexican packers in passing through here, and in fact wherever they encounter these timid creatures, seem to take malicious delight in shouting at them in such a way as to arouse their fears, even going so far as to pretend to hurl stones at them. I remember last year when in a canon north of this one my Mexican packer saw two women ascending the mountain side on a dizzy trail, and each with a water jar on her head. He shouted at them to see them run. They acted almost exactly like wild animals, increasing their gait each time that he sent a cry after them at intervals of about a half-minute, and then slowing down between the shouts. This same fellow, however, could not be induced to carry my camera tripod close to the mouth of a cave dwelling, where I wanted to get a photograph, as he was afraid that the occupants might use their bows and arrows if they thought we were trying to force an entrance to their peculiar dwellings.

This arroyo abounds in cave dwellings, there being probably thirty or forty in a distance of fourteen or fifteen miles. A few years ago the main trail which leads from Carichic to the great mining region of Batopilas was diverted from its usual course and made to run through the "Canon of the Churches," since which time there has been a general tendency on the part of the cave and cliff dwellers to desert their subterranean homes and move further off the trail. It may be said,

however, that as many of the interior mines are owned by Americans, Englishmen, and others, their bullion conductors, or those having charge of pack trains carrying silver from the mines to Chihuahua, are of the same nationality, and consequently this pestering and worrying of the natives along the route has largely stopped, and the cave and cliff dwellers here are not so quick to leave their homes as they were formerly when the Mexicans opened a trail near their homes. Some of these cave dwellers where the Arroyo Valley is wide, that is, from twenty to thirty yards, have taken advantage of the little space to cultivate corn, while numberless flocks of goats can be seen grazing on the steep hillsides wherever a blade of grass or a bush of any kind can be found. There live, how-

ever, a few semi-civilized Tarahumaris in the arroyo, as seen by a log cabin here and there, and the larger number of flocks belong to them.

One cave in particular was very singular, its apparent entrance being at the water's edge, where the stream which flows through the canon must have been at least thirty feet wide. One would have thought that the only way for the owner was to swim the river to get into his home, but on closer investigation there was revealed a side entrance worn through the rock, where a person could enter from dry land. A rise of a foot in the river would put the floor of his house under water, and I doubt if it is habitable the year round, for these mountain streams are peculiarly subject to freshets, although they last only two or three days. But

The elements themselves conspired against our progress, for we left Nuevo Laredo at the end of a week's wet weather, and the road—where there was a road—was heavy and muddy, and the arroyos or dry water-courses in many instances had to be forded.

A table-land in this portion of Mexico is a vast, almost unbroken sea of cactus and mesquite. To stray from the beaten path is to become hopelessly lost. In these broad, densely-covered plains, there is little of the larger animal life, but immense quantities of rabbits and birds. At eleven in the forenoon we came upon an immense flock of goats lying in the shade of the bushes at the roadside, an indication of some sort of civilization. At last, with the sun beating down on us pitilessly, worn

out, hungry, thirsty, and half choked with dust, we reached our driver's accustomed halting place.

In this picturesque country, one of the most picturesque objects is the ranch. Oftentimes it is but a thatched roof, supported at a convenient distance from the ground by poles, and with the most meager furniture. Again they are extensive, with outside walls of mesquite branches, mud-plastered, and with every appearance of comfort, surrounded by a high and close wall of mesquite branches. They are never more than one storey high, and always with an earthen floor. The rich, full tones of a grand piano, in perfect tune and well played, coming from one of these ranches was a sufficient surprise during one day's ride in this portion of Mexico, but this was at a ranch of the better class. I have seen others that were the common playing ground of the numerous children, goats, dogs and pigs. At the ranch which was to provide us with rest and refresh-



IN THE LAND OF THE LIVING CLIFF AND CAVE DWELLERS ON THE URIQUE TRAIL.

the average cave dweller can usually pick up all his worldly belongings in his two hands and walk off with them at a moment's notice.

Coaching in Mexico.

Riding all forenoon in a rickety, creaking Mexican stage coach, with no companions save four Mexicans, including the driver, in a wild and lonesome table-land in Northwestern Tamaulipas, was perhaps the most lonesome day of my existence. Our progress was slow and tedious, for the Mexican promise of four horses had dwindled down to one pair of diminutive, chafed, collar-galled Mexican mules.

ment, our host was the typical Mexican, dressed in the heavy sombrero, light shirt, and pantaloons, with the inevitable corn-shuck cigarette, always smoked with a few puffs and replaced with another.

While our host was preparing our meal, he sought to entertain us by furnishing us, what was to me at least, real pleasure, an opportunity to look through a "Travelers' Book."

The Mexican sentiments were patriotic, the English complaining of the want of a good hotel.

I could not refrain from subscribing my testimony to the courtesy of our host, the lovely air and scenery, and went to sleep, only to awaken when our driver came to announce that it was time to start.

R. K. M.



"YOUR CONDUCT IS THE ONE GREAT BAR BETWEEN."

For MASSEY'S ILLUSTRATED.

THE BARS BETWEEN.

A THANKSGIVING STORY.

IT was a bright and beautiful Thanksgiving Day. A handsome young girl stood leaning thoughtfully against the bars which led into the orchard. Her garden hat hung over her arm and the gentle breeze lightly stirred the rippling curls which lay on her forehead; while the sun, just setting behind a great golden bank of clouds, cast soft shadows across her face. But there were other and deeper shadows there, and a look almost of pain came into her eyes as she heard footsteps approaching; nor did she turn when a fashionably dressed young man, hastening down the lane, bent over her, saying gaily: "Ah May! were you so impatient for my coming that you came so far to meet me? But wait, sweetheart, there are the bars between—"

"Oh, Tom!" interrupted May, and though there was a smile on her lips, there were tears in the bright eyes; "that is just the trouble."

"Trouble, May! what do you mean?" and Tom Scott leaned forward to look in her face. She was silent and Tom added: "Remember what you promised last night. I have come to hear my fate; and you talk of trouble. Don't you love me as you thought, May?"

"I love you dearly," May said, softly; and one look into her eyes told her lover how truly she spoke, "but father says—"

She ceased as Mr. Baldwin, who had been in the carriage-house, and so unavoidably had overheard her words, came slowly toward them. There was a kindly gleam in his sharp, grey eyes as he said:

"Let me tell what 'father says,' little May." Then turning to Tom, he continued: "Do not be offended if an old man speaks plainly. I know you love my daughter; but what have you to offer in exchange for the good home she must leave if she becomes your wife? Your farm is mortgaged to the utmost; and, so far, you have done nothing to help it. Your father gave you the best of education, but it has unmade you for a farmer, and made nothing else of you but an idle, fine gentleman,

that I can see. These are harsh words, I know; but your father was my best friend, and I cannot bear to see you stand idly by, while the home that he toiled for so long slips from your hands. You said just now there were 'the bars between you and May,' meaning only the light obstruction against which you lean. I say, frankly, your conduct is the one great bar between you and my daughter."

As the old man spoke Tom's face grew cold and hard—he drew back as if the words were blows almost. But May said:

"Don't be angry, Tom. There is no bar between our love. I will wait."

He looked into her sweet, troubled face, and his better nature prevailed.

"God bless you, darling!" he said. "Your father is right. I have been idle and wickedly thoughtless; but that is past. Only have faith in me and I will take down the bars between us, if life and health are spared."

"Spoken like a man!" said Farmer Baldwin, heartily. "There's my hand on it. And remember, dear boy, though I spoke harshly, you have no better friend."

"I'm sure of that," said Tom. "He is a true friend who speaks out frankly what he knows to be right. But I can see May surely, while I am working for her?"

"May must settle that," said Mr. Baldwin, as he hurried away. He was a shrewd, careful man, who hated debts and despised an idler; who believed that what a man honestly earned he prized doubly; and who believed, besides, that each young couple should have their own home in which to begin the new life together. If Tom disappointed his expectations, it was better to find it out before entrusting May to his keeping.

Mr. Baldwin, had never exactly approved of Tom's college education; but Mr. Scott, had always said: "It won't hurt my son. I believe that the day is surely coming when farming will be as much a profession, and as honorable, as the ministry, and farmers will be regularly educated for their profession. Why, a man needs knowledge of chemistry and geology both to understand the properties of the soil he tills."

So Tom had been sent to the best schools, and to

college afterwards; and his father had worked early and late to supply the expenses of his education. But troubles had come crowding upon one another, and striving to bear the burden alone, Mr. Scott had sunk under it; and dying suddenly, left his affairs in dire confusion.

Of course Tom came home at once. Mr. Baldwin aided him in every way, and kind, motherly Mrs. Baldwin cared for him and made much of him. But it was May, his little playmate grown now to sweet maidenhood, who proved the consoler of his grief, and for whom the childish love of by-gone days quickly grew into the deep, strong love of manhood.

But six months had gone by, and Tom had as yet made no effort toward removing the debt on his home. And this day, when having told his love to May, he had come for her answer, Mr. Baldwin had spoken as we have seen.

Talking over the matter that night with his wife, Mr. Baldwin decided that it was better for May to go away for a while, till Tom proved what he was made of. "If he fails," said he, "May will forget him sooner away from her."

"May will never forget him," said Mrs. Baldwin, with a mother's loving insight into her child's heart. But she, too, thought it best that May should go, and before the week was over, took her to Montreal to visit an aunt who had long been urging her niece's coming.

The lovers parted hopefully, thinking the separation would only be for a few weeks at most. But weeks rolled into months and months into years before they met again. Mrs. Thurston, May's aunt, was something of an invalid, and being ordered abroad for her health, insisted on her niece accompanying her, to which her parents willingly consented, when they thought of the advantages of travel to their child.

Meanwhile, Tom was working with the strength of a young giant, bending all his efforts in one direction with unflagging zeal—the freeing of his home from the debt which hung over it like a heavy cloud. And now the knowledge acquired in long years of study came into play. Soon he began to be known as a "successful farmer." His crops were the best in the market; his cattle the finest and healthiest. By and bye, articles betraying deep thought and knowledge of the subjects treated, began to appear in journals devoted to agriculture, and it was not long before "young Scott's opinions" became authority for even older and more experienced men.

Tom's writings, beside the good they did to others, were a source of remuneration to himself; and great was his joy when the day came in which he could hold his head proudly erect among his neighbors, a free man, "owing no man anything." But something strange had helped to hasten that day. Three times he had received an envelope bearing the Montreal post-mark, and enclosing each time a hundred dollars, "for payment of a just debt."

At first Tom had suspected Mr. Baldwin of trying to help him in this way; but that gentleman's unfeigned surprise when shown the letters proved his innocence.

It was again Thanksgiving day. Tom had been invited to join Mr. and Mrs. Baldwin in their Thanksgiving dinner. On arriving at their farm he was overjoyed to find May awaiting him. When the first rapturous greetings were over, he said: "Why did not your last letter tell me you were coming that I might have had the joy of anticipation."

"May did not know herself that she was coming," laughed Mrs. Thurston, who was there with her niece. "I saw how she was longing for the old home, so I just gave up being selfish and came on at once."

"How you've changed, May," said Farmer Baldwin, critically regarding the very elegant young lady before him; then glancing meaningly at Tom, who, in his working clothes, with sunbrowned face and hands, stood close beside her.

"But my heart has not changed," said May, who caught the glance and interpreted it aright. Then she turned toward Tom with such a loving, trusting look, that he just opened his arms and took her straight to his honest, faithful heart.

"I've the right now, for there is no bar between us," he said proudly, to Mr. Baldwin.

"I think May helped to take down one of the bars," said Mrs. Thurston, slyly.

Then, in spite of all entreaties, she told how, in the land of art abroad, May had developed a taste for art herself, had studied diligently, and at last—because her pictures were so sweet and simple, with their stories of country life in the wonderful new world—they found ready sale among those who were tired of the "old masters." And how all the money so earned her niece had begged her to send to Tom, which she had done through her lawyer.

Hearing this, Tom looked so sternly at May that her eyes filled with tears.

"Don't be angry, dear," she said (and her words and pleading voice brought back the memory of the day, long ago, by the orchard bars); "it was for our home."

They are in that home now. Tom, prosperous and happy, has added many an acre to the farm which once was so nearly lost, and May has earned enough to beautify the home that is her especial province. They work together, and on each recurring Thanksgiving day they especially bless the day when Tom resolved to break down the

"BARS BETWEEN."

For MASSEY'S ILLUSTRATED.

Can our Present Methods of Farming be Improved upon, and if so, How?

By MR. D. P. L. CAMPBELL, VANKLEEK HILL, ONT.

If we scan the pages of history and follow the records of nations, we will find them emerging from a barbarism and ignorance to culture and enlightenment, ever reaching forward to a state of advancement and advantage. True, their course may not be unimpeded, but on the contrary circumstances may arise that would seem for a time to check their progress and even threaten to terminate their very existence, but how often has it occurred that when a crisis comes and matters would appear to make retrogression inevitable, help would come in an unexpected way. Some famous leader would appear on the scene of action and with a master-hand exert an influence that would turn the tide of affairs, and again the cry would be "forward."

Or, take, if we will, the records of science, and there will be found at first but the faintest glimmer of light on the subject; but wait a while and as the rays of light in early morning chase away the shadows and darkness of night, so investigation and research will reward the patient student with a knowledge of his subject that at one time might be considered impossible. Just as in childhood, when told that there were people living on the opposite side of the earth, we wondered what could keep them from falling off. After a time, however, something of the laws of gravitation was learned

and now we can understand in a measure, at least, why it is that our antipodes are not sent off to wander among the planets. To the uninformed mind, the globe, on which we live, is considered to be a flat surface with sun, moon and about a thousand stars revolving around it. But what does astronomy teach? It teaches us that we live on a ball, which revolves daily on its axis, at the same time moving onward in its orbit with the sun as a centre. Instead of being able to count the stars and imagine their distances while viewing them with the naked eye, astronomy with her instruments reveals to us hundreds of stars in a space equal to that of the moon's disc.

This serves as an example to show what advancement has been made. And what is true regarding astronomy, applies to other sciences. Instead of the chemist still continuing to seek for the "Philosopher's Stone" and "Elixir of Life," we find him analyzing soils, plants and animals' bodies, ascertaining their composition and then turning the result to practical account in the arts, manufactures, and agriculture.

Let us however turn our attention to farming, and do we not find most gigantic strides made in this line also? Instead of merely using what might grow of its own accord, and with few wants, and these easily gratified, we find man laboring to improve his condition and devise better methods to cause nature to respond to his call thereby enabling him to satisfy his varied requirements. In order to accomplish this he utilizes the strength of the horse, ox and mule, the power of steam and force of wind.

No longer can the finger of scorn be pointed at the farmer as he digs his ground to prepare it for the seed, or as with reaping hook and aching back he cuts his grain; then to save time stacks it by moonlight, and afterwards accomplishes the threshing with a stick. What a change has come over all this?

The soil is inverted with a riding plough. When the crops are matured they are cut with mower and binder, pitched on the waggon with a loader and unloaded with a pitching machine. Again instead of wintering his stock on the leeward side of a stack, stables are provided to shelter them from the rigors and changes of winter. And further, instead of feeding in a haphazard sort of a way anything that may chance to come to hand, the intelligent and progressive farmer calls to his aid the chemist and practical experimentalist and ascertains

from them what combination of food he shall use to give the most satisfactory results.

Notwithstanding all that has been attained, the fact that experimenters are still at work and with each succeeding year something further has been discovered and improvements made, points to the inevitable conclusion that better methods can yet be reached. How?

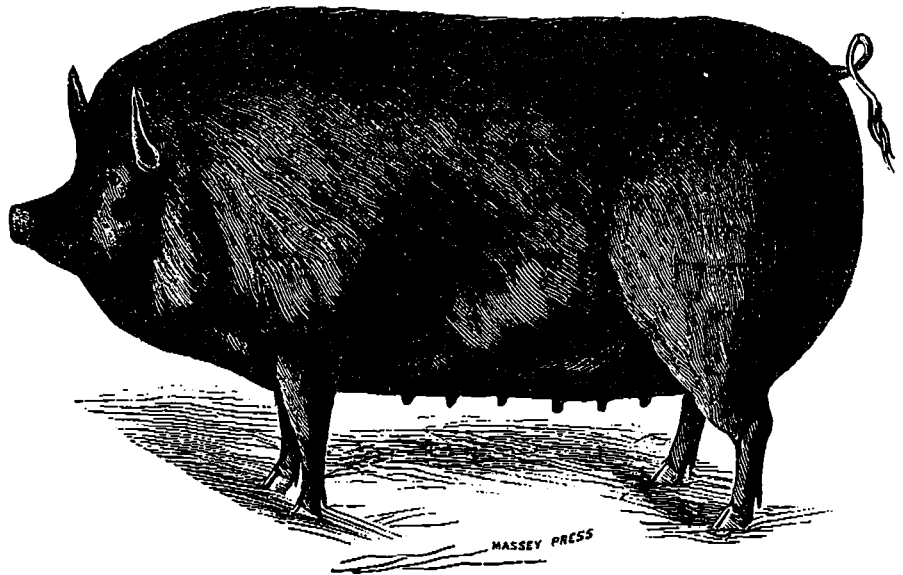
While we may have come to the conclusion that improvements in our methods will take place, it may be somewhat difficult to indicate "how." But let us try and see if we can discover some of the points to be aimed at in order to advance.

Although at one time it was thought that the fertility of our prairies was inexhaustible, the contrary is now proven to be the case, and to maintain the productive capabilities of the soil it is found that what is taken from the soil must be returned, or it will deteriorate. Hence as little as possible must be sold off the farm, and what is disposed of must be in a concentrated form such as beef, pork, mutton, eggs, butter etc.

In securing this the question of the cost of production meets us and if we can produce at a cheaper rate, then "a penny saved is a penny gained."

According to present methods grain crops are cut, allowed to dry, then hauled and stowed away in barns or stacks. Threshing follows; straw is run through a cutting box; the grain ground into meal and mixed with the cut straw or other feed before it is considered ready to enter into the animal system. All this requires considerable labor. Now in order to overcome this to a great extent could not our implement manufacturers construct a machine on the principle of the binder, with a waggon attached, having a suitable rack and as the grain or crop was cut it would be elevated into the rack, and when it would be full the waggon could be detached and hauled away to the silo, while another waggon could be attached to the machine? If a machine of this kind could be built and a mixture of, say, peas and oats sown and afterwards cut on the green side and siloed at once, it would undoubtedly make an excellent feed and at a comparatively lessened cost. As an improvement in silos, may we not hope that some clever Yankee will yet devise means by which the ensilage can be taken from the bottom, instead of the top, and thus lessen the labor bill still further. After a time it will probably be discovered, that some localities are better adapted for certain branches of agriculture than others. In one place dairying may prove to be the most suitable; in another, sheep-raising.

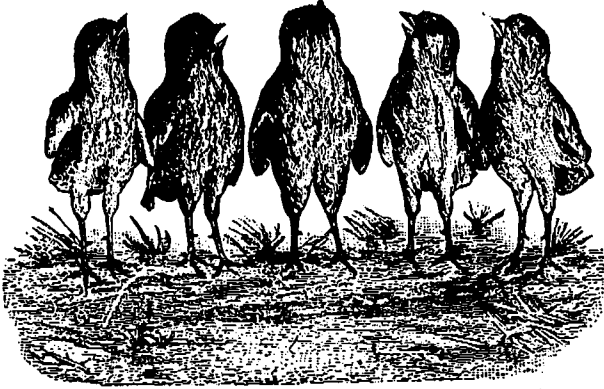
Instead of living a quarter of a mile apart, farmers may find it to their advantage to live in villages. In these and many other ways, methods of farming will improve in time to come.



Pure-bred Essex Sow.

OUR illustration is that of a pure-bred Essex sow, one year old. The Essex is one of the so-called small breeds. The general appearance is well shown in the engraving. The color is jet black; hair fine, rather thin and without bristles. The face is short and dishing; ears fine, soft, erect when young, but incline somewhat with age; carcass of medium length, broad, straight and deep; bones fine, but strong enough to support the body; hams broad but well let down. They mature early and are surprisingly easy keepers. In fact their ex-

trême aptitude to fatten is at once the characteristic merit and the greatest drawback of the breed. Under ordinary treatment, no pigs give quicker or larger returns for the food consumed by them than the Essex; but when kept in confinement and full-fed, the carcasses are too lardy for modern taste, and lack a desirable proportion of lean meat. This tendency to fatten should be counteracted by diet and exercise. They are good grazers and should have unrestricted run of pasturage, and very little, if any, corn or other fattening food, save to finish them off for the last few weeks before slaughter.



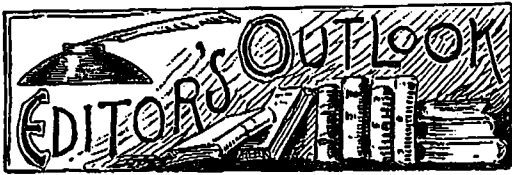
November.

No breeze the balm of woods to bring,
No leafy branches waving nigh,
No bud to flower, no bird to sing,
No song between the earth and sky,
No oriole with sunny wing,
No hills of green to greet the eye.

No blossoms on the faded brier,
No fragrance in its withered stem,
No life in leaves as red as fire,
No sweetness in its ruby gem,
November, like a sober friar,
Now doffs Queen Nature's diadem.

Yet how delightful is the day!
The leafless limbs like ladder-bars,
Bear our plumed fancies far away;
Like Jacob's stair that touched the stars,
They hint of white wings, and the ray
Of glory from God's golden cars.

What though the bird's deserted nest
Swings without song upon the tree,
Like a sad heart within the breast,
And faded leaves fall fitfully—
Spring will return, the gorgeous guest,
With song and balm for you and me.



TO OUR READERS.

We are exceedingly pleased to be able say, as we are about to enter upon our third year, that MASSEY'S ILLUSTRATED has already secured a place in our rural homes such as few, if any, of the old-established publications of its class can boast of. It has thus rapidly won its way to popular favor strictly upon its merits. We can honestly say that any promises we made two years ago have been fulfilled to the best of our ability and such will be our policy in the future. Our sole desire is to see the ILLUSTRATED steadily growing and creating in its influence, and if our friends who appreciate our efforts—and we are glad to know they are not few—will co-operate with us during the coming year, our list of subscribers will be more than doubled, and we will thereby be encouraged to do even better things in the future.

We have to draw the attention of our readers to page eleven, where they will find something of interest to them, and also to our clubbing list on page sixteen, from which it will be seen that by sending us the regular subscription price for any of the Canadian Weeklies, they will have the ILLUSTRATED practically for nothing and besides by subscribing now they will get the balance of this year free. This rare opportunity should be largely taken advantage of.

FROM statistics furnished to the British Board of Trade it is shown that during the present year there has been a great falling off in emigration from the British Isles. For the nine months ending with September the emigrants of British origin to all parts of the world numbered 176,056, as against 208,315 for the corresponding period of last year, showing a decrease of 32,259. Of the total number 20,041 came to British North America, as against 25,739 last year, a decrease of 5,698.

THE attention of our readers is drawn to the following new regulation of the Post Office Department:—"108. Every person who uses or attempts to use, in pre-payment of postage on any letter or mailable matter posted in Canada, any postage stamp which has been before used for a like purpose, or who uses or attempts to use for the purpose of transmission by or through the Post, any post-card, or stamped envelope, or stamped post band or wrapper, which has been before used for a like purpose, shall incur a penalty not exceeding forty dollars and not less than ten dollars for every such offence; and the letter or other mailable matter on which such stamp has been so improperly used, and the post-card, stamped envelope, or stamped post-band or wrapper so used more than once, may be detained, or, in the discretion of the Postmaster General, forwarded to its destination, charged with double postage."

THE Canadian hen occupies at present a most unique and enviable position; she is, in fact, the observed of all observers. Is a hen, a bird? That is the question which bothers a large number of people. In the McKinley bill "Eggs" are charged with a duty of five cents per dozen and in another part of the bill appears the following entry: "Eggs of birds, fish and insects, free." People on this side of the line, when they heard of the duty of five cents per dozen on eggs, at once jumped to the conclusion that the product of the hen was meant but on learning of the other entry they, or at least some of them, began to think that they had been too hasty in their conclusions as they slowly realized the fact that from time immemorial a hen had always been ranked as a bird. If she is not a bird, what on earth is she? To call her an animal would be the height of absurdity. It is just as irrational to contend that a hen is not a bird as to contend that sheep, cows, horses and goats are not animals. We understand it is seriously contemplated to bring a case into the United States courts to test the point and we believe it will be held that a hen, being a bird, her product should be admitted free of duty.

THERE have been, this year, an unusually large number of cases of typhoid fever throughout the Dominion. It has been suggested that the recent epidemic of the grippe may have afforded the occasion, the opportunity, for the appearance of typhoid fever; it may have so weakened many people as to make them susceptible to the malady. But we think the etiology of typhoid must be sought for in another source. Typhoid fever is not indigenous in any locality; there must be a cause for it, and that cause is only to be found in the introduction into the intestines of the typhoid bacillus. There are many ways in which this bacillus may reach the locale where it will create a nest in which the disease will be hatched, but the most facile line of approach is that furnished by water. It is therefore of the utmost importance that the water we drink should be free from all sources of pollution. It is a peculiarity of the bacillus that it will only develop in situations where the conditions are favorable, as for instance, one person in good health and another who is not so strong may be infected, and the result will be that, in the latter, the disease will be developed, while the former will remain unaffected. That the fever may be limited to certain localities in large cities is not at all proof that it is not due to the water; the influence of environment is simply indirect. The residents of some places are more liable to attack than those of other places as the localities happen to be healthful or the reverse.

THERE is no better method of training the eye and all the faculties lying back of the organ of vision, which receive and develop the impressions obtained by the eye, than that of making careful descriptions. This may be practised in several ways. For instance a farmer has attended one of our leading fairs and on his return is anxious to describe

to his neighbors, who had not the same privilege, some of the prize animals. In doing this it is an easy matter for him to give general ideas which are both vague and misleading. Suppose a description is attempted of a horse. What are some of the peculiarities by which this animal, so superior as to lead his competitors, can be distinguished from all others? Attempt to approach accuracy in size, weight, the shape of various parts, etc. It will not be long before a second sight of the horse will be needed to clear up some of the doubts that detailed description has developed. Again, take some object near at home, and one with which you are familiar, and think you know all about. How does one cow differ from any other in the herd? Fix upon some points by which you could describe each one of the whole herd to a stranger or by which the same person could identify them. Next to oral description, and in some respects its superior, is the plan of writing out a description. Draw a plan of your farm with all the fences, gates, etc., from memory. Try the same with the buildings, grains, fruits, seeds, woods, leaves, and thousands of other familiar objects that offer excellent subjects for descriptive study. In short, try to express in words or drawings, or both, the characteristic features of surrounding things. Such attempts are far from wasted, for they train the observing powers and faculties of discrimination, upon the right use of which success in life depends, and nowhere so manifestly as with the farmer.

How far back into the misty past the legend runs that men and women, drinking at some spring or mountain stream, have gulped a lizard, we will not undertake to say. The story may be read in magazines one hundred years old, as it may be read in the papers of the present day. It is always the same story. Carelessly and hastily drinking at a spring, without the intervention of a drinking cup, the thirsty soul takes down an infant lizard casually swimming there. Safely ensconced in the human stomach, the lizard at once proceeds to make himself at home, and, notwithstanding his necessary lonesomeness, he thrives mightily. After nourishing it in that dark cave for three or four years the man undertakes to rid himself of his uncomfortable inmate, and in the general melee that results the lizard invariably gets the best of the encounter. He kills his man. This is the common legend, and it has been told so often that there are a great many people who believe it. Now the truth is that the saurian reptile known as a lizard and its various congeners are air-breathing animals, and can no more live without the atmosphere than can any other lung-possessing animals. Certain species inhabit swamps, but they cannot live under water for any length of time. Hence, if it was the misfortune of one of them to find the way to a human stomach, he would induce such a commotion and nausea inside of his prison as to induce his gaoler to let him up easily, or he would die and be digested as live oysters die there and are digested. All these stories about lizards in the stomach are old wives' fables, and have a like foundation to the story of the "three black crows." Everybody knows that story, and this other is the same. Some person somewhere, once upon a time, threw up something that was as "green as a lizard."

OUR correspondent in Melbourne, Australia, speaking of the collapse of the land boom there gives some startling figures regarding the present values of land in the heart of the city. He says: "Within the past three months the Mutual Life Insurance Company of New York have completed the purchase of 110 feet on Collins Street, at the corner of Elizabeth, at £2,100 per foot, and with a frontage they had to purchase on Elizabeth street to complete their block, brought the Collins street frontage up to the sum of £2,700 per foot (about \$13,500). The Athenæum Club is now putting up a new building on the site of George and George's warehouse, recently destroyed by fire, in Collins street, and they are paying a ground rental of £75 per foot, per annum, for a term of years, we think thirty. These figures will give you a little idea of the land values here, and from all we can learn there is little prospect of a decline in city values

for some years to come." Such prices are almost incredible when it is considered that in 1836, little more than half a century ago, when the site of Melbourne was marked out, there were only thirteen buildings, viz: three weatherboard, two slate, and eight turf huts. As a comparison between the value of land there in 1835 and the present year, it is stated in Wright's *Australian Gazetteer* that in the former year John Batman, a New South Wales settler, acting as agent for a knot of speculators, made his way to what is now the site of Melbourne and there made acquaintance with the native chiefs and persuaded them to sell him all their right, title, and interest to about 600,000 acres of fine land for the valuable consideration of "twenty pairs of blankets, thirty tomahawks, one hundred knives, fifty pairs of scissors, thirty looking-glasses, two hundred handkerchiefs, one hundred pounds of flour, and six shirts." This brilliant investment, however, brought him no results, for the government annulled the trade.

THE McKinley Bill is being hotly discussed and criticized almost throughout the whole civilized world. Great Britain, France, Germany, Austria, Italy and other nations who are affected in their exports by the new tariff are considering the best means of meeting the difficulty by retaliation or otherwise. Regarding the policy of our own country Sir John Macdonald, in his speeches at Halifax and St. John, N. B., gave no uncertain sound. Canadians, he said, were not to be coerced by a restrictive trade policy into selling their flag and their allegiance to the Queen but would remain true to their own Dominion and the British empire. He believed the McKinley Bill would not do much immediate harm, but the effect would be of much ultimate good. The people of the country would rise in their might and seek and find new avenues of trade. Such are the Premier's sentiments and they have found a cordial response from the press and people of the mother country. Fresh markets will be found in England, the West Indies, Australia, China and Japan for Canadian products which are shut out from the United States. Trial shipments of eggs have already been made to the English markets with most satisfactory results and a ready and paying market will also, it is said, be found there for our surplus hay, barley, cattle, sheep and hogs. Other channels of trade will be found for other products but that cannot be done in a day or a year, as when trade has once got firmly settled into certain grooves, it is always a labor of time to accomplish a wholesale transfer. In the effort, however, the Dominion will, without doubt, receive all the assistance that the mother country can possibly render; therefore, the time may not be so far distant as some people imagine. It is believed that the increased duty will have little, or no effect, on the exportation of our horses to the States as the purchasers will rather bear the extra duty than be without them. In this respect *The Horseman* of Chicago, a conservative journal on equine topics, pays the following compliment to Canada in its last issue: "It is not an exaggeration to say that in none of our States is the breeding interest becoming more firmly established and making greater comparative progress at present than in Canada. The movement is general all along the line, from the sandstone headlands that are washed by the Gulf of St. Lawrence to the boundless plains of the Great Lone Land. Many parts of the Eastern provinces are as admirably adapted to the breeding business as the rich province of Ontario, the better sections of which in agricultural wealth will compare favorably with any of the States. A tide of good blood has steadily poured across the borders, and now almost every county in the Dominion has its well-bred stallion, and on many farms are gilt-edged matrons."

WE are told that "patience and perseverance overcome all obstacles." Perhaps they do in most things but in the matter of the establishment of a system of advanced Public Schools among our rural populations, more especially devoted to the interests of agricultural education, it would seem as if something more than the exercise of these virtues were necessary to overcome obstacles that may be in the way. Are there any obstacles? We

do not know of any and it is therefore passing strange that none of our Local Governments has taken steps to give the system a trial. It has been successfully tried in other countries, at trifling expense, and its introduction in this country would be so manifestly to the advantage of our agricultural communities, that we wonder why they do not rise in their might and compel the governments to give it practical effect without further delay. What is to hinder each rural constituency from sending a deputation to their member in the Legislature and telling him quietly but firmly that he must use his influence with the Government in this direction? That would be a simple and effective way of helping along the good work. This is not a matter that farmers should look upon with indifference. It vitally concerns their own and their children's future interests and they should lose no time in taking concerted action, in the manner indicated, to have these schools established. The Public School Inspectors of Ontario have placed on record their opinion that it is desirable to establish such schools, and, we think, it will be admitted that few are better qualified to speak advisedly of the educational requirements of the rising generation, than they. It is a notorious fact, as we have previously said, that boys are reared in our rural districts without knowing and without noticing intelligently the thousands of objects of interest that surround them. Trees, flowers, grasses, wild beasts and birds are, with a few insignificant exceptions, sealed books, as it were, to the rustic youth. It is hardly to be wondered at that it is so, because his father before him knew equally little, and the instruction he receives at school deals with altogether different subjects, useful in their way, no doubt, and necessary, but barren of interest to youth as compared with the book of nature when properly opened and explained. It might, however, be very much otherwise were a suitable key provided for the opening up of nature's mysteries. Then we would have a wider and deeper interest in the things of the country taken by boys belonging to the country, and less of the growing tendency to crowd into large urban centres—in many cases much to the disadvantage of those who go. While on this subject we may mention that in Austria there is not only a High School of Agriculture, costing the State 125,000 florins a year, but there are fifteen intermediate and eighty-three primary agricultural schools besides nine chairs of agriculture in polytechnic establishments and agricultural experiment stations. Moreover, there are 162 courses of agricultural lectures, attended on an average by about ten thousand a year. The whole expense of agricultural subventions is set down in the Austrian estimates for the present year as 1,777,084 florins, equal to about \$888,500.

Words of Encouragement.

THE following letters are among the many received last month:—

MR. ALFRED B. OWEN, agent, Dr. Barnardo's Home, Toronto.—Enclosed please find cheque in payment of account, which kindly receipt. We shall be glad to renew our contract for another year at same rate, as I am pleased to say your paper has been of great service to us and brought us into communication with a large number of the best class of farmers.

MR. ED. M. JAMIESON, Melita, Man.—Please find enclosed fifty cents, for which, kindly send me MASSEY'S ILLUSTRATED till Dec. 1891. I congratulate you on its success. We like it as a home paper, and do not mean to be without it again. Wishing you success, etc.

MR. J. READER, The Pas, Cumberland, N. W. T.—Please find enclosed fifty cents, in postage stamps, in payment of my subscription for the next year's numbers of your interesting publication, which is always welcomed out here.

MR. S. MILLS, Bunyan, Ont.—I am a reader of MASSEY'S ILLUSTRATED and am well pleased with it. The letters from Palestine were really interesting. I think many of the cuts of inventions and hints with regard to farm management worth the price of the magazine. Your September number was a beauty.

MR. C. A. CASS, L'Orignal, Ont.—Enclosed please find one dollar to pay for MASSEY'S ILLUSTRATED for this year, which I am receiving, and for next year, 1891. I like your paper very much and consider it well worth the money.

SEE advertisement on page 11.



1st.—The McKinley Tariff bill signed by President Harrison. General Lord Wolseley assumes command of the troops in Ireland.

2nd.—Disastrous fire in Sydney, New South Wales; loss £1,500,000. Circular issued by the New York Central railroad to the heads of departments instructing them to employ no more Knights of Labor.

3rd.—Sir John Macdonald and other Ministers address two public meetings in St. John, N. B. Arrival of the Comte de Paris in New York.

4th.—Death of the wife of General Booth, Commander-in-chief of the Salvation Army. The first ground broken for the construction of the great Niagara tunnel.

5th.—All the buildings on the State Experimental farm at Hamlin, Minn., destroyed by fire; loss \$35,000.

6th.—The Mormons at a General Conference in Salt Lake City, accept the manifesto of their President forbidding in the future all polygamous marriages.

7th.—Ten men killed, twenty wounded, and the village wrecked by a series of explosions at the Dupont Powder works, Rockland, Del. The Imperial Parliament summoned to meet on Nov. 25th. Arthur Hoyt Day, found guilty at the Welland Assizes of murdering his wife by throwing her over the precipice at Niagara Falls, and sentenced to be hanged on Dec. 18th.

8th.—Tilsonburg, Ont., carries a by-law in favor of a \$10,000 bonus to the Tilsonburg, Lake Erie, and Pacific railway. Hon. Wilfrid Laurier, leader of the Opposition, addresses a big political meeting at Abbotsford, Que.

9th.—Two school girls, Mary and Eliza McGonigle, outraged and murdered, in a wood near their parents' residence, Cumberland, Russell County, Ont; the suspected murderer, Narcisse Larocque, arrested. Formal opening of the West End Y. M. C. A. building, Toronto.

10th.—Wm. O'Brien, and John Dillon, the Nationalist M. P's, make their escape from Ireland, forfeiting their bail of £1000 each, in order to visit the United States. Fire in Wallaceburg, Ont.; loss \$10,000.

11th.—The Pillow-Hersey Manufacturing Co's rolling mills at Point St. Charles, Que., destroyed by fire; loss \$75,000. The Jews in Sebastopol, Russia, ordered to leave the city.

13th.—Deaths of Justice Miller, of the United States Supreme Court, and ex-Secretary of War Belknap, at Washington. The children of the Public Schools, Toronto, celebrate the anniversary of the battle of Queenston Heights.

14th.—Death of Mr. R. Sellars, the oldest native of Kingston, Ont., and the oldest Freemason in Canada, in his 90th year. Public reception tendered the delegates to the Eighteenth Annual Congress of the Association for the Advancement of Women, at Toronto. F. Blanchard sentenced to be hanged at Sherbrooke Que., on Dec. 12th, for shooting his companion, Calkins, in November last.

15th.—Valuable seams of coal located in Cape Breton.

16th.—The Leland hotel, Syracuse, N. Y., destroyed by fire, four lives lost. The Senate and Regents of Victoria University assent to federation.

17th.—Opening of the annual convention of the Baptists of the Dominion, at Woodstock, Ont. Archdeacon Farrar accepts the chaplaincy of the Imperial House of Commons.

18th.—The new Cape Breton railway just completed by the Government formally opened by the Governor-General.

19th.—Dr. Dennis O'Connor consecrated Bishop of the London, Ont., diocese in presence of an immense congregation.

20th.—Death of Captain Burton, the distinguished traveller and writer. Abbott and Co's machine shop and workshops, Montreal, destroyed by fire; loss \$40,000. Death of Senator Archibald, of North Sydney. Sir Richard Cartwright opens his political tour by addressing the electors of Renfrew.

21st.—Rev. James Thompson, Methodist minister, at Honeywood, Ont., suspended for preaching conditional immortality and the annihilation of the wicked.

22nd.—Three railway collisions in the United States, one near Birmingham, Ala., the other near Kansas City, and the third in a tunnel near Cincinnati, O.; six persons killed and many injured. The Gladstonians carry the election in the Eccles division of Lancashire, previously held by a Conservative.

23rd.—Reported that New York merchants are to test the constitutionality of the McKinley Act in the courts.

24th.—Severe storm in New York and Boston and along the coast, ships wrecked and great loss of property. The Comte de Paris enthusiastically welcomed in Montreal.

25th.—Great festivities in Berlin, Germany, in celebration of the ninetieth anniversary of Count Von Moltke's birthday.

26th.—Archbishop Cleary of Kingston, Ont., invested with the pallium in presence of a distinguished gathering of clerical dignitaries.

27th.—Another destructive fire in Kinmount, Ont.; loss \$12,000.

28th.—Father Macdonell consecrated Roman Catholic Bishop of Alexandria, including Glengarry and Stormont.

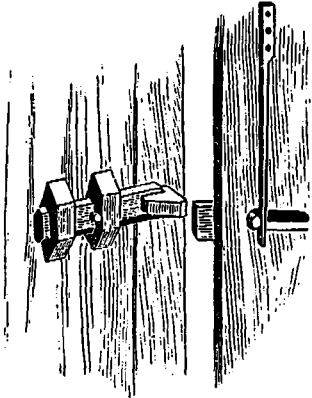
29th.—The explorer, Stanley, sails from England for his lecture tour in the States and Canada. The North West Assembly opened at Regina.

30th.—The Governor-General lays the foundation stone of the new buildings in course of erection in connection with McGill University, Montreal.



Barn-Door Fastening.

A DEVICE for fastening a barn-door is illustrated herewith. It consists of a wooden bolt, playing loosely in two wooden guides. A pin of tough hardwood, two and a half to three inches long, is firmly driven into the bolt, and extends through a transverse slot in the door. On the inside of the door is fastened a spring of ash or hickory, with its free end resting against the pin. As the door is



SECURE DOOR FASTENING.

closed, the bolt catches on the wooden fastening driven into the opposite door-post, and is held there by the spring inside of the door. This is a very simple contrivance, but it is none the less valuable. A bolt on the barn-doors is always in place. Even where honesty is the rule, it is better to lock the door before the horse is stolen.—*American Agriculturist.*

A Simple Saw-Mill.

FIG. 1 shows in horizontal section a method of cutting down a standing tree by the aid of spring-poles. An inch hole is bored into one side of the

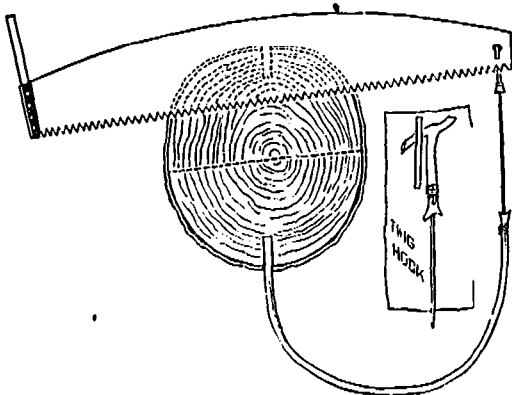


FIG. 1.—HORIZONTAL SECTION OF TREE.

tree directly opposite the point where the saw-cut is to begin. Into this hole is inserted the butt-end of an elastic pole, cut to the proper length. To the tip of the spring-pole is attached a hook cut from a forked branch. This end is then bent

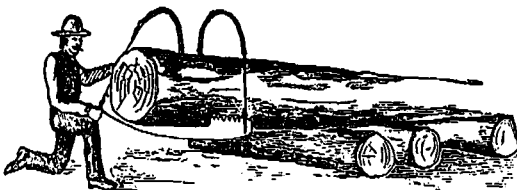


FIG. II.—MODE OF CUTTING FALLEN TREE.

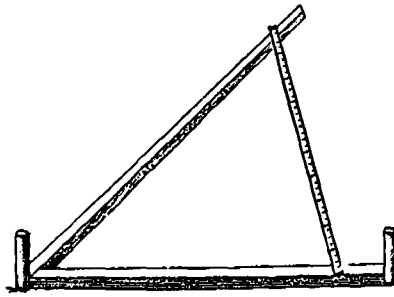
around and the hook inserted into the hole in the saw near one end. This spring-pole holds the saw close to the work, and assists in hauling it, as the sawyer, grasping the handle, pushes it from him. When the tree is cut half off, the hook is liberated from the saw and the spring-pole shifted to the

opposite side of the tree, where it assists in completing the work.

Fig. 2 shows a similar method of cutting the fallen tree to logs of any desired lengths. In this case two spring-poles are inserted into holes in the upper side of the tree, as the distance from the ground would not admit them on the lower side.

Uses for a Ten-foot Rod.

AMONG the things which are found convenient in every farmer's work-shop is a ten-foot pole, made thus: A piece of wood, one and a quarter inches square and ten feet long, is nicely smoothed with the plane, and then marked as follows: One side has a mark every three feet, to indicate yards; another side is marked every two feet; the third side is marked every foot; while the fourth side has feet, inches, and half inches, the pocket-rule furnishing the smaller sub-divisions of an inch. This measure will be found useful in many places. For instance, when a small building is being started,



stakes are set in the ground at each corner. The proper angle of the sills may be found by measuring eight feet on one, and six on the other. Bring them together until the ten-foot pole just reaches both marks, as in the engraving, and a right angle is the result. Again, the proper length for a post, to support a low roof, is quickly measured with such a pole. If a corn-crib is being built, six feet wide at the bottom, seven at the top, and nine feet high, the proper length of the various scantling is readily measured off. Many other uses will be suggested when this simple implement is at hand.

To keep apples in winter, spread buck-wheat chaff on the barn floor, and on this place the apples, and then cover them with chaff two feet thick. Fill the interstices with chaff. Other fine chaff will answer. The chaff will exclude cold currents and absorb incipient decay.

The compost heap is the best place for any rubbish that will decay and become fitted for manure. Old bones should be broken fine before being thrown into the heap. If weeds that have gone to seed are put in, the seeds will become scattered with the compost and bring future crops. It is much better to burn them. Where the droppings of the pig-pen, hen-roost, or stable are added to the compost heap, lime and ashes should be kept out, or they will drive off the ammonia.

WHERE owners of dwellings burn fire-wood for fuel there is danger that the accumulations of soot may take fire and cause a conflagration. The chimneys should be cleaned at least once a year or oftener. Choose the first calm day after rain when the shingles have been thoroughly soaked, or when the roof is covered with snow, clear all out. The blaze of one year's soot will not then be attended with danger, but the accumulation of two or more years set on fire on a dry day, and especially with a brisk wind, may be uncontrollable—more so if the men are on a distant part of the farm. With no ladder at hand and a blazing flake on the shingles, house and furniture would be in great peril.

THE plan of soaking the rims of waggon wheels in linseed oil once a year is a good one and pays. It should be done during a dry spell, when the wood is perfectly dry. The wheels are suspended over a galvanized iron tank containing the oil, and slowly turned a few times every 15 or 20 minutes.

They should be soaked four or five hours to do a good job. It may be done in connection with such other work as will permit one to give a moment's attention to the wheels as needed. Some men think that the oil should be kept boiling hot, but that seems wholly unnecessary. The wheels will soon take in all they will contain if the oil is hot to start with. They should be placed under shelter to dry a few days before they are used.

A SOURCE of waste and loss on the farm occurs at this time of the year by allowing manure to be washed away. Rain falls upon it, dissolves the liquid parts, which are the most valuable, and carries them to where they can exert no benefit on growing crops. This waste can be prevented in three different ways: 1—The manure heap may be placed under a shelter built on purpose. 2—It may be supplied with a sufficient amount of absorbents to prevent the wash and waste, and farmers who raise muca grain may have enough straw for this purpose, if placed in alternating layers with the manure. 3—Or it may be drawn at once, as soon as made, to the fields and spread, and the washing it gets from rain and melting snow immediately carries this liquid to the soil where it is wanted, and by which it is at once absorbed and ultimately diffused through the particles.

THE benefit obtained from a thorough drainage of land is of great importance to a farmer and of benefit to his farm crops, and is still more necessary for the garden. An instance occurred where a portion of a farm had been underdrained, which rendered the soil fit for the early sowing of a crop of oats. Before the other part was quite dry enough, long rains set in and put off the sowing of this part three weeks later. The early-sown oats gave a fine heavy crop; the other, on account of the late sowing, gave a meagre product, but little more than one-half the other. Drainage on all soils needing it virtually lengthens the season several weeks, and often in vegetable gardens makes the difference between success and failure—between rich, delicate growth, and hard, dry, small garden vegetables.

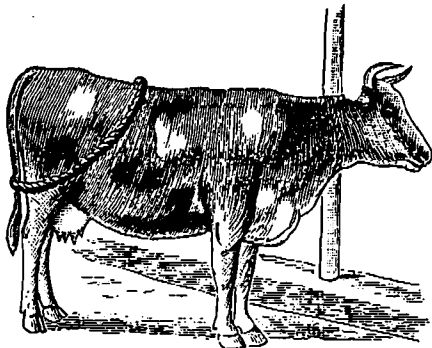
EXCEPT the lightest sandy soils, all level land will be benefited by fall plowing. That the land will leach and lose its fertility is a mistake. Nothing will be lost in any case except the nitrogen, which exists in the form of nitric acid, or the most soluble nitric salts, and, as a rule, there is no danger of this because of the almost entire absence of this form of nitrogen in the land. On the contrary, it is for the purpose of developing this scarce plant-food in the soil that fall plowing is desirable. The turning over of the soil aids in the change of the abundant inert nitrogen, which is mostly combined with the carbonaceous organic matter in the soil, into soluble nitrates, and this process goes on slowly during the fall and early spring, and, where the ground is not frozen, even during the winter. Consequently the land is brought into a more fertile condition by the fall plowing, and besides this gain, there is another of much importance, viz.: the spring work is forwarded so much, and the crops may be put in so much earlier.

Few articles so useful as grindstones are so little cared for. To save time and trouble, a trough for water is attached to the frame or rest. This is, with careful farmers, well supplied with water; the consequence is, that when the stone is not running—which is a very large portion of the time—a part of the surface is in the water and kept soft. The remainder is constantly growing harder from exposure to the air and sun. This soon throws the stone out of balance; as the wet part wears much faster than the dry, the stone becomes uneven and unfit for use. The proper way to keep the grindstone in order is to have it at all times under cover; a trough it may have, but this should be adjustable, so that it can be lowered when the stone is not in use sufficient to keep it dry. The face of the stone should at all times be kept smooth and sharp by turning off. The grinders in all tool factories clean the face of the stone as often as every ten minutes. With the stone always in order, it will put an edge on a scythe or axe in one-tenth part of the time usually taken.

Clive Stock.

Device for Use in Milking.

To get the full supply of milk and cream, unvarying kindness and quietness in the stable are requisite. With the best intentions in the world, a workman may be led into an angry exclamation, when receiving a vigorous switch in the face from the tail of the cow he is milking. A device to restrain the cow from moving her tail, and also to prevent voiding during the operation of milking, is herewith illustrated. A piece of old rope, at least an inch in diameter, is cut off six feet in length for cows of ordinary size. The ends are fastened neatly together by a splice, covered with twine. This circle



MILKING MADE COMFORTABLE.

of rope is placed upon the cow as shown in the illustration. There should be one for each milker, and nails placed where they may be conveniently hung when not in use.—*American Agriculturist.*

CLOVER hay can be supplied to the hogs that are being wintered over to great advantage after the supply of grass runs out and a peckful should be supplied daily.

WHEN the pigs from an old sow fail to grow as fast as their companions from young sows it is an unmistakable indication that the old mother is failing and should be sent to the pork barrel. While the old sow is doing well, do not discard her unless there is a certainty that she can be replaced with something better.

ONLY a portion of the food of an animal is stored up as fat; a large share is expended in keeping the animal warm. If the weather be mild, much less of the food will be required to keep up the heat, and more will go to laying on fat. There are two kinds of food elements—heat producers and flesh formers. Every farmer who fattens animals should study the composition of food, that he may thereby feed most profitably.

EXPERIENCE has shown that when horses are clipped in winter they thrive better on the same or less food than when not clipped. This fact has been investigated by an English professor who finds horses' sweat rich in albumen, so much so that it will take six ounces of oats to furnish the albumen found in one pint of sweat. He adds: "I do not know how much sweat a horse with a long coat loses with laborious work, but we may state as a practical rule that clipping must be equivalent to at least an extra pound of grain per day."

A LEARNED professor is credited with saying that green food in a tight silo and in the stomach of a cow, is closely allied in respect to conditions and changes. The paunch of a ruminant is a silo in miniature, or, if you please, a well-built silo is a large rumen for the reception and preparation of food for digestion. In each the food is partly comminuted, and in each exactly the same action is begun, namely, lactic fermentation. It may be carried a little further in the silo if it remains long, but as far as they go, the changes are both alike.

It is thought and said by some that winter dairying cannot be followed, as a rule, because the cows

will not breed in the season required. This is a mistake. Cows are entirely artificial and while undomesticated animals through the necessity of their condition, supply of food and suitable weather being the chief of these. drop their young in the spring, this rule does not apply to domesticated animals. Cows may be bred at any season of the year, and any farmer who wishes to change from summer to winter dairying will find no difficulty in the way mentioned if he will keep back his cows until the desired season. December or January is the best month for breeding cows for this purpose. It is not to be feared that every dairyman will make this change at the same time and so disturb the common order of things, for many other preparations are required besides fresh cows.

It is always difficult, and, unless properly managed, expensive and hazardous to attempt to raise the condition of a poor flock of sheep in the winter, especially if they have reached that point where they manifest weakness. If the feeding of a liberal allowance of grain be suddenly commenced, fatal diarrhoea will often supervene. All extra feeding, therefore, must be begun very gradually, and it does not appear in any case to produce proportionate results. Roots, such as ruta-bagas, Irish potatoes and the like, make a substitute for grain or serve as extra feed for grown sheep. The ruta-baga is preferable to the potato in its equivalents of nutriment. No root, however, is as good for lambs and yearlings as an equivalent of grain. Sheep may be taught to eat nearly all the cultivated roots. This is done by withholding salt from them and then feeding chopped roots a few times, rubbed with just sufficient salt to induce them to eat the roots to obtain it; but not enough to satisfy their appetite for salt before they have acquired a taste for the roots. Sheep undoubtedly require salt in winter, which may be left accessible to them in the salt-box as in summer, or an occasional feed of brined hay or straw may be given them in the warm, thawing weather, when their appetite is poor.

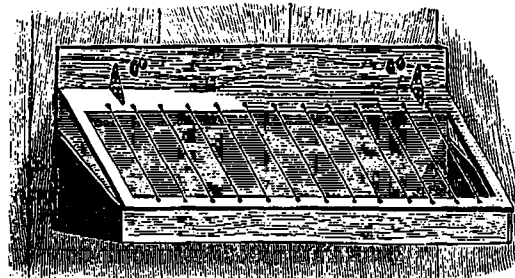
A CHEAP way to raise good pork is to have a hog range of ten or fifteen acres of high, dry land with a stream of living water flowing through it. This ground should be well supplied with fruit and nut trees, such as mulberry, plum, apple, peach, chestnut and the various kinds of oak, so that there would be something for the animals to pick up all along from June till November. Such a range would afford them ample exercise, the wild fruits and nuts would go far to feed them all summer, and a run on an adjoining field of clover or peas would keep them in fine condition, without much outlay for grain. During the last four to six weeks of the hogs' career, they may or may not be confined in a close pen, at the option and convenience of the owner, though it is better, perhaps, to confine them, provided they can always have a clean spot to eat and sleep on, and are provided with cooling vegetables, and rotten wood or charcoal to prevent their stomachs becoming disordered by too long confinement on a diet of corn. It may be laid down as a good rule, however, that any place is too small for a hog that compels it to eat or sleep in filth. Cleanliness is as essential in the fattening pen as elsewhere. The cheapest pork is made from pigs which are never wintered, and are reared and fattened by a process similar to the plan outlined. Autumn pigs kept through winter are expensive, though, of course, the farmer must winter some of them, and with proper care these too will make first-class pork, but not the cheapest meat.

The Poultry Yard.

Improved Feed-Trough for Poultry.

OUR illustration shows a wooden trough for feeding grain and other dry food to fowls, or for placing bone, gravel, shell, etc., in. It is hung about eight inches above the floor, upon two large nails driven into the wall of the poultry-house or other building. The wire bars in the cover are three inches apart, bent, driven into the strips and clinched. The cover is hinged, so that it can

be raised. It inclines at such an acute angle that the fowls cannot make a roost of it, and the food is kept perfectly free from all impurities. It is about four inches wide and can be made of any



HANGING FEED TROUGH.

desired length. This trough takes up very little room, and is especially useful for keeping granulated bone, gravel, shell, etc., in. No poultry-house is complete without three or four of them.

GOOD care and judgment are indispensable in wintering fowls. Be sure that your houses are dry and do not forget the water as fowls require it, but let it be fresh.

Eggs should be gathered daily and placed in a dry, cool room, not a cellar. Fifty degrees is a safe temperature. If wanted for hatching, turn the eggs once a day.

If you find your winter quarters are crowded sacrifice some of the fowls, or provide other quarters for them if too valuable to kill, for where there are too many together they will not thrive, and the weaker ones must suffer.

HAY cut very fine, and mixed with any kind of meal and then steamed, makes an excellent poultry food, is economical and has a good effect on egg production. One part hay to two parts meal is a good proportion, also mixed with meal, potatoes, and other vegetables.

A FOWL that will lay from January until December from 175 to 200 eggs ought to be considered worth while keeping. The Pekin duck will do it, yet some farmers have forgotten that such a thing as a duck exists. Besides being good layers, they rear a great many young in a season, maturing in eleven weeks. They are sure to market at a good profit.

A CHEAP fence, and one that will last for some years, can be made of plastering laths, and it will just as effectively confine fowls as one of greater cost. One hundred laths costing about twenty-five cents, will give three panels of fence, eight feet long. The posts and boards, to which it is necessary to nail them, can be of the cheapest material. They answer for yard divisions and for making compartments in the fowl house.

The Langshans have come into popular favor so fast that many farmers are breeding them because they find them a good farm fowl. As a market fowl there is none better, and this fully covers its good points for a farm fowl. Of course they are table fowls, else they would not find much call in the market. They are good layers of large eggs, and with equal attention bestowed on other kinds will supply eggs in abundance, even in cold weather. The hens make good mothers, yet not inveterate sitters like Cochins.

ONE of the best meat foods for poultry consists of the neck and coarser portions from the butcher, chopped and fed three times a week, a pound to 16 hens, or an ounce to each. The cheap portions of the meat will answer. It should be lean—no fat. Liver and lights are also excellent and cheap. If you cannot procure meat for your fowls, buy them some cotton-seed meal. If fed daily, one pint to a mess of soft food for two hundred hens is sufficient. Milk is also an excellent substitute for meat. No matter how well-balanced their ration may be, change it often. A variety of food gives zest to the appetite and stimulates digestion.



Bird-Houses.

The possessors of lawns, yards and gardens have been, within the last few years, awaking to the fact of the valuable assistance rendered by the birds. The graceful flitting, cheerful chirping and merry singing of the birds add animation to a country landscape.

Children who are trained to observe and care for birds will many times have an occupation for an otherwise dull and idle hour. Two brothers twelve and fourteen years old, who are spending their first year in the country, found untold delight during the spring in building houses for the birds which have so interested them. They hesitated at first about commencing the work, fearing that it was so late in the spring that the birds would have already selected the places for their nests. Their uncle reassured them, by telling them that some late comers would be sure to need and like the houses, and that they would be surprised how many second broods would be raised in the homes they would provide.

The boys decided to make the most simple and easily constructed ones first, and take a longer time for the more elaborate houses, thinking, even if they were not occupied, they would be an ornament to the grounds, and ready for the first-comers next spring.

Tin cans were used for making the first houses. Where the cans were opened to remove the fruit,

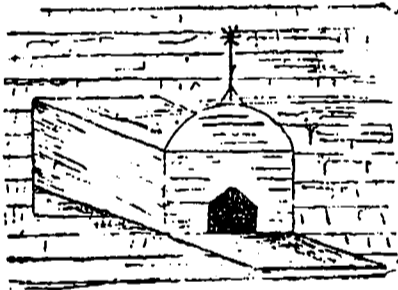


Fig. 1.

the tin was cut out to make a square instead of a round opening. On the lower edge of this opening a thin bit of board was fastened by wires passed through holes to give the bird a place to light on. Two holes were also cut on both sides of the top and of the bottom of the cans, through which strings were passed by which the cans were securely fastened to a branch of a tree. The cans were painted a dark grey.

On the side of the wood-house was fastened a very neat brown cottage fashioned out of cigar boxes (fig. 1). This cottage was adorned with a rounded front, surmounted by a weather-vane made of wire. The door was cut with a fret-saw, and was pointed instead of arched, to suit the capacity of the workers. One box formed the house proper. A larger box furnished the pieces for the rounded front, platform, and the bracket at the back by which it was fastened to the wood-house.

A larger dwelling to be nailed on the side of the carriage-house and intended for the use of the martins (fig. 2) was two stories in height with a balcony in front of each. A small flag floated from a miniature staff nailed to the peak in the front of the roof. This house was made of thin boards nailed together with slender brads. The balconies were ornamented by curved pieces at each end whittled out with a pocket-knife. The doors were arched. The house was divided inside into upper and lower stories. These were again divided by several partitions.

The most ornamental structure made by the boys adorned the top of a post around which clambered a vine, (fig. 3) It was a round wooden box to which they fitted a conical roof, made of wedge-

shaped pieces of shingle and securely tacked to the box. The roof was then thatched with straw, giving a picturesque effect to the house. The thatch was held in place by rows of wire concealed beneath the overlapping straw. It was further adorned with an elaborate weather-vane made of a slender rod, on the end of which was a small rubber ball. The arrow was cut from a bit of shingle. Rod, arrow and ball were all gilded. Doors were cut at regular distances around the house.

Ned's memorandum book, made in imitation of his uncle's, contained the following:—

NOTES ON BIRD-HOUSE BUILDING.

Cans are excellent and are liked by the smaller birds. It would be an improvement to their looks to place a thatched or pointed roof over them.

The ornamental top of an old pump, bits of cast-off furniture, round boxes, &c., can all be used to good advantage and fine effect in ornamental houses.

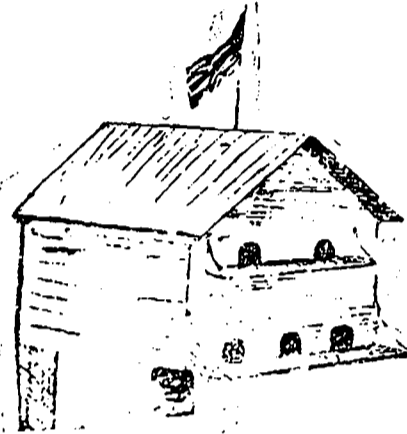


Fig. 2.

Various pieces of old brass, such as lamp tops, shade frames and old keys, work in well for making ornamental pieces and weather-vanes.

For gold paint use carriage gilding. Five cents' worth will go a long way.

For fastening up the houses different methods will have to be used, according to the places where they are to be put up. When it can be used, wire is better than string, and screws than nails.

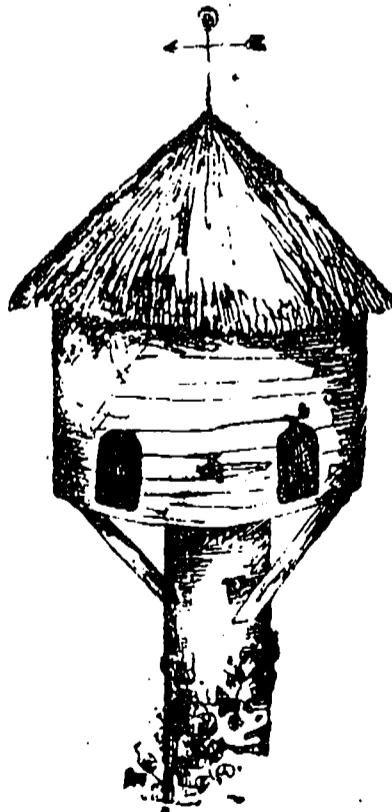


Fig. 3.

To protect the birds from the cats when the houses are on poles, pieces of discarded stove pipe can be slipped over the poles below the houses and nailed in place, then painted the color of the pole, or the post can be wrapped with barbed wire for a short distance.

Soft browns, grays or dark greens are the best colors to use for painting the houses.

Thanksgiving Games.

LET Thanksgiving be a night of rollicking fun for the children, little and big. In after years when they are away from home, its influences will linger around them still. Your son or daughter may be kept in the "straight and narrow way" by the remembrance of just one happy home night.

A simple game that even the baby can almost take part in, is called "Fish, flesh, or fowl." The leader must stand and say to one, "Fish, flesh, or fowl," then if before he has counted five that one does not give the name of some fowl, he must pay a forfeit. There is lots of fun in this game, for in his effort to think of some fowl quickly, one is likely to get confused and cry out "eels," or "elephants," forgetting that these are unlikely fowls. The leader must talk rapidly for the older folk, but more slowly for the little ones. It will incite the latter to look up all the available names of fowl when they know this game is to be played.

If there is a large party of boys and girls, it cousins or neighbors have been asked in, "The Jolly Mariners" is an enjoyable game. Have the parlor doors opened so as to pass through one door and out at the other. The boys all march round, the one who takes the lead with a handkerchief over his shoulder, and all singing:

"We are a set of jolly jolly lads,
Who've just arrived on shore;
We spend our days in many merry ways,
As we have done before.
And we will turn around and 'round
And we will turn around,
And he who finds a very pretty girl
Must kiss her kneeling down."

Having chosen his "very pretty girl," and saluted her, he spreads his handkerchief for her to kneel upon, while the girls sing:

"It's a bargain, a bargain for you, young man,
It's a bargain, a bargain for you;
You've given your word, now keep it true,
And love her all you can."

Then another lad takes the lead, and the song is repeated until all the girls have been chosen.

There isn't much to be said for the meter or rhyme of these verses, but the boys and girls will not be too critical about that, and those who object to boys and girls of tender years kissing each other, may teach the former to make a courtly bow instead.

"My father's got home from India" is an old game but it never fails to bring down the house.

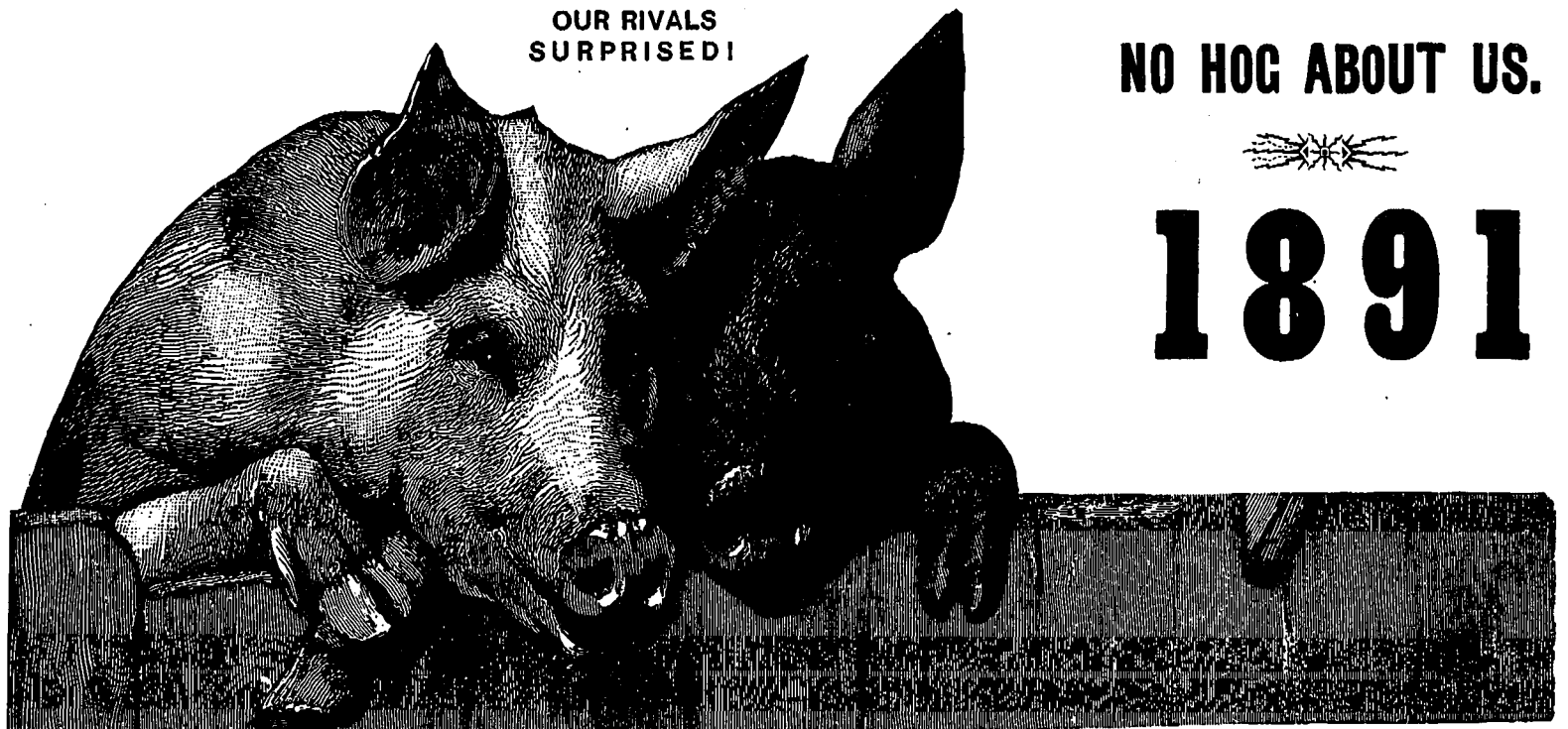
Seat the children on three sides of the room, and let the leader sit so that he can be seen by all. He must then say, "My father's got home from India." "What did he bring you?" one must be instructed to ask. You reply "A fan," and then begin to fan yourself with your hand, which all must imitate. Then you repeat the remark about the return of your father, and another asks, "What did he bring you?" "Two fans," fanning with both hands, which all must imitate. To the next question the answer is, "Two fans, a boot, and a shoe," which necessitates that both hands go through the motion of fanning, while the feet tap the floor. To the next you reply, "Two fans, a boot, a shoe, and a hat," and then the head must be nodded. The first one who misses any motion must pay a forfeit, and it is needless to say that the forfeits are many. It is really good exercise, and after the little ones have been thoroughly instructed in games of this kind, they will relieve you of their care through many a busy hour by playing them among themselves.

"That's the end of my tale," as the tadpole said when he turned into a bullfrog.

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"It seems to me I have seen your face before." "Quite likely. That's where I carry it."

Employer: "Well, Patriok, which is the bigger fool, you or I?" Patriok: "Faith, I couldn't say, sor, but it's not mesill, surely."

Not much of a sight after all.—"I saw a goblet to-day made of bone." "Pahaw! I saw a tumbler made of flesh and blood last night." "Where?" "At the circus."

As a general rule, we are opposed to mon'polies and trade combines; but there is no rule without its exception, and we are free to admit that a turkey trussed is not so bad.

Mistress: "Mary, have you made the dressing for the turkey." Mary: "Sure, ma'am, an' I've made his pants, but I'm havin' hard work wid his coat, for it's nosamestress I am at all, at all."

A thankful spirit.—Teacher: "Johnny, can you tell me anything you have to be thankful for in the past year?" Johnny (without hesitation): "Yessur." Teacher: "Well, Johnny, what is it?" Johnny: "Why, when you broke your arm you couldn't lick us for two months."

Teacher: "Anonymous means without a name; write a sentence showing you understand how to use the word." Small girl writes—"Our new baby is anonymous."

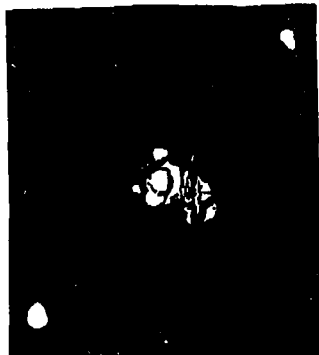
"Did you ever go to the circus, Jim?" asked one small urchin of another. "Not a real circus," said Jim, reflectively, "but I've seen my mother chase chickens into the coop."

Teacher (who believes in seasonable exercises, and who has been having the children read about poultry): "And now can any one tell me what 'poultry means?" New pupil (confidently): "Yes, m. Poultry is something you read aloud!"

Said the cook to the footman: "It's a great use that pepper has in the kitchen." "Yes," was the reply, "but the nutmeg has a grater."

"Do you buy your music by the roll?" said a gentleman to the deacon's daughter. "No, sir," she sweetly replied: "I always wait until Sunday, when I can get it by the choir."

Daughter, aged 33 (facetiously): "Papa, I found a dozen grey hairs in my head this morning and pulled them out. Don't you give me away though." Father (sighing heavily): "Give you away, Emily? I've abandoned all hope of it."



HE BLEW OUT THE GAS! A Drama in Three Acts.



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(Communications intended for this Department should be addressed to AUNT TUTU, care MASSEY PRESS, Massey Street, Toronto.)

For the Baby.

ILL-FITTING and uncomfortable clothing is responsible for much of the ill nature displayed by men and women, and has made many a baby cross and fretful, that suitably clothed would have been happy and contented.

The material of a baby's clothes should be soft and fine. When the cost must be carefully counted, it is wise to discard all trimming and put the money thus saved on the quality and quantity of material. Plenty of garments are necessary, for a healthy, playful child and dirt seem to have a mutual attraction for each other.

Pretty percales, soft cambrics and flannels, in

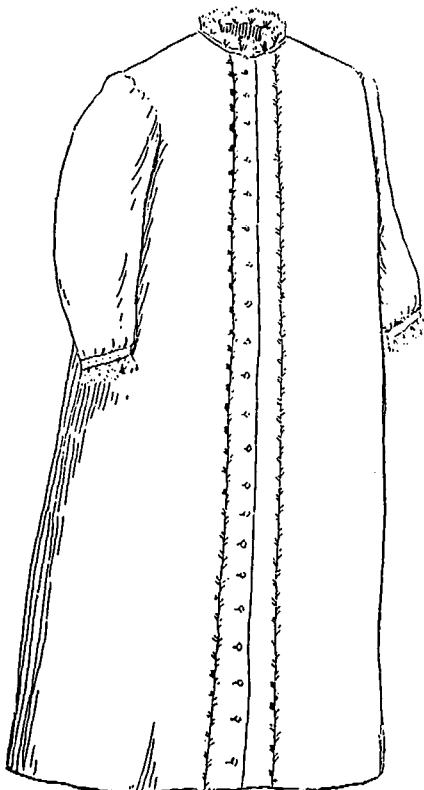


Fig. 1.—Baby Wrapper.

these days of low prices, can be bought very reasonably. Neatly made, and when the time can be allowed, finished by hand, they are dainty enough to satisfy anyone.

When laundered, no starch ought to be put in any of baby's clothes. Indeed, soft, graceful folds are now so much admired, that stiff, starched dresses and skirts are things of the past for any one.

A wrapper of white cambric, like fig. 1, is a most useful garment for a baby. It is cut in two pieces only. The seam is in the middle of back. A hem, an inch wide, should be allowed for around the bottom and up each side of the front. A narrow frill of soft lace is put around the neck and bottom of the sleeves. A row of feather-stitching ornaments each side of the front. It is worked just inside the hem with crochet cord, No. 12. The wrapper is buttoned with small, white pearl buttons.

Percale with a white ground, over which there is a small figure of blue or pink, will make a pretty wrapper, simply finished with a hem. Such a garment will be found very convenient to put on baby in the morning until ready for its bath.

In winter, when additional warmth is desirable a blue or pink flannel wrapper will prove to be a thing not only of beauty but comfort also. When flannel is used, the edge should be finished with a binding of narrow ribbon of the same color as the material.

The diagram (fig. 2) shows exactly how the wrapper is cut. The front edges are straight and the

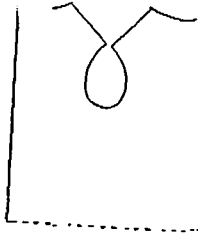


Fig. 2.—Diagram for Cutting.

back seam is bias. It is best to first cut a paper pattern the exact size wanted, then there is sure to be no waste of material. Unless the goods are very wide, twice the length of the wrapper will be required. The sleeves can be cut out of the pieces that come off the sides and should be loose enough to slip on easily.

A pretty sack (fig. 3) can be cut by this same pattern, by making it shorter and rounding the corners.

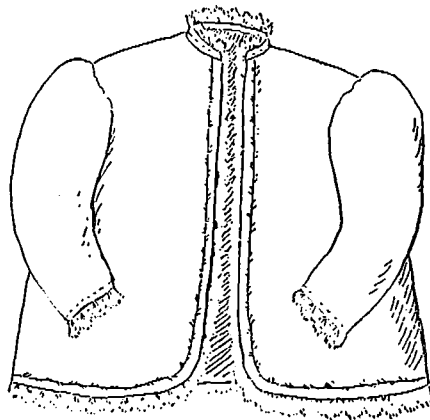


Fig. 3.—Baby Sack.

Flannel or cashmere are suitable materials. Cream white flannel makes a very dainty sack. It can be finished with a narrow roll hem and an edge crocheted of cream white two-threaded Saxony-yarn. Cashmere in any pale shade looks well in these little sacks, and another pretty finish is a small scallop button-hole stitched with silk of the same shade as the cashmere.

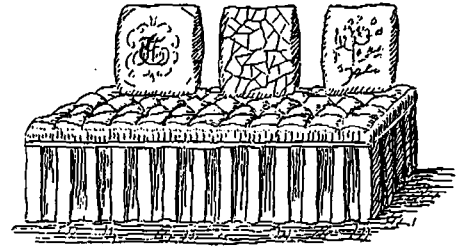
An apron for a child two or three years old can be cut by this same pattern. Fold the print or gingham in the centre of the width and place the straight edge of the pattern on the fold. This will make the apron bias at the back. Larger or smaller gores will have to be put on at the lower part of the back, according to the material used.

The apron is hemmed around the button, and the neck finished with a narrow ruffle. Buttons and buttonholes close it at the back. The bias edges on which the buttons are sewed and in which the buttonholes are worked are faced with a straight strip of the material. This prevents them pulling out of place when laundered. Such aprons are easily made and serve to protect the dress.

Home-Made Couch.

"KITTY D." writes: I have been needing a couch or lounge for my sitting-room for some time, but did not feel as if I could afford to spend the money. A week or two ago I happened to see a long, rather narrow box in the wood-shed, and the thought came to me to try what I could do with it. I had four casters put on it—left out of an old bed-

stead. I made a mattress and three pillows out of coarse muslin. The mattress and two of the pillows were stuffed with sweet, new hay. The other pillow was filled with feathers. It was all covered



HOME-MADE COUCH.

with dark-red oiled calico, of which it required ten yards. The mattress I fastened down at regular distances with buttons, and covered with the calico. For this I used an upholsterer's needle. Around the sides I tacked a box-plaited valance, reaching within an inch of the floor. The covers for two of the pillows I ornamented with outline figures; the cover for the other had a monogram on it. This work was done with yellowish-brown linen floss. When finished, it looked very nicely, and has proved to be comfortable and useful.

Helpful Household Hints.

A paste which will stick anything is said to be made as follows:—Take two ounces of clear gum arabic, one and a half ounces of fine starch, and half an ounce of white sugar. Dissolve the gum arabic in as much water as the laundress would use for the quantity of starch indicated. Mix the starch and sugar with the mucilage. Then cook the mixture in a vessel suspended in boiling water until the starch becomes clear. The cement should be as thick as tar and kept so. It can be kept from spoiling by the addition of camphor or a little oil of cloves.

To cure a felon, mix equal parts of strong ammonia and water, and hold your finger in it for fifteen minutes. After that withdraw it and tie a piece of cloth, completely saturated with the mixture, around the felon and keep it there till dry.

To give a brilliant white light, a lamp needs a thorough cleansing every little while. The oil should be poured out of the fount, leaving no dregs on the bottom. The fount should then be washed in strong soapsuds, rinsed in warm water and dried. It should then be filled with fresh oil. The burner should be boiled in soda and water until the network that crosses it, is freed from dirt and dust. If the wick has become clogged with the sediment, replace it with a new one.

Do you know how to make the quickest kind of tea biscuits in the world? Here is how: a quart of sifted flour, two scant teaspoons baking powder put in before sifting, work a good tablespoon of cold butter thoroughly into it with the fingers until it is nice and crumbly (a pinch of salt also put in before sifting) wet with sweet milk into a stiff batter, which you can poke from the batter spoon with the fingers into little round "dabs" on well-buttered tins; bake them in a moderately quick oven a delicate brown, and you have a "tea cake" that with a dish of fruit, some cold sliced beef, pickles and a cup of good tea, makes a light and dainty repast. To go back a bit, if the milk you use is rich, do not use so much butter (or lard); if it is grocery milk then you may; if you've no milk at all, use sufficient shortening and cold water.

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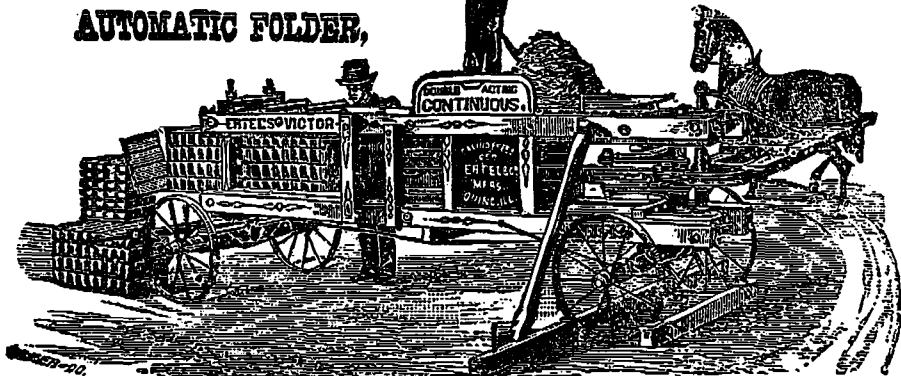
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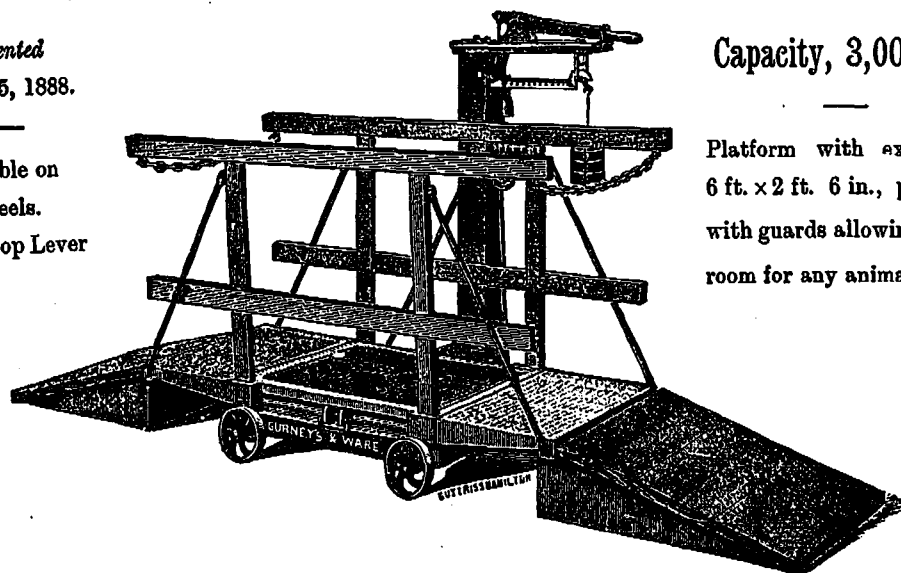


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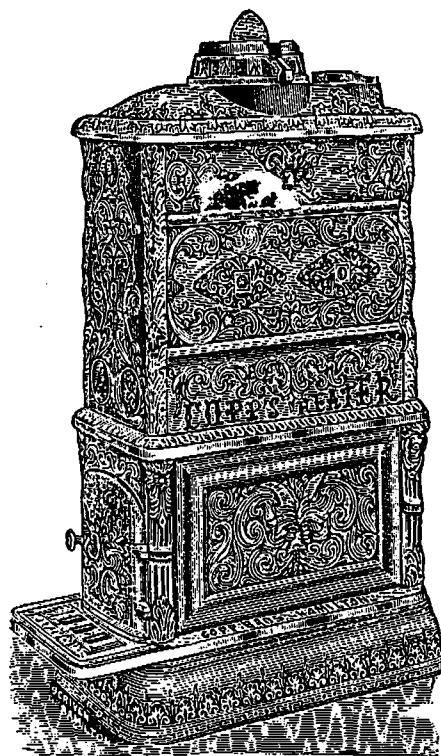
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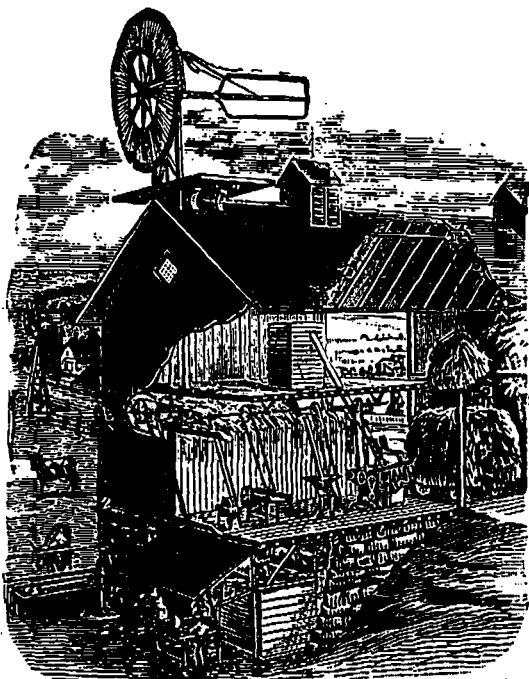
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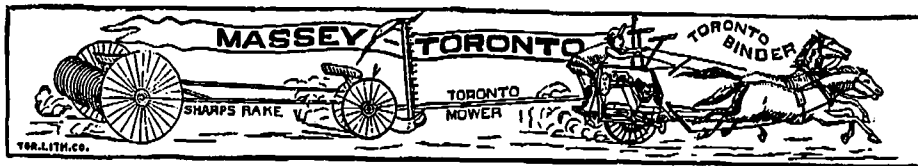
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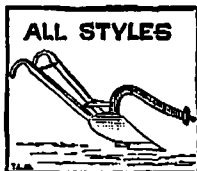
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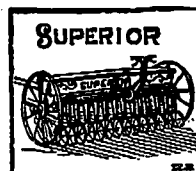
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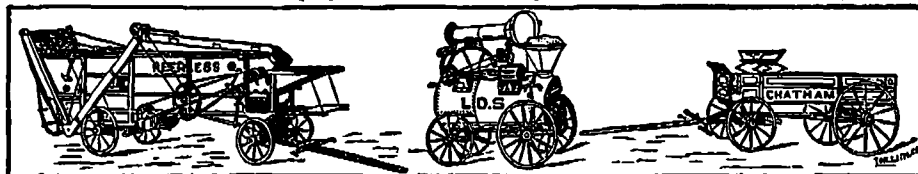
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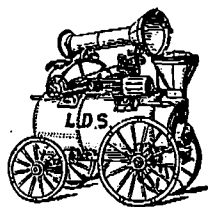
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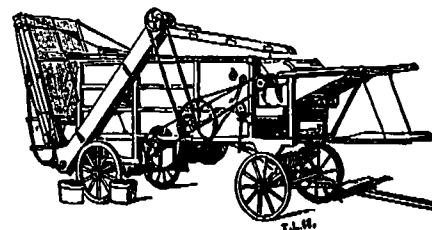
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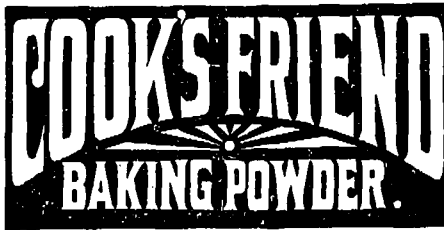
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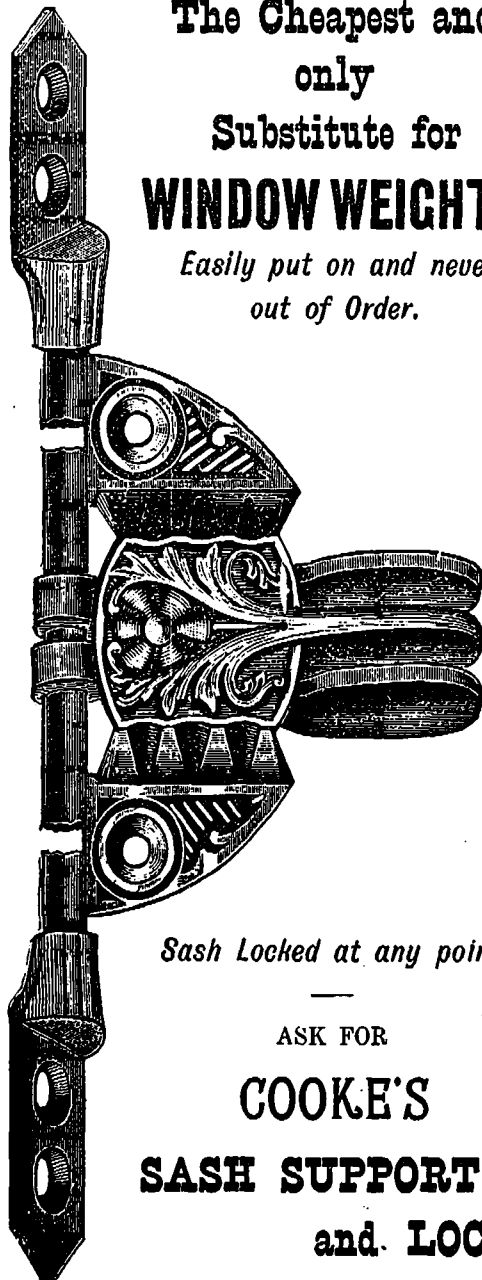
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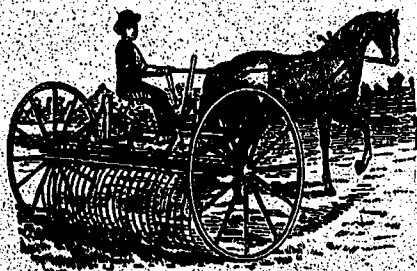
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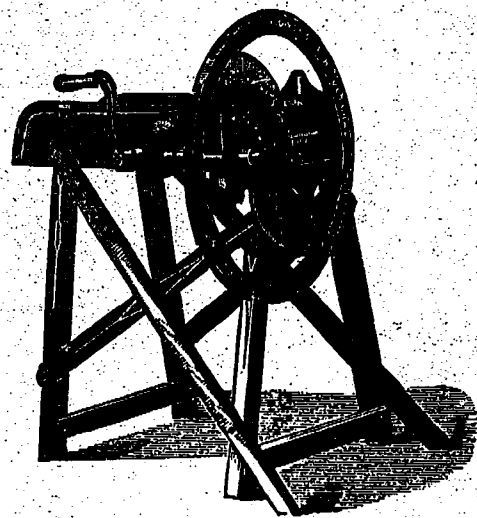
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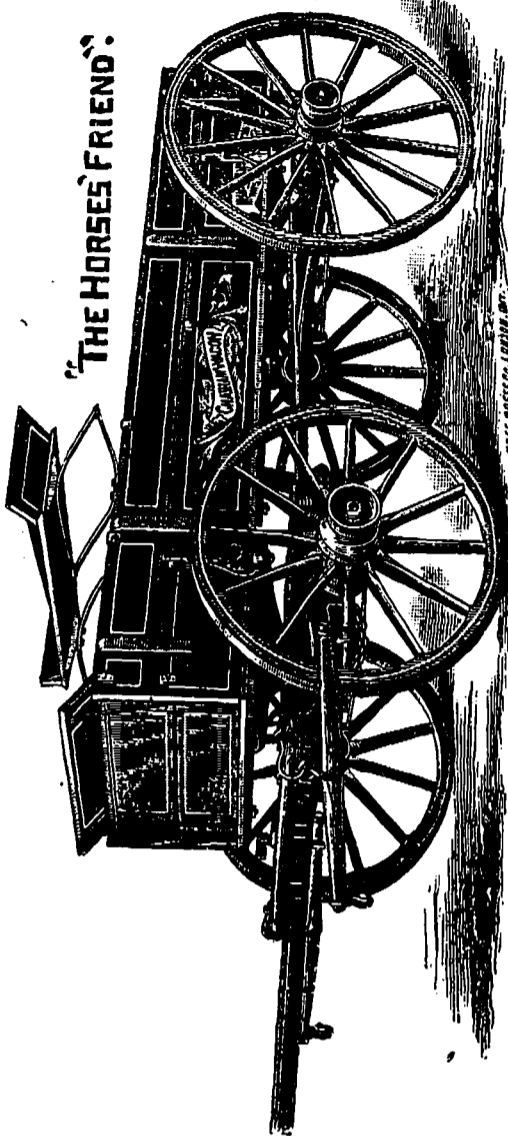
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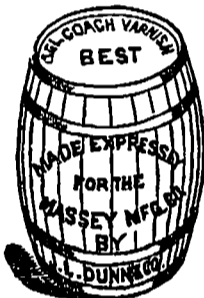
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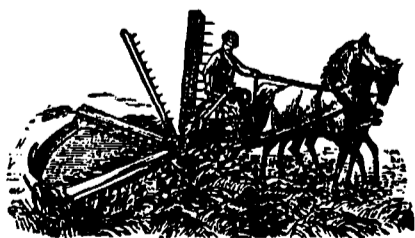
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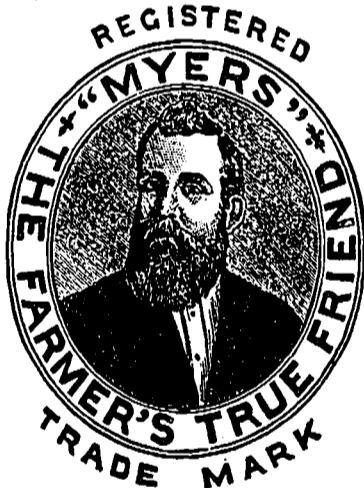
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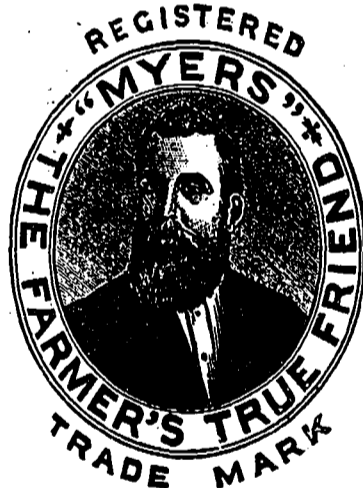


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