

• Massey's Illustrated •

(PUBLISHED MONTHLY.)

7499

January Number

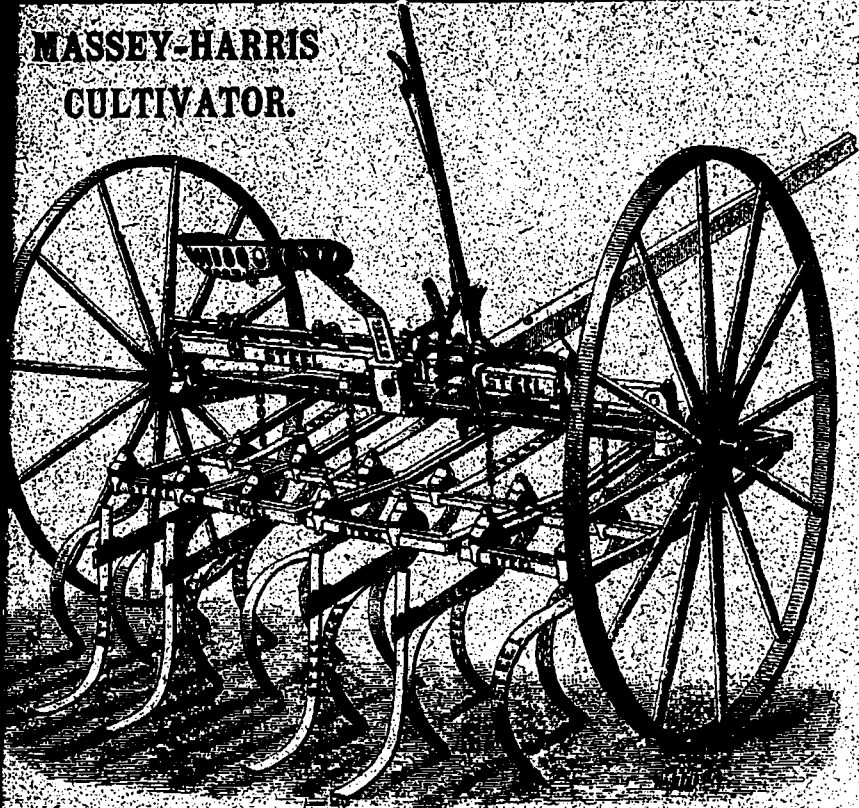
New Series, Vol. 5, No. 1.]

[Toronto, January, 1893.



UBSCRIPTION PRICE 50c PER ANNUM
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**MASSEY-HARRIS
CULTIVATOR.**



The greatest cultivating implement ever invented.

Will cultivate the hardest clay land with great facility.

The patent "Helper" prevents the breakage of teeth.

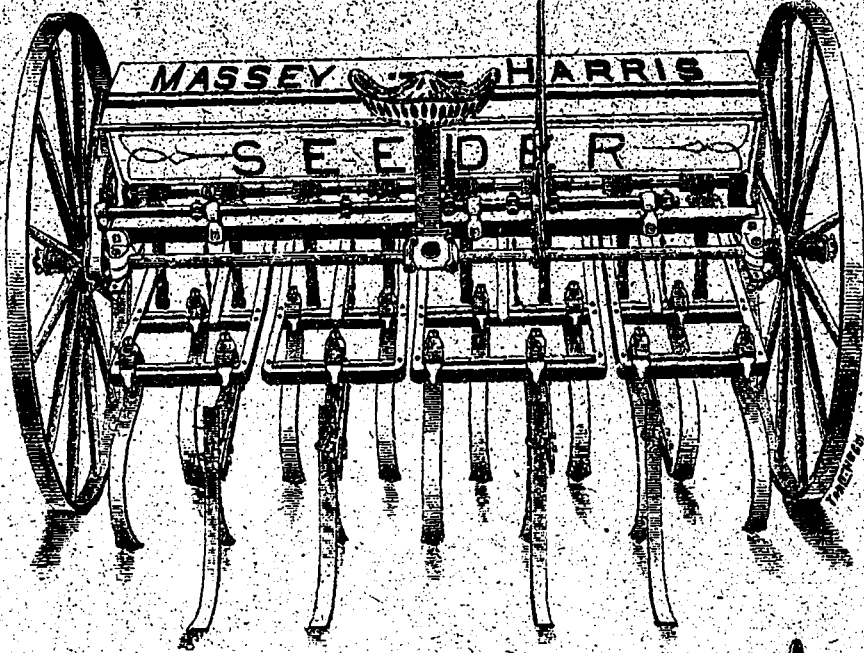
The Steel Sections are perfectly flexible, even when full pressure is applied.

The depth of work can be easily and perfectly regulated.

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

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

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



ALL STEEL.

FRAME
AND
SECTIONS
ARE OF
ANGLE STEEL.

ALL STEEL.

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

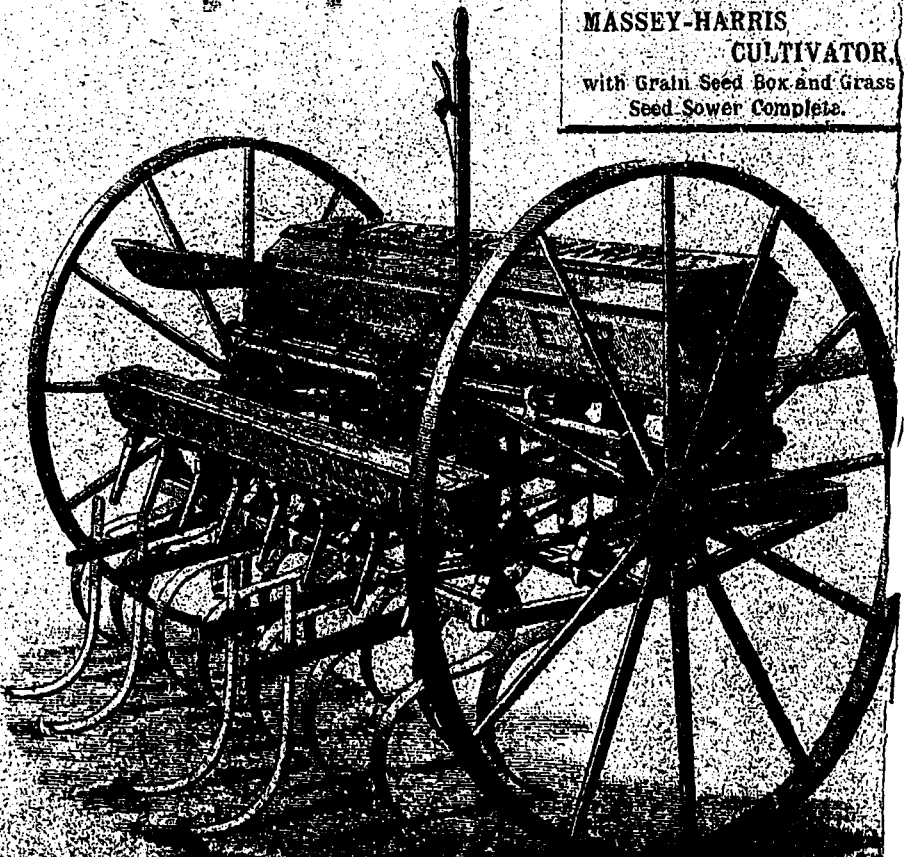
Four Steel Sections carry the Teeth.

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

Thus one implement takes the place of several different tools.

seed box with new improved scattering apparatus is made to go with the Cultivator. When thus equipped it makes a perfect one-seeder.

Grass Seed Sower is also adapted to cultivate in parvo machine.



• Massey's Illustrated •

(PUBLISHED MONTHLY.)

A Journal of News and Literature for Royal Homes

NEW SERIES.]

TORONTO, CANADA, JANUARY, 1893.

[Vol. 5, No. 1.

Smoky Days.

IN SIX CHAPTERS.

CHAPTER V. IMPRISONED IN THE CAVE.

"I can go down there," thought Pete; "go down fast enough—that's sure."

He threw in a piece of driftwood. It stood on end and was out of sight in an instant.

"Should I get tore up?" thought Pete. "Or should I fall far enough to get smashed on the bottom? There's plenty of room—it's fifteen feet across at the funnel. But I guess I'd better explore all round before I risk my life in such a whirling hole."

He returned along the high tunnel to the main cave. Again he stopped at the fissure. His sense of imprisonment deepened as he turned from the vastness and gloom of the huge vault behind him to gaze at the free and flying clouds.

Inward draughts of air brought him the smell of freshly wet earth. Heavy rain slanted along, scurrying into mist on a rocky hillside opposite his jail. Poplar trees bent and swayed there under mighty gusts of wind.

As the boy thought of the burning woods and the parched country and his father's clearing, he blessed the Lord for the swift rain that his mother had prayed for so often. He could hear her, he fancied, as he fell into the reverie that such rain commonly gives—he could hear his mother's piteous prayer, as if the woe of it were compelling the rain.

Then he exulted in the fresh breeze and the drops that were blown to his face.

That joy vanished as he turned to the pouring echo of his prison. Now he could but hear the cascade, so dim had the cave become by the cessation of lightning and the darkening of the hole in the roof. Night was closing in upon the outer world, and uttermost darkness succeeded.

But Pete's fire burned hugely. After he had busied himself at the water's edge for half an hour he heaped up piles of driftwood by the light of the flame. Between the throwing down and going forth for more wood he stood listening and looking into the high portal of the south, or old, channel ravine.

Pete thought as the night went on that he heard again the sounds of wild animals that he had fancied before. Were fierce eyes glaring at him from the great pile of fallen rocks that had

barred him from escape? Were soft feet, sheathing cruel claws, coming silently toward him?

The night drew on toward dawn, and intenser darkness prevailed in the cave. At longer intervals thunder rattled through the cavern. The lightning that preceded might have revealed, to any eye looking down from the hole in the cave's gable, the figure of a boy sleeping in the space between four guardian fires that slowly waned to smouldering brands.



The eye looking down would also have seen the water of a rapidly rising creek lapping on the coals of the most northerly fire, and sizzling as it extinguished them. Still Pete Armstrong slept profoundly. He had not reckoned that the rain now pouring down outside would raise the water in the cave.

Inch by inch its level ascended. Soon the brands of the extinguished fire were afloat and drifting toward the whirlpool. Even when the water had encroached upon the two fires further in, the boy still slept. His cowhide boots were lapped by the rising flood, and yet he lay quiet as a log.

Down from the cascade poured a large volume. Driftwood came tumbling with it. The Lost Creek was in half flood with the steady and great rain. No longer could the cloop-cloop have been heard by any one in the cave; for the funnel was gorged too full.

By morning neither flame nor coal of Pete's fires could have been seen from above. Nor was there any sign of Peter Armstrong near the dispersed ashes of those inner fires that had not been overflowed by the rising stream. The cave's floor was newly covered by a tumult of whirling water.

CHAPTER VI.

VINCENT DOWN THE CHUTE.

At noon on the third day, long before Mrs. Armstrong had received Vincent Bracy's letter, he stood, with one man, at the place where Pete had disappeared. Both carried camp lanterns with reflectors.

"Grosbois," said Vincent, "the creek has risen a good deal here since yesterday."

"Yeesch! Bapteme—it's de rain."

"Do you hear that pouring sound?"

"Yessch—dass a fall down dere, way far. Can't be ver' high—no, sir, not ver' big fall."

"No. I dare say the chute runs into deep water. That would account for the sound, eh?"

"Mebby. I don' know, sir, for sure."

"How would you like to go down?"

"Sapree! Not for all de money in de Banque du Peuple."

Vincent had brought ten men with him from camp. Eight were now at the Brazeau end of the cave looking for the longest tree they could hope to carry into the curved ravine.

Early in the morning they had found the channel by which Lost Creek discharged from the cave to the Brazeau. Looking into an irregularly-walled, tunnel-like passage about twenty feet high, they saw how the water came whirling down straight from the clooping funnel that Pete had seen from inside the cave.

After dropping into a deep, narrow basin it spread wide and shallow over the level rock on which the search party stood, gathered again into a narrow brook, and prattled on gently to the Big Brazeau River, a quarter of a mile distant.

It was clear that Pete's body, if he had been carried dead down the funnel, would have been found on the shallows, where sticks that had descended were widely strown. Between and under these sticks the water ran. Vincent's inference that Pete was alive within the cave looked reasonable.

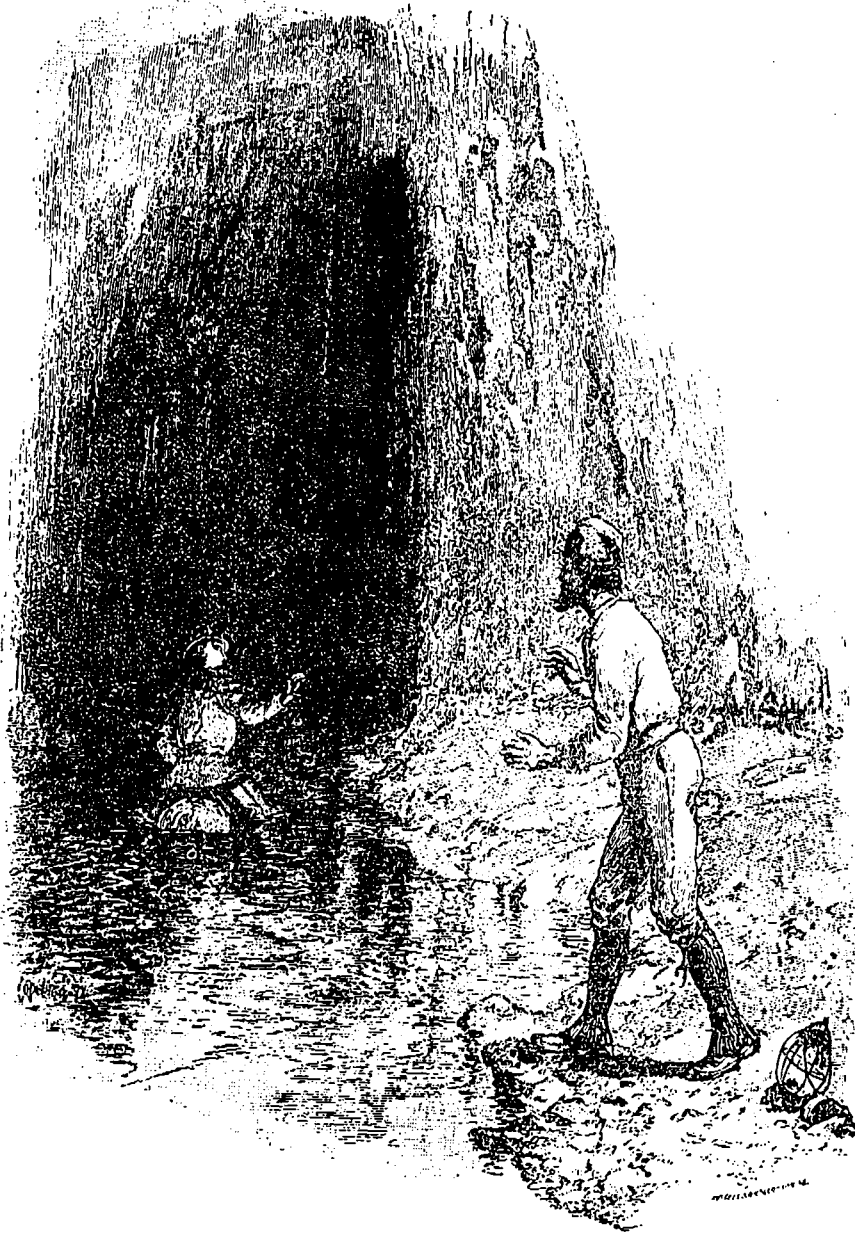
He took his men into the passage whence he had escaped, and soon found the south side of the enormous barrier of fallen rocks whose

north side had blocked Pete's way out the day before. They stood opposite where Pete had stood, and found that end as impracticable as he found the other.

Vincent sent one man to camp with a note to the chief engineer. With himself he kept old Grosbois. He ordered the eight others to ascend the Hump, cut down one of the tallest pines growing there, and wait for the chief to arrive with ropes and the rest of the men, twenty-two in number.

Then he and Grosbois walked away through the cave to the upper entrance with the two camp lanterns.

An hour passed. The great tree lay stripped on the upper plateau. After clearing away the branches the men found they could not stir the trunk. They went below to the cave that they might gain shelter from the incessant rain. There they lighted a fire and waited.



A PERILOUS JOURNEY.

Another hour passed. Grosbois now sat with his comrades by the fire. He had returned to the party without Vincent Bracy. Sometimes the superstitious men turned their heads and peered into the blackness of the cave. They half-expected to see Vincent's ghost coming toward them.

Another hour had nearly passed when the chief engineer and his twenty-two men came into the camp from the Brazeau side.

"Ah, M'sien, Mr. Bracy's gone," said Grosbois, almost crying.

"Gone?"

"Yessch—gone for sure."

"Gone where?"

"Down de chute."

"What chute?"

"Down where he see dat boy go yesterday—de boy that he's tell us about last night."

"You are out of your senses, Grosbois."

"No, sir, I haint out af no senses—for sure I wish I was. But I'll tol' de trut'. Mr. Bracy he's say to me, 'Mebby Pete is starve before we find it.' He's say, 'Mebby we don't get up in dere all day, mebby not all to-morrow.' He's say, 'Mebby dere haint no way to get to de boy except only one way.'"

"Go on—what did he do?"

"He made me help him for cut off a large clunk off one hollow cedar. He put his hax in de hollow, an he put in a piece of rope, and some pork and biscuit, and he put in his pistol, and his lantern. Den he plug up de two end. An he say to me, 'Grosbois, you tell 'em to keep climbing back dere. Good-by, Grosbois,' and dat's all."

"But where did he go?"

"M'sieu, in two seconds he's away down the black chute!"

"In the water?"

"Yessch, in de water—straddle on de log."

"Vincent must have gone crazy."

"He haint look crazy," said Grosbois. "He's look like he's see something bad what haint scare him one bit. He's say, 'Good-by, Grosbois,' an' he's make me a bow same as he's always polite, and he's smile easy, easy. Den he's roll in his log before I b'leeve he's goin' to be so wild, and I don't see him no more."

"Up with you—up for the tree!" cried the chief. "Not you, Grosbois—all the rest, Grosbois, you go down to the outlet and watch for the body."

Little Vincent Bracy! My life and soul—what will his father say!"

The men were climbing the hill by various paths to get the long tree, when one of them stopped, held up his hand, and looked around fearfully at those nearest him.

"I hear Mr. Bracy's ghost," he said.

The startled men stood still, listening. All now heard the faint call. As from the bowels of the earth the cry floated up:

"Hello! Hello! Hello!"

"He's alive, wherever he is," cried the chief, arriving. "He's shouting in the hope he'll be heard."

"Hello! Bracy! Vincent! Hello!"

Still Vincent's voice ascended monotonously.

"Hello! Hello! Hello!" at intervals of some seconds.

"Yell all together!" cried the chief to the men, who were coming from all directions. They shouted and listened again. And again the far voice cried, "Hello! Hello!" with

the same tones and intervals as before.

"It's from over there. And there's smoke coming up," said one.

They approached the edge of the plateau and looked down.

"Why here is smoke. And here's a hole," cried the chief, getting down on his hands and knees. "He must be down here. Yes! Vincent!"

"Hello, yourself, chief!"

"You're alive then?"

"Yes, sir. All alive."

"Hurt!"

"No—as sound as a nut."

"Had a rough passage?"

"Pretty rough, sir. But I'm not hurt."

Down by a bright fire they saw Vincent Bracy standing alone. He looked up at the faces crowding round the hole in which the fissure terminated.

"Have you the ropes there?" he shouted.
 "Go down for the ropes," cried the chief engineer, and away went four men.
 "Rope is coming. Vincent. Keep your heart up."
 "Oh, I'm all right, sir."
 "Where's the Armstrong boy?"
 "Gone. He was here this morning."
 "How do you know?"
 "This fire was not quite out."
 "Where's he gone? Have the bears got him?"
 "No sign of it."
 "What's become of him, then?"
 "I fancy he went down the creek before the water rose in here."
 "But you saw no sign of him down there."
 "Better send Grosbois to look after his trail, sir. Perhaps he got out alive."
 "Grosbois is down there now."
 "Hey, Grosbois! Grosbois!" shouted the chief. But no answer came. Grosbois had gone out of hearing.
 "Is the water rising, Vincent?"
 "Yes. It's risen three inches since I got here."
 The pond within the cave now presented the aspect of a stream incessantly returning on itself by an eddy up one hand and a current down the other.
 Vincent could not reach the fissure without wading. From that crack flowed a rivulet a foot deep. No sound except the surging of a whirlpool came from the corridor where Pete had heard the *cloop-clooping* sound.
 "Young Armstrong must have been starving!" shouted the chief.
 "No, sir. He seems to have lived on the fat of the water."
 "Fat of the water?"
 "Yes; trout. Look here!" Vincent held up two fish.
 "How could he catch them?"
 "I'm sure I don't know. But he certainly did. The place is all heads and tails. I shouldn't have supposed any fellow could eat so many trout in the time. He was here only a day altogether."
 "Can you get straight under here, Vincent?"
 "Yes. I waded through that crack a while ago."
 "Well, the ropes are coming."
 Vincent waded down the fissure and stood. In the course of half an hour the rope had descended. Vincent had placed the loop under his shoulders, and the exulting men had drawn him safely up. Then the whole party walked down to the whirling outlet.
 "It's impossible young Armstrong could have come through here alive," said the chief, looking into the tunnel out of which the rising water rushed.
 "There wasn't so big a volume this morning early when we were here before," said Vincent.
 "And Pete must have come down before that."
 "You seem very sure he did come down."
 "Well, sir, so I am. It's what I should have done myself in the circumstances. I was beginning to think of it when you answered my call."
 "Lucky you didn't. Perhaps you are right. But it's surprising that he took the risk when he had plenty to eat."
 "You forget how alarmed he was for his mother. Besides, he probably thought I had lost myself, and he had no hope of a rescue."
 "But what can become of him if he got out here?"
 "He would make for home up the river."
 "Well, I hope your theory is sound," said the chief. "What's become of Grosbois, I wonder? Grosbois! Grosbois!" he shouted.
 But Grosbois was far away, following what he thought a trail through the woods. It took him up the river. Meanwhile another voyageur had picked up the trail of Grosbois and brought the news back to the chief.
 "He must have found Pete or his track," said Vincent. "I'll follow, too, 'sir, if you'll allow me. I have to go to Kelly's crossing, anyway, and I may as well try to get to the Armstrong's to-night."
 About three o'clock that afternoon Mary Arm-



strong was giving Eliza Jane and Ann Susan a "piece." She stood with her back to the cabin door, when Ann Susan suddenly cried. "Pete! Pete!" and held out her hands.
 "Pete's here!" said Eliza Jane coolly.
 Mary turned.
 Pete, indeed, staggered up the path. His face was covered with dry blood from many scratches his shirt and trousers were in strips, his feet bare and bleeding.
 "Mother! It is Pete! Pete's come back. He's not dead at all," running out into her brother's arms.
 Mrs. Armstrong tottered to her feet.
 "Is mother dead? Where is she?" cried Pete as he caught sight of Mary.
 "Why, mother! Aint you glad to see me?" he said, holding her in his arms a minute later. She was weeping as she clung to him.
 "O Pete, Pete, Pete. I thought you was burned to death!" was all she could say.
 "There, mother! There mother! I'm all right. Only tore up a little, running through the woods. I've been travellin' since daylight, and I lost my boots out of my hand coming down a whirlpool out of a cave, and I couldn't find them amongst the driftwood below. I was in too big a hurry. I was most scared to death for fear you would not be here. My! it was good to see the barn and house standin'. I came up along the river till about two hours ago. Then I worked up top of the Hump for easier walkin'. Where's father?"

"A boy came for him. He went down river two hours ago to look for you."
 "I'd have met him, then, if I'd kept straight on. Maybe he'd miss my track up the Hump."
 But the father had not missed it, for he had met Grosbois, who held to Pete's trail like a hound to the slot of a deer. Scarcely had the boy entered the cabin when David Armstrong and the voyageur came down the Hump's side. The father, swept by his emotion beyond self-control, caught Pete in his arms, uttering thanks to God.
 Eliza Jane and Ann Susan roared, weeping at the top of their lungs because mother and Mary were crying, and father talking so loudly.
 Ann Susan, stopping suddenly, said decidedly. "I vant Pete!"
 "Pete's dead, and he's come back," said Eliza Jane.
 "Take them, Pete," said the mother; "take them. They've been hankering after you most as bad as me."
 He lifted the little ones in his arms. They drew back from his dirty and bloody face. Pete laughed.
 "Mother," said he, "I didn't fetch you your tea."
 "That young Mr. Bracy sent up some up by the messenger, Pete."
 "Mr. Bracy? Oh, Vincent," said Pete. "He got out of the cave then? I was planning to start back and find him?"
 "Guess what this man says he did this morn-

ing, Pete." said the pioneer, turning to Grosbois. "He went down that chute in the cave after you."

"Yessir, I see him myse'f," said Grosbois.

"Well, aint he a good one?" said Pete. "Why, I wouldn't have gone down there this morning for the price of the hay. The creek was beginning to rise before I went out. But say, Vincent is lost like I was!"

"No. Just as I started on your trail I heard them yellin' they found him," said Grosbois.

Pete had hardly eaten his supper that evening when Vincent arrived.

"Pete!"

"Vincent." The boys shook hands.

"You went into the chute after me," said Pete, choking. "If it hadn't been for you keepin' me goin', I'd 'a' died in the fire by the creek—so I would, and—"

"Oh, please don't," interrupted Vincent.

"And I'd been abusin' you," said Pete. "I'd said you was a dood!"

"Dooce you did! Well, I dare say I am. But what matter? It's not really a crime, don't you know. There's just one thing I want you to tell me, Pete. How did you catch the trout in the cave?"

Pete pulled a fish line with a hook on it from his pocket.

"Forgot I had it for a long time in there," he said. "Don't you mind I said I had a hook and line that time we was kickin' the trout out of the creek?"

"But what bait did you use?"

"Bait? They didn't want no better than a bare hook."

You may be glad to learn that David Armstrong's hay sold for ninety dollars a ton that winter. The comfortable situation into which this put the pioneer family gave Mrs. Armstrong a new lease of life, and Pete three winter's schooling in the settlements. There he learned so much that he is able to transact the business of the large lumbering interest, which he has long since acquired.

Peter Armstrong is worth ten thousand dollars to Vincent Bracy's one, but they are fast friends, and agree that Mr. Bracy's comparative lack of fortune was due to his having practised a profession instead of going into business.—*Youth's Companion.*

Care for the Eyes.

A MAN went to visit a relative in the country whom he had not seen for several years. He wore glasses, and his friend commented on them in a way that suggested that possibly they were worn for ornament, for the wearer was young. "John," he asked, "why do you wear glasses? I think you'd look better without them!" The visitor, annoyed, replied: "I wear these glasses because I do not wish to go through the world with one eye, like two of your sons." There they were, at the table, two handsome young men aged seventeen and twenty respectively, each with an eye closed—the eye of the older boy tight, that of the other partly.

This was news to the farmer, and naturally he was interested at once as well as the boys. He and his wife had scolded the boys for squinting, as they called it, and had also expostulated and even stormed, but all to no purpose; the eyes continued to squint and to close tighter. The result of the visit of the man with glasses was that the boys put on glasses, but one, the older, was too late. Probably he will not habitually keep his eye open, at least it will never appear like the other. He has disfigured himself for life, for there is nothing that changes the countenance, always for the worse, as any deformity of the eye or parts tributary. These boys, years before, should have consulted an oculist and by his direction, put on glasses. The father exclaimed, now in another key, "John, if

you'd come sooner, we might have saved those eyes, or kept them as they were intended to be worn."

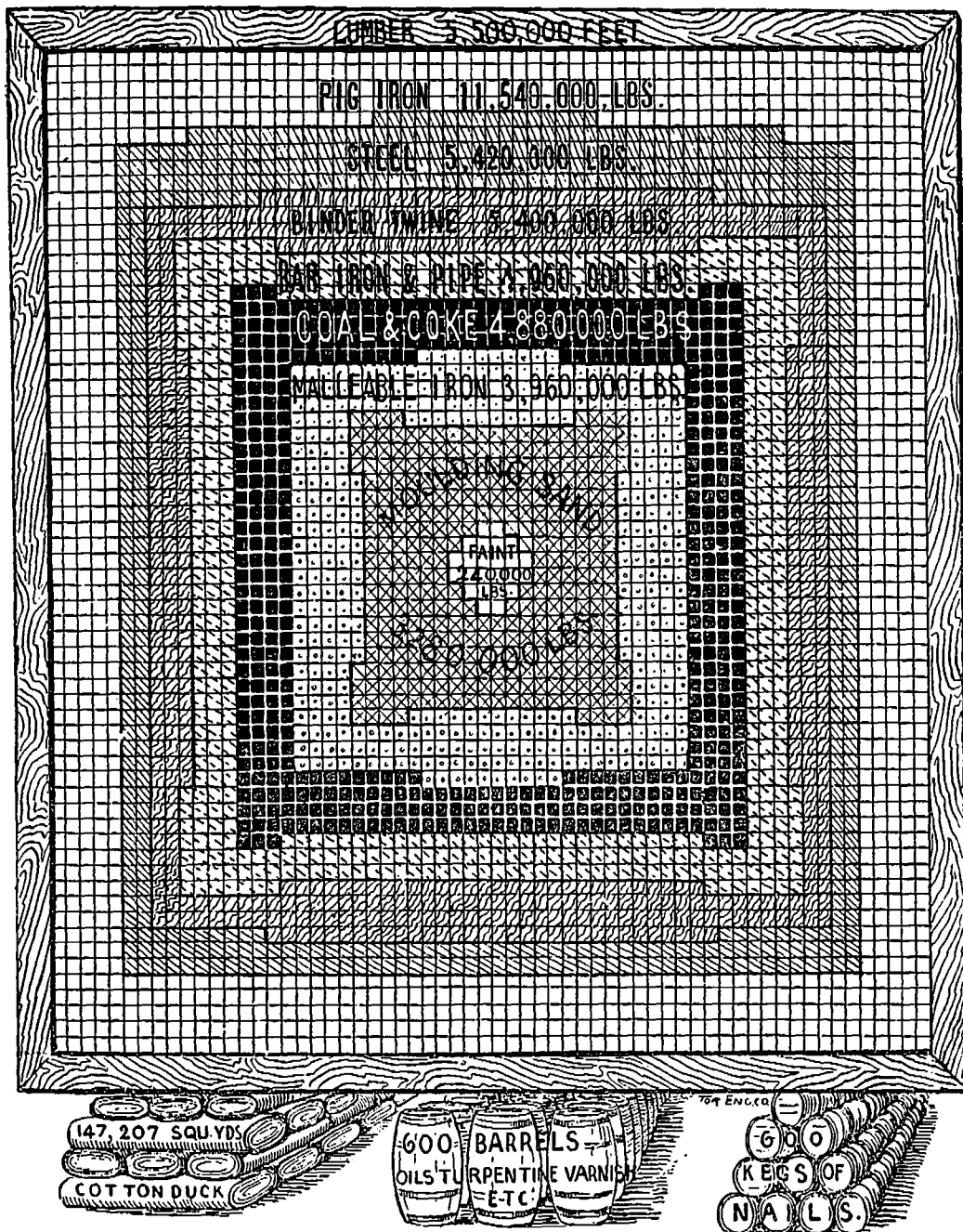
If the people in any city be observed as they pass, many may be seen with one eye closed, the result of a defect of vision of which they probably are not conscious. An eye once closed is usually closed forever—that is, it will never be open again habitually. The disfigurement of the face as a result of closing the eye, does not always stop at the eye. Some persons who wish to close an eye do not find it easy, and to accomplish it, they twist the face and distort the mouth. A girl about fifteen years of age has this double deformity, all the result of closing the eye. She must have been what is called beautiful, with fair round face and perfect mouth. She closed the eye and twisted the corner of the mouth toward it, throwing the cheek back, or bunching it, elongating the lips, destroying the symmetry of the features and the beauty of the mouth—all the result of defective eyesight.

There are thousands of closed eyes and distorted faces that rise from abnormal vision or the squint that it produces. Regularity and beauty of features are worth something in this life. It may not be just, but often the "good-looking" take precedence before the plain. At all events, good looks are worth preserving and cultivating. A student of social problems declares that as a whole the American people are deteriorating as to regularity and fairness of countenance, due to many causes, more or less indefinite, mode of life, food, physical conditions that enter into all lives in all classes of society. How often is heard the remark, "The children are not as fine featured as their parents." But that is another subject.

TO STONE RAISINS.—Pour boiling water over them, let them stand in it 1 minute, then pour off the water, open the raisins and take out the seeds and take off the stems.



DIAGRAM ILLUSTRATING THE
ENORMOUS QUANTITIES OF RAW MATERIAL
 Annually consumed by **MASSEY-HARRIS CO. Limited.**
 EACH TINY SQUARE REPRESENTS 10,000 POUNDS.



It is very doubtful if any of our readers have but the most meagre conception of the enormous quantities of raw material used by MASSEY-HARRIS Co., Ltd., in the construction of their farm implements for a single season's trade. Even a recital of the figures conveys but an indefinite idea, as the mind is scarcely able to grasp such large sums so as to correctly gauge their proportions. We have, therefore, prepared the diagram above, each tiny square of which represents ten thousand pounds of material, which will enable the reader to better appreciate these vast weights.

These figures are made up from the books of the company and are the quantities of materials used in making up the goods for the season of 1892. As a still greater number of machines are being made for 1893, these quantities will all be somewhat increased.

The white portion in the centre of the diagram, though very small as compared with the other parts, represents 240,000 lbs. of paint. If we mix this paint with the quantities of oils, turpentine and varnish represented in the pile of barrels at the foot of the diagram, according

to painters' rules for figuring, we will have enough mixed color to give six thousand average size barns (30 ft. wide, 60 ft. long, and 20 ft. high) one good coat of paint.

The quantity of moulding sand annually used (3,280,000 lbs.) would form a pyramid or hill sixty feet square at the base and forty feet high.

Forty bushels of wheat is considered a good load for a farm wagon, and taking this as a basis it would take 1,650 such wagon loads to move the 3,960,000 lbs. of malleable iron.

The consumption of coal and coke, 4,880,000 lbs., is represented in the black portion of the diagram, and it would take a shed ten feet wide, eight feet high and over one-fifth of a mile long to hold it.

Bar iron, used for forgings, bolts, nuts, etc., and for rake and seeder wheel tires, is purchased to the tune of 4,960,000 lbs. per annum. If this were rolled into one single wheel tire, two inches wide, it would be 1,118 miles long.

The binder twine, if made into one single strand, averaging, say 550 feet to the lb., would extend around the earth at the equator twenty-two and one-half times.

Steel, which is the highest grade material for the construction of implements, as every one knows, is very extensively used, as the diagram shows. If these 5,420,000 lbs. were rolled into one single solid steel half-inch bar, it would be 1,555 miles long, or, in other words, would reach not far from half way across the Dominion of Canada from the Atlantic to the Pacific Oceans, or 150 miles further than the distance from Toronto to Winnipeg, Man.

The vast weight of pig iron, 11,540,000 lbs., would form a continuous row of pig bars one hundred miles long, averaging three inches in diameter.

In addition to the 39,680,000 pounds of material bought by weight represented in the diagram above, there are enormous quantities of other classes of material used in the mammoth works of the MASSEY-HARRIS Co., Ltd., at Toronto, Brantford and Woodstock. As the frame around the diagram shows, 5,500,000 square feet of lumber is required to supply this company's yearly needs. A very large proportion of this lumber is white ash, oak and hickory. It will surprise the juveniles of the family to figure out how many barns like their father's can be made out of this many feet of lumber.

Canvas duck of a heavy grade is consumed very largely. The 147,207 square yards would form a strip 28 miles long, one yard wide.

Astonishing quantities of other kinds of goods are also purchased, aggregating hundreds of tons when bulked together. About forty-five tons of paper go through the publishing department, and some fifteen or eighteen tons of brass are used.

Probably but few persons have any conception of the great variety of materials used in a business like this, which manufactures so largely for itself. Pig Iron, Steel, Bar Iron and Lumber constitute the staple raw materials, but to turn these into castings, bolts, nuts, rivets, washers, burrs, forgings, knife sections, guards, set screws and the thousand and one pieces which go to make up Self-Binders, Mowing Machines and Seeders, large quantities of the following goods are annually used: tool steel, cast steel, and many other kinds of steel; all kinds of wire, brass, copper, tin, zinc, lead, babbitt metal, silver, a great variety of nails, tacks and screws; cotter keys, crucible steel springs, 5 kinds of sand, fire clay, fire bricks, mineral facing, resin, flour, molasses, beeswax, plaster paris, borax, potash, sal soda, sal ammoniac, nitre, spirits, muriatic acid, gas, chalk, carbon, paints, bones, shellac, glue, glycerine, leather, belting, laces, straps, walrus hide, solder, crucibles, shovels, sieves, bags, tubes, rubber, paper, printing and writing inks, circular and band saws, files, oil cans, wrenches, buckles, hinges, planer knives, grindstones, emery wheels, emery, sand paper, a great variety of brushes, brooms, waste, cotton duck, cord, marline, carbon points, window glass, electric light supplies, glass oilers, tallow, 12 kinds of oil, benzene, red lead, white lead, all kinds of paints, varnish, turpentine, japan, putty, and many other classes of materials, used in smaller quantities, which would be too numerous to mention.

No articles on the above list appear more curious or more insignificant than Molasses, Bones, Brooms and Window Glass. However, in the manufacture of cores the Company use annually over ten barrels of molasses; while in case hardening 5,000 lbs. of bones are used; and to keep the factory floors clean, 200 to 250 heavy brooms are worn out per annum. To replace the window panes "accidentally" broken throughout the year, nearly 2,000 sheets of glass are required.



The New Year.

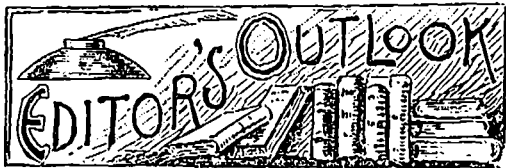
What shall I wish thee?
Treasures of earth?
Songs in the spring time,
Pleasure and mirth?
Flowers on thy pathway,
Skies ever clear?
Would this ensure thee
A Happy New Year?

What shall I wish thee?
What can be found
Bringing thee sunshine
All the year round?
Where is the treasure,
Lasting and dear,
That shall ensure thee
A Happy New Year?

Faith that increaseth,
Walking in light;
Hope that aboundeth,
Happy and bright,
Love that is perfect;
Casting out fear:—
These shall ensure thee
A Happy New Year

Peace in the Saviour,
Rest at His feet,
Smile of His countenance
Radiant and sweet;
Joy in His presence,
Christ ever near—
This will ensure thee
A Happy New Year!

—FRANCIS RIDLEY HAVERGAL.



A HAPPY New Year to all our readers.

AMONG the large meetings announced in which farmers are specially interested are the following:

Poultry Association of Ontario, at Hamilton from January 2nd to 6th; Eastern Dairyman's Association, at Kingston, January 3rd, 4th and 5th; Western Dairyman's Association, at London, January 10th, 11th and 12th; Creameries Association of Ontario, at Harriston, January 11th, 12th, and 13th; Central Farmers' Institute, at Toronto, February 7th and 8th.

It is true that farmers have many grievances to complain of. The town-bred man is ready to believe the opposite of this and to think that the occasional protest which issues from the grange or institute is, the chronic grumble without which a farmer could not comfortably exist.

But the town man is apt to be unreasonable. He takes care that the country hears all about his troubles and his wants, and he rests not until his demands have been conceded. But as soon as the farmer raises his voice he is met with the taunt that the tillers of the soil are a mean set anyway and that their demands are impracticable or too expensive. It is a pity, a misfortune the town does not take a just view of the situation and lend a helping hand to the rural interests of our country. For, after all is said and done, it must be admitted that the farming community is the back-bone of the country. The stalwart yeomanry of any country is the foundation on which a sound, enterprising and prosperous population must rest, and this is especially true of Canada where agriculture engages the attention and energies of so large a proportion of our people. The yeomanry of Canada is as fine a class as can be desired. The descendants of the brave pioneers who felled the forest and peopled the fertile plains, combine the hardy virtues of their sires with the enlightenment of present day conditions, and were it not for a weakness on the side of modest contentment with their lot, whatever it may be, their prosperity and comfort would be unsurpassed by that of any farmers in the world.

The Massey Music Hall.

BY ALEX. FRASER, ASSOCIATE EDITOR.

ONCE more has Mr. Hart A. Massey come to the front as a public benefactor. The cause of higher education he has materially advanced by his princely donations to Victoria University and to Wesley College, Winnipeg. He has now placed the citizens of Toronto under a peculiarly welcome obligation by offering \$100,000, or more, for carrying out a scheme from which will be derived the greatest benefit to the greatest number of citizens. His proposal, cherished in his mind for some time,—and associated therewith the memory of a lovable and beloved son, Mr. Charles A. Massey,—whom death removed just when personal characteristics were maturing which gave promise of a career in which a warm hearted parent must have felt a glowing and righteous pride,—was submitted to a number of Toronto's foremost citizens, whose names are synonymous with philanthropy, benevolence, education and art, and they, after much consideration, happily came to a unanimous conclusion that a spacious Music Hall, with which the name of Charles Albert Massey would be connected, would prove the very best outlet for Mr. Massey's generosity. This has been accordingly decided upon and the Music Hall will, in all likelihood, be begun at an early date. It is proposed that it should be a carefully designed and substantially constructed edifice. While due regard will be given to architectural finish, the first consideration will be convenience, comfort, and adaptation, that the building may be utilitarian in every respect. There will be two galleries constructed so as to give good acoustic properties, and they will be large and well-seated. The ground floor will be arranged on the most modern and best adapted plan for the purposes of a Music Hall. The platform will be spacious, and, besides accommodating a large and powerful organ, will have ample seating capacity for orchestral and chorus purposes. The hall will comfortably seat 3,000 persons, and will be equipped by committee rooms, offices, etc., and various rooms for small gatherings. The site purchased for the Music Hall is centrally situated, being within the limits of Wilton Avenue, Queen Street, Yonge and Church Streets, and is of a comfortable size for the building. The name decided upon is the "Massey Music Hall," and it is not too much to say that it will be a fitting memorial to his son Charles, who was himself intensely fond of music, and used his talents in that direction for the benefit of others. The press generally, with a spontaneity most flattering, has been lauding the donor and his kind action; the citizens generally have made it plain that the gift is most seasonable and appropriate, and to cap the climax, the city, through its council and chief magistrate, has expressed its high appreciation of the gift. There was a side to the subject, not without a certain amount of interest, even if sometimes very amusing, and that was the numerous, and in many instances the sincere, suggestions forwarded to Mr. Massey as to the best disposal of his munificent gift. From a skating rink to public baths, from a convalescent home to public parks, from the endowment of useful institutions to the interminable fads of cranks, there was no end of advice and "carefully-thought-out" proposals. But Mr. Massey placed himself in the hands of capable citizens and he was bound in honor to be directed by their unanimous conclusions. A few extracts from the opinions of the press will show that we have not over-stated the public opinion aroused by the gift. *The Empire*, of December 5th, begins a complimentary article thus: "A Public Benefactor.—Mr. H. A. Massey will expend a Hundred Thousand Dollars on a Music Hall." *The Globe*, of the same date, says: "The need for a great public hall in Toronto has been often emphasized during the large conventions which are frequently held in the city. Such events as the great meetings to welcome the visiting teachers last year, and the Pan-Presbyterian council this

autumn, lose much of their effectiveness because of the necessity for holding them either in the bare, barn-like rinks, or in the pavilion, which is not capable of accommodating half the people desirous of attending; or in the churches, which are smaller yet. Then our musical festivals are crippled for lack of such a hall. The Philharmonic, the Vocal and other musical societies could give concerts at prices now unthought of if more people could be admitted. All these things have been impressing themselves upon Mr. H. A. Massey, and, after thinking the matter over, he has allowed the following statement to be made public. Then follows the facts above related regarding the Music Hall. The *Mail* devotes much space to a description of the proposed building, and in the course of an able editorial, says: "That Mr. Massey has been wisely advised there is no room for doubt. That it will confer a great boon on the citizens there can be no question. If Toronto needs one thing more than another it is such a public hall as is here offered. The want has been a pressing one for years, and public-spirited citizens have more than once made an effort to provide means, on the joint-stock company plan, for the erection of such a building. A few years ago a movement in the same direction almost succeeded, and a site was selected not far from the one now purchased by Mr. Massey, but a difficulty in securing the site fixed upon and an element of uncertainty as to the financial success of the undertaking killed the project. Yet scarcely a month passes that does not leave behind additional evidence of the disadvantage at which we are placed by the want of comfortable accommodation for great gatherings. Toronto has become famous as a city for conventions, and is likely to become more so year by year. A comfortable and attractive meeting place is one of the greatest inducements which can be offered to those bodies whom we may wish should visit us and transact their business in our city. Mr. Massey's gift will, therefore, not only benefit our citizens directly by affording them a magnificent Music Hall, but indirectly by attracting outsiders to Toronto.

Mr. Massey is to be heartily congratulated on the excellent example he has set. There be many rich men who bequeath money for good purposes to be used after their death; there be few who take the better course of giving of their wealth during their lifetime. Mr. Massey is one of these latter. His action is to be highly commended. He has set an example which ought to be followed by some other wealthy fellow citizens. Toronto has sons who have richly remembered her and her needs, but they are comparatively few in number. She has many more born within her limits to whom she has afforded a pleasant home and on whom fortune has lavishly smiled. They have not been very ready to offer gifts to her in return. Something commensurate to their wealth is to be expected from them, and now that Mr. Massey has come forward in the manner in which he has done, they should follow his worthy example."

The following is a list of the Farmers' Institute meetings which are to be held by order of the Minister of Agriculture, and under the control and direction of the Ontario Agricultural College, during this month. This list embraces 119 meetings and covers nearly the whole province, excepting East Simcoe and the Districts of Muskoka, Parry Sound, and Algoma, which are to be arranged for at a later date. They will be of an educational character and ought to be attended by every farmer within reach of the meeting place:

Division 1.—Prof. Shaw, H. L. Hutt, B.S.A., and John Jackson.		
Durham	S. Grey	Jan. 3rd
Kenilworth	E. Wellington	" 4th.
Damascus	E. Wellington	" 5th.
Harristown	W. Wellington	" 6th.
Paisley	C. Bruce	" 7th.
Port Elgin	N. Bruce	" 9th.
Tara	N. Bruce	" 10th.
Teeswater	S. Bruce	" 11th.
Brussels	E. Huron	" 12th.
Holyrood	S. Bruce	" 14th.
Kincairdine	O. Bruce	" 16th.
Dungannon	W. Huron	" 17th & 18th.
Hensall	S. Huron	" 19th.

Division 2.—Prof. Shuttleworth, D. McCrae, and W. L. Carlyle, B.S.A.		
Drayton	W. Wellington	Jan. 3rd.
Berlin	N. Waterloo	" 4th & 5th.
New Hamburg	S. Waterloo	" 6th & 7th.
Listowel	N. Perth	" 9th.
Milverton	N. Perth	" 10th.
Mitchell	S. Perth	" 11th & 12th.
Ilder on	E. Middlesex	" 13th & 14th.
Coldstream	N. Middlesex	" 16th.
Wyoming	E. Lambton	" 17th & 18th.
Sombra	W. Lambton	" 19th.
Brig ten	W. Lambton	" 20th.

Division 3.—Hon. Charles Drury, J. W. Steinhoff, and J. H. Broderick.		
Appin	W. Middlesex	Jan. 3rd.
Bothwell	E. Kent	" 4th.
Thamesville	E. Kent	" 5th.
Chatham Centre	W. Kent	" 6th.
Maidstone	N. Essex	" 7th.
Woodslee	N. Essex	" 9th.
Kingsville	S. Essex	" 10th & 11th.
Tilbury Centre	W. Kent	" 12th.
Bismarck Sta.	W. Elgin	" 13th.
Shedden	W. Elgin	" 14th.
Aylmer	E. Elgin	" 16th & 17th.
Delhi	N. Norfolk	" 18th.
Port Rowan	S. Norfolk	" 19th.
Victoria	S. Norfolk	" 20th.

Division 4.—W. J. Palmer, B.S.A., Wm. S. Fraser, and A. McD. Allan.		
Hamilton	S. Wentworth	Jan. 3rd.
Hall's Corners	S. Wentworth	" 4th.
(Himbrook P.O.)	S. Wentworth	" 5th & 6th.
Camptden	Lincoln	" 7th.
Niagara Falls South	Welland	" 9th.
Welland	Welland	" 10th.
Pelham Town Hall	Monck	" 11th & 12th.
Cayuga	Haldimand	" 13th.
Canboro	Monck	" 14th.
Waterford	N. Norfolk	" 16th & 17th.
Norwich	S. Oxford	" 18th & 19th.
Mount Pleasant	S. Brant	" 20th & 21st.
St. George	N. Brant	" 20th & 21st.

Division 5.—John I. Hobson, Samuel Hunter, and G. C. Caston.		
Embo	N. Oxford	Jan. 3rd.
Drumbo	N. Oxford	" 4th.
Freelton	N. Wentworth	" 5th.
Nassagaweya	Halton	" 6th.
Weston	W. York	" 7th.
Woodbridge	W. York	" 9th.
Owen Sound	N. Grey	" 10th & 11th.
Maxwell	C. Grey	" 12th.
Markdale	C. Grey	" 13th.
Shelburne	Dufferin	" 14th.
Orangeville	Dufferin	" 16th.
Erin	C. Wellington	" 17th.
Fergus	C. Wellington	" 18th.
Guelph	S. Wellington	" 19th.
Brampton	Peel	" 20th & 21st.

Division 6.—John McMillan, M.P., F. B. Lintfield, B.S.A., and D. W. Beadle.		
Burlington	Halton	Jan. 3rd.
Bond Head	S. Simcoe	" 4th & 5th.
Collingwood	W. Simcoe	" 6th & 7th.
Elmvale and Wyevale	C. Simcoe	" 9th.
Minesing	C. Simcoe	" 10th.
Newmarket	N. York	" 11th & 12th.
Agincourt	E. York	" 13th & 14th.
Uxbridge	N. Ontario	" 16th.
Cambridge	N. Ontario	" 17th.
Woodville	W. Victoria	" 18th.
Beaverton	N. Ontario	" 19th.
Oshawa	S. Ontario	" 20th.
Pickering	S. Ontario	" 21st.

Division 7.—H. B. Sherman, B.S.A., D. E. Smith, B.A., and R. F. Holtermann.		
Lindsay	W. Victoria	Jan. 3rd.
Bobcaygeon	E. Victoria	" 4th & 5th.
Lakefield	W. Peterborough	" 6th.
Peterborough	W. Peterborough	" 7th.
Warkworth	E. Northumberland	" 9th & 10th.
Grafton	W. Northumberland	" 11th.
Pictou	Prince Edward	" 12th.
Wellington	Prince Edward	" 13th.
Napanee	Lennox	" 14th.
Bath	Lennox	" 16th.
Cannifton	E. Hastings	" 17th.
Paltimore	W. Northumberland	" 18th.
Orono	W. Durham	" 19th.
Bullock's Corners	N. Wentworth	" 20th.

Division 8.—T. G. Raynor, B.S.A., and A. H. Pettit.		
Blackstock	W. Durham	Jan. 3rd.
Tweed	E. Hastings	" 4th & 5th.
Sharlot Lake	Frontenac	" 6th & 7th.
Perth	S. Lanark	" 9th.
Smith's Falls	S. Lanark	" 10th.
Alnoutre	N. Lanark	" 11th.
Pakenham	N. Lanark	" 12th.
Renfrew	S. Renfrew	" 13th.
Eganville	S. Renfrew	" 16th.
Richmond	Carleton	" 17th & 18th.
Winchester	Dundas	" 19th.
Avonmore	Stormont	" 20th.

Division 9.—Prof. Pantou, Joseph Vuill, and Edward Jeffs.		
Spenceville	S. Grenville	Jan. 3rd.
Oxford Mills	N. Grenville	" 4th & 5th.
Metcalfe	Russell	" 6th & 7th.
Vankleek Hill	Prescott	" 9th & 10th.
North Lancaster	Glengarry	" 11th.
Martintown	Glenary	" 12th.
Cornwall	Cornwall	" 13th.
Morrisburg	Dundas	" 14th.
New Dublin	Brockville	" 16th.
Athens	Brockville	" 17th.
Lansdowne	S. Leeds	" 18th.
Delta	N. Leeds	" 19th.
Centreville	Addington	" 20th & 21st.



1st.—Toronto Public Library re-opened after extensive repairs. . . . Mr. George Wood, the celebrated temperance lecturer, of Manchester, England, visited Toronto. . . . Serious outbreak of cholera in France announced.

2nd.—Thirty-three business failures announced in Canada during the present week. . . . Mr. Alfred de Rothschild's proposal rejected by the Monetary Conference. . . . Jay Gould died.

3rd.—Robert C. Riggs, aged 103 years and five months, died at St. John, N. B. . . . Freedom of the city of Liverpool conferred on Mr. Gladstone. . . . Commander Roswell D. Hitchcock, jr., U.S.N., died.

5th.—The Manitoba Government decided to proceed with the erection of a Court House for Winnipeg to cost \$80,000. . . . The governments of Britain, Germany and the United States agreed on a plan for the restoration of order in Samoa.

6th.—Prince Albrecht resigned the Regency of Brunswick owing to ill health. . . . Forty-third annual session, Grand Division, Sons of Temperance of Ontario, opened at Milton, Ont.

7th.—Mr. Chapleau sworn in as Lieut.-Governor of Quebec. . . . National Agricultural Conference met in London, Eng., and carried a resolution in favor of the partial protection of the British markets.

8th.—Mr. Ross re-elected Speaker of the North-West Assembly. . . . Mr. Cayley, Premier North-West Territories, resigned.

9th.—Benchers of the Ontario Law Society decided to admit women to the course of study which will qualify them to become solicitors. . . . Public meeting in Kingston, Ont., declared in favor of establishing a School of Mines.

10th.—Captain Montel arrived at Tripoli after an exploration journey in the Sahara desert extending over three years. . . . Mr. James H. Carleton, of Salem, Mass., purchased the Whittier home.

12th.—British Government decided to introduce an Imperial penny postage. . . . The West Huron election case was dismissed and Hon. J. C. Patterson confirmed in his seat.

13th.—The Conservative Conference at Sheffield adopted Col. Howard Vincent's resolution in favor of preferential fiscal arrangements between Great Britain and her Colonies. . . . Premier De Boucherville, Quebec, resigned.

14th.—Sir Adams George Archibald, K.C.M.G., died at Truro, N.S., in his seventy-ninth year. . . . Fearful colliery explosion at the Ranfurlong pit, Wigan.

15th.—Hon. Mr. Taillon accepted the Premiership of Quebec. . . . Mr. T. W. Russell, M.P. for South Tyrone, delivered an address on Home Rule for Ireland, in Toronto.

16th.—Cornelius Vanderbilt gave \$5,000 to the New York Police Pension Fund. . . . Two new cases of cholera at Hamburg. . . . Robert McGreey's sentence shortened by three months.

17th.—Queen Victoria consented to lend for exhibition at the World's Fair Leonardo de Vinci's drawing of the first map of America. . . . Rev. Dr. Talmage's tabernacle seized by a sheriff on a judgment for \$1,104.88.

19th.—James Harrower, ex M.P.P., died at Winnipeg. . . . New ranching regulations came into operation in the North-West. . . . Free traders, Melbourne, Aus., passed a resolution congratulating the Democrats of the United States on their recent victory.

20th.—The factory of the Ontario Box Co., Hamilton, was destroyed by fire. . . . Mr. G. P. Graham, ex-Mayor of Morrisburg, appointed to the new "Municipal Statistics" office, created by the Ontario Government, in connection with the Department of Agriculture.

21st.—The Hon. W. B. Ives, M.P., the two new Comptrollers, and the new Solicitor-General were nominated and elected by acclamation on taking office in the Thompson Government. . . . W. G. Parmelee was appointed Deputy Minister of Trade and Commerce.

22nd.—Mr. Cleveland consented to deliver the opening address at the Columbian Fair and to start the machinery. . . . Navigation on the River St. Lawrence closed. . . . Mr. Wm. McAulay, a prominent merchant of Hamilton, Ont., committed suicide.

23rd.—Mr. Michael Davitt, M.P., unseated in North Meath on account of undue priestly influence. . . . Strike took place among the Clyde shipbuilders. . . . Evicted Tenants' Commission, Ireland, closed its sessions.

24th.—Martial law was declared all along the Lower Rio Grande. . . . Ex-Congressman Nute died at Farmington, N.H. . . . The *Globe* building, the oldest evening paper in London, Eng., burned to the ground.

26th.—Nominations for municipal elections held throughout Ontario. . . . Ice bridges formed over Niagara and St. Lawrence rivers. . . . Christmas celebrated.

27th.—Donation of \$1,000,000 made to the Chicago University by John D. Rockefeller. . . . Rev. Wm. Perrin, England, appointed Bishop of British Columbia.

29th.—John Boulton and Emma Shea, while skating near Port mouth, Ont., fell through the ice and were drowned. . . . A daughter of Mr. Davis, Highland Creek, Ont., accidentally shot.

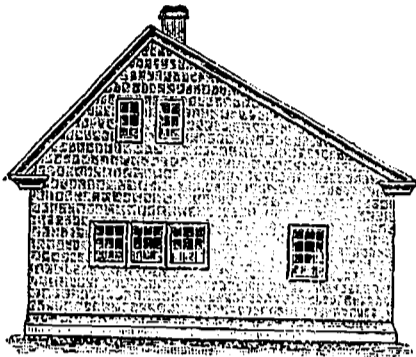
30th.—Mr. Gladstone attained his eighty-third birthday. . . . Destructive explosion by anarchists took place in Paris. . . . Canadian National League formed in Montreal.

31st.—The S.S. *Umbria* reported safe, but disabled, at sea. Eight thousand German Colliers struck work.



A Convenient Stable.

FOLLOWING is a sketch of a cheap, well-planned stable used for years by a farmer, and found to be of a most desirable kind :



There is room for three horses and four carriages and a sleigh. It is 31 by 32 feet, and faces south. The walls are shingled and papered. The rolling door shuts the carriages from the wash room; also a rolling door closes the opening between the harness room and the room for the animals. In cold weather the carriage room is shut off, and the stove heats the wash

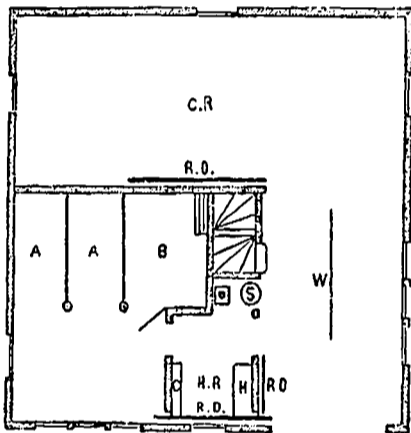


Fig. 2—A A, Stalls; B, Box stall; C R, Carriage Room; W, Wash Room; S, Stove; R D, Roller Doors; H R, Harness Room; H, Harness; O, Shelves.

room without heating the whole stable (fig. 2). The chimney is 16 feet square to the top of the first storey, and 24 feet square to the top. A six inch drain tile flue carries the smoke up the centre of the chimney. A wooden duct one by two feet, is built on the upper side of the floor to the second storey, one end opening into the chimney, the other into an opening one by two feet in the ceiling in the centre of the horses' room. The heated tile causes an upward draft through the duct and the chimney, thus venti-

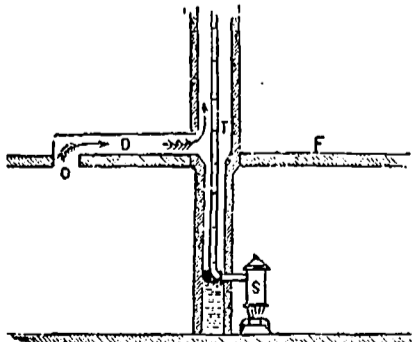


Fig. 3—S, Stove; F, Floor; O, Ventilating Opening; D, Duct; T, Tile Flue.

lating the horses' room very thoroughly (fig. 3). There is no danger from fire, as the tile carries all the smoke and sparks. I kept two horses and a cow in the room, and it never smells badly.

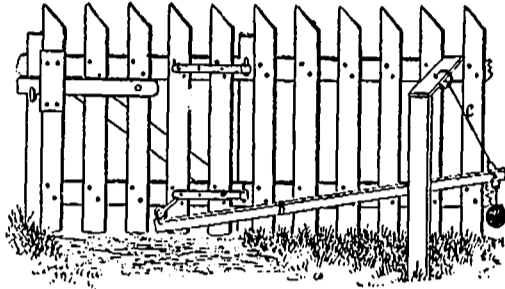
There are three windows in the outside rolling door, which, with three windows on the east side of the wash room, gives abundant light. The manure pit is outside the barn. As

a result of this, and the forced ventilation, the barn is free from ammonia at all times, thus saving the varnish of carriages.

The animals are on the south side, where three windows give them abundant light and sunshine.

A Sure Gate Closer.

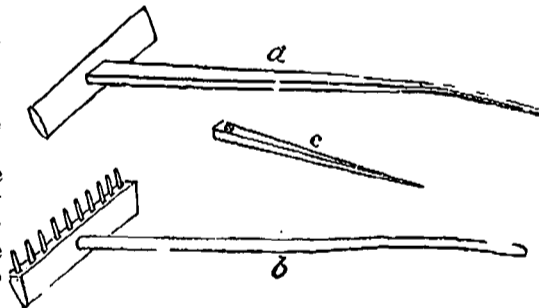
THE annoyances resulting from open garden and lawn gates can be avoided by the contrivance shown in the accompanying illustration drawn from a sketch sent us by a valued correspondent. This gate closer will not only close the gate every time it is opened to the usual width, but if the gate is swung complete-



ly back to the fence, it will also hold the gate open. This is a great convenience, as all realize who have tried chains or ropes with weights, and self-closing hinges or springs. With self-closing gates, the carelessness of children and callers will be overcome, and the trees and plants saved from injury by trespassing cattle and swine.

Convenient Stable Tools.

At the cost of very little time, and no money, every horse owner may have several convenient stable tools. The wooden scraper at *a* has a handle four and a half feet long, the scraper head being fourteen inches long, six inches wide, and one and a half inches thick at the centre, and tapering toward each edge. The scraper at *b* has the same length of handle, also the same length and thickness of head, the solid portion,



however, being but four inches wide, the upper edge set with pointed wooden pins two and a half inches long and three-quarters of an inch in diameter. Provided with these wooden teeth, the stable can be nicely and expeditiously cleaned without the use of a fork. It will, also, prove convenient for separating the coarse from the fine litter. The wooden pin at *c* is for clearing out the holes, made through the floor for drainage, and should be one foot long, a hole being provided near the upper end for a string or wire loop by which it may be hung up.

PHOSPHORUS is a very essential element of plants and animals. It is continuously, though slowly, liberated by the disintegration of rocks into soil, from which it is selected and absorbed by the plant. It is estimated that the harvesting of each acre of cereals removes nineteen pounds of phosphoric acid from the soil. Each acre of hay removes 12.5 pounds.

It is practically, although not technically true, that "tillage is manure." But tillage

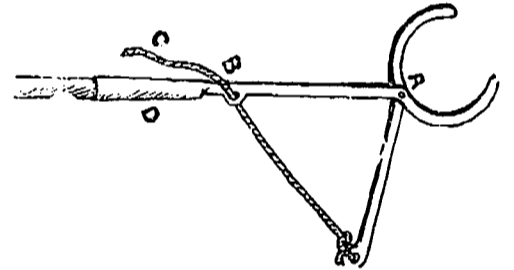
with manure is a safer rule, if you are after big and paying crops. In the same line of thought science is a valuable aid to agriculture. But "science with practice" is the combination that must unlock the secrets that lead to the highest agriculture and the most profitable farming.

Sods, hay, or straw, are not the most suitable first covering for tile drains. No vegetable growth should be used for this purpose, because it soon decays, and small particles of earth find their way into the drain. For covering the joints, nothing is better than a strip of tarred paper, four inches wide and reaching to within an inch of the bottom on each side. The water enters the tile at the joint near the bottom, or during a heavy rainfall, at the level of the running water inside the tile.

Libe Stock.

A Handy Hog-Catcher.

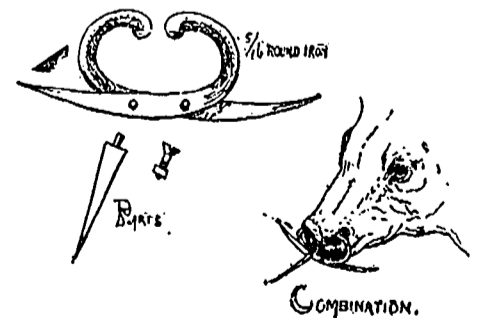
A HANDY hog-catcher comes in useful on a farm. Here is the cut of one, easily and cheaply made by any blacksmith. A is the rivet, BB are eyes, D is a socket. Pass a 4-foot rope through eyes BB, make a knot on end of rope. Take an old broom handle, and fit end loose in socket. The jaws should be large enough when closed to hold a hog's leg firmly, without slipping out. It is a difficult thing to go into a pen of porkers and catch them, especially if one wants to single out one animal. Take the



catcher by handle in right hand, and rope in the other. Hold it to the hog's hind leg pull by rope, and you have the animal fast. The cost is very small, and the farmer will find it a saver of time and temper many times during the year.

Nose Ring for Calves.

THE formidable looking nose-ring here reproduced has been tried a great deal during the past two years and proved a good, useful article. It successfully prevents a calf from sucking a cow. The spike is rivetted in one set holes, and after



the ring has been placed in the nose the bolt is fastened in the other. This is sure to prick the cow and make her move away when the calf sucks. Some heifers get into this bad habit and will not give up, even when they have calves of their own.

THIS is not bad advice. Buy a thorough bred cow or sheep, taking the chance of getting the service of a pure bull or ram. Those who gradually improve their stock and are careful of it are the prosperous farmers.

THE hog house need not be costly but it ought to be clean and warm.

THERE will never be a poor market for the best quality of butter and cheese.

A HORSE'S feet ought to be carefully examined at least once a month and kept in shape by a timely use of the rasp.

ON THE breed, feed and care of the calf depends the profit or loss of the cow. As the calf is reared the cow is inclined.

CARROTS have been found to be excellent food for horses with weak digestive organs. The effect is both nourishing and curative.

WARMTH is a prime necessity in winter dairying. Feed is not more necessary to milk production than is warmth and comfort.

THERE are many instances of sows improving as breeders with age. Reasonable age need not deteriorate swine for breeding purposes.

BAD sanitary surroundings will induce tuberculosis in cattle, hence it is, that the disease usually originates in cities and badly kept byres.

THE ram is half the flock, therefore it is necessary to have a good one. The difference in price between a good and an indifferent one is the difference between success and failure.

TRYING to keep cows fat that have no other protection from the winter's cold than the leeward side of a straw pile is like trying to warm up all out of doors with a No. 7 heating stove.

DO YOU want to get a herd of dairy cows at a small outlay of cash? Then buy heifer calves, raise them according to approved methods, and you will soon have a dairy that will astonish you.

DAIRY progress is often merely the fore-runner of progress all along the line, because the proper care and feeding of the herd gives a manure crop that incites to high farming. Discuss improved dairying at the institutes this winter. There is no greater room for improvement in any branch of agriculture.

DO NOT believe the man who tells you that calves born in the fall or winter will have to wear stockings and blankets to live till spring; all they need to make them in every way more profitable than a spring calf is a good warm barn, with plenty to eat and drink, good care, and exercise in the open air on sunny days.

DORSET sheep are said to be dog proofs, *i. e.* that they can fright dogs or at least are not scared by them. Many farmers assert that their Dorsets will turn around and face any dog and will not run away from them. This, if true, is a valuable fact, for a sheep that can fight a dog is not likely to be killed or worried by a dog.

THE value of feed is not the same to all cattle of the same breed. You may have two Jerseys of the same stock in the same barn and get more milk from the one than from the other although they may be fed exactly the same. Again, if they are fed differently according to their different tastes you may get about the same quantity of milk and butter from both.

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

THE wool is a sure crop every year, and brings cash at a season when it is often needed. Early large lambs will bring a profitable sum per head before the grain is ready for market. Sheep husbandry improves the condition of the farm. A good flock will bring the cost at any season of the year.

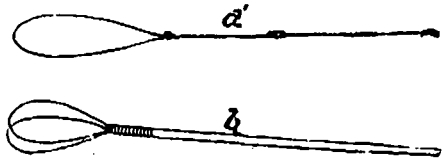
SHEEP when properly treated are the easiest managed of all domesticated animals. The approach or voice of the farmer should be the signal for them to gather about him, and not scamper away out of reach. During the past year there has been a gradual awakening as to the profitableness of the sheep industry, and this winter will find many farmers with a flock of sheep for the first time in many years, and they and others should remember that sheep that go into winter quarters in good condition are reckoned as half wintered. If the first fall of snow finds them in feeble condition it means a demand for extra feed and more careful attention for several months, and a consequent light clip of wool in the spring. In the purchase of sheep for wintering select those that are young and in good condition, even at an extra expense of one dollar per head.

SINCE horse-feeding can receive more than usual attention at this time of the year the following remarks from "Old Experience" are *apropos*:—It is my candid opinion that more money is thrown away, and animals injured at the same time, in horse feeding than in any other department of farm work. Horses are fed as if they could each hold nearly as much as a mow or a bin, and as if one rule should be observed, feed all the horse can possibly stuff. Feeding a big mess of oats to be immediately followed by a manger full of hay is an excellent way to waste food and damage the animal, but is the very opposite of intelligent, economical feeding. A judicious feed of hay should precede the grain ration, if both cannot be fed together, which is my invariable practice. Ground grain and cut hay mixed, after slightly moistening the hay, is in my opinion the best way to feed a horse.

The Poultry Yard.

Removing the Gape Worm from Fowls.

WHEN the gape worm becomes established in the throat of a chicken, death will result, unless the worm is soon removed. One plan is to introduce some liquid substance in the throat that will kill the worm, or cause it to loosen its hold upon the membrane of the throat. For this purpose, kerosine or turpentine are the common remedies, being applied with a feather which is dipped in the liquid. The chicken's mouth is held open with one hand, and the feather introduced into the chicken's throat with the other, being given a twirl between the thumb and finger, thus putting the oil on all parts of the throat. Such applications usually add to the inflammation of the throat, and death is often hastened thereby. A better plan is to loop a



hair from the mane or tail of a horse. A simple loop is shown at *a* in the illustration. The three round dots are bits of wax to hold the hair in position. At *b*, several loops are placed in the end of a small split stick and held together by wax or thread. These loops are introduced into the bird's throat, when by twirling, the worms are loosened and as some of the mucous in the throat will attach to the loop the loosened worms are readily withdrawn. The operation takes about a minute and saves the life of a chicken.

THE White Call duck is a cheap, hardy and thoroughly tame bird, and make most engaging pets.

THOSE who planted rye patches for winter grazing will be rewarded with plenty of eggs this winter.

GREASE will spoil eggs for hatching. Therefore, never grease a setting hen. Kill the lice with insect powder.

A BOX six inches high and two feet square kept filled with clean dry earth makes a good dust bath for fowls.

If ducks can have a free range during the day and comfortable quarters at night they can readily be kept healthy.

INDIAN game crossed on any of the American breeds as well as the Asiatics will give an excellent cross for roasting fowls.

To RAISE geese successfully there must be some pasture land near by; for geese cannot thrive without plenty of green food.

NEXT to the Jersey Red, the Poland China breed is considered to rank highest in regard to hardiness, and ability to resist disease.

A GOOD cheap food consists of bran and wheat screenings which bought late in the fall may be procured without much expense for poultry.

THE swan is the longest lived bird, in extreme cases reaching the age of 300 years. The common barnyard hen attains the age of from fifteen to twenty years.

A SIMPLE remedy for scaly legs is as follows: Apply vaseline or lard with a few drops of carbolic acid added and there will be no excuse for their presence in a well kept flock of poultry.

DON'T forget to lay in a barrel of air slacked lime. Nothing is better for sprinkling over the platforms after you have cleaned off the manure. Also scatter liberally over the hen house floor.

Do not be afraid of feeding your fowls too heavily in cold weather. An exclusive carbonaceous diet will be too fattening. Give dry bran, vegetables, oats in the sheaf, chopped hay. Give liberally and you will be well repaid.

POULTRY may be made extra profitable if you will save all the waste vegetables, small potatoes, and turnips, loose heads of cabbage, inferior garden truck, and feed it during the cold weather. It will return you more this way than if fed to pigs.

THE chaff from wheat is one of the best materials for the floor of the poultry house. Keep the chaff dry and under cover. It not only permits of easy cleaning of the house, but acts as an absorbent and also serves as a litter in which the hens may scratch for food.

COCKERELS can be caponized at any age but it is not advisable to perform the operation after they are six or seven months old as their organs have become too firmly established in performing their functions. Neither is it wise to caponize chicks when too young as the frame is too tender to handle without injury. Active roosters cannot be caponized without fear or loss.



Scientific Recreations.

A COMMON soap-bubble illustrates in a most beautiful manner many important scientific principles, and even now all the phenomena presented by these films of soap and water are not clearly understood; perhaps least of all why a solution of soap should possess this property of forming bubbles, to such a high degree. These subjects have frequently been referred to in these columns, and in the present article we shall only describe some pretty experiments which may be performed in the way of bubble blowing, as illustrated in *La Nature*.

The ordinary solutions of soap and water are of very little use for these purposes, as the bubbles last only a few minutes and break at the slightest touch. The best liquid is a solution in water of pure oleate of soda to which has been added one-third its bulk of glycerine. Oleate of soda can usually be obtained through a druggist, but if not, the following recipe will give a fairly good substitute:

Cut some white castile soap into fine shavings and dissolve in hot water, with constant shaking. Allow the mixture to stand over night, and in the morning pour off the clear portion at the top, and add to it one-third its bulk of glycerine. With this solution fine large bubbles may be blown which will remain a long time without breaking, and can be handled quite freely.

In Fig. 1 an ornamental glass dish is represented, in which a small porcelain statuette is placed. If the figure and the edge of the dish are previously moistened with the soap solution,

a bubble can be blown directly down over the head of the figure until it is enclosed by it as shown in the illustration. If some tobacco-smoke is taken into the mouth while blowing the bubble a very curious and beautiful effect is obtained. The body of the figure disappears in a cloud of smoke, as if it were undergoing a fumigation—a familiar operation in these times of cholera panics.

A more elaborate piece of work, in the shape of a moving wheel of bubbles, is shown in Fig.

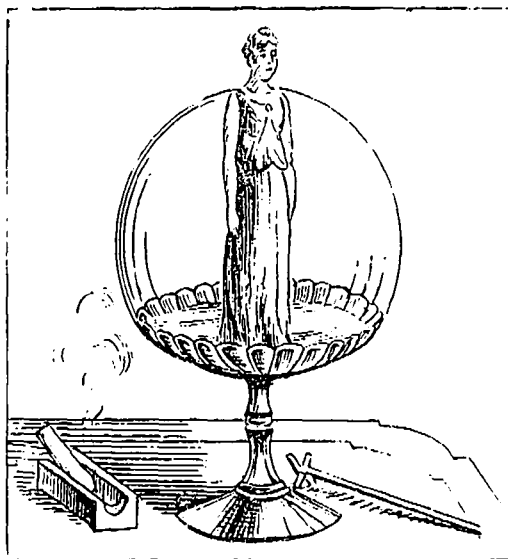


Fig. 1.

2, in which the frame work is made of wire and straw, and the bubbles are suspended to disks of cardboard. If properly constructed, it can be made to revolve by gently blowing upon it. Many other similar experiments can be performed, which will readily occur to those interested in the subject, and some very beautiful effects can be obtained.

Take two small wooden balls (Fig. 3) and

fasten them together by a double cord of rubber. Twist the cords tightly by turning the balls in opposite directions, and then place them on the floor or smooth piece of ground. Some very curious figures will be produced by the rapidly

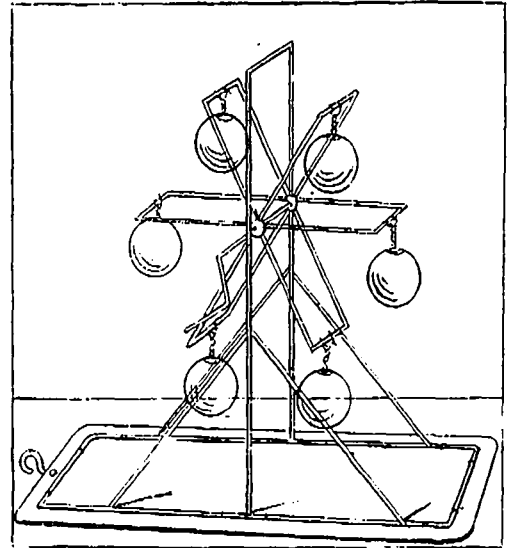


Fig. 2.

revolving balls, as shown in the lower part of the engraving, which are of interest from a mechanical point of view. The simplicity of this ingenious scientific toy is not its least recommendation.

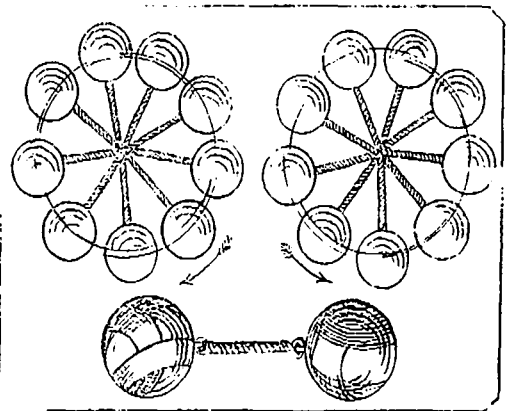


Fig. 3.

A curious pneumatic top (Fig. 4) is illustrated in a recent number of the *Scientific American*, and consists of a disc of cardboard three or four inches in diameter, provided with an axis to spin upon, which may consist either of

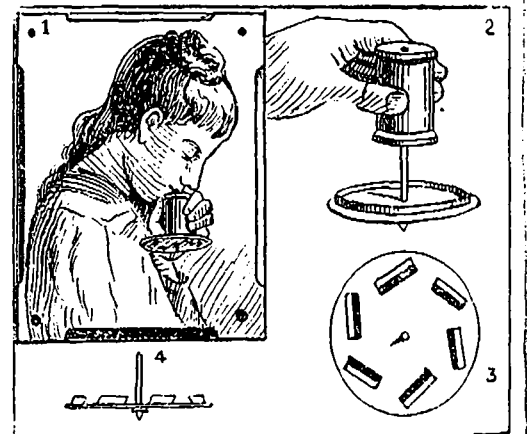


Fig. 4.

a piece of wood, or a large needle or pin. On the circumference are several vanes, made by cutting through the cardboard on three sides of a rectangle and turning up the card on the fourth side, as shown in 3 and 4. To spin the top, take an empty spool, place the stem of the top in the hole in the centre and blow strongly

downwards, as in 1. At first it will be necessary to hold the top in place by letting the point of the stem rest against the finger-nail, but as soon as the current of air is established the support can be removed, and the top will be suspended in the air by itself. This remarkable result is due to the pressure of the atmosphere; a partial vacuum is formed by the centripetal movement of the air between the lower surface of the spool and the upper surface of the cardboard disc, which is thus held in place, while at the same time the current of air striking the obliquely placed vanes causes it to revolve rapidly. When one ceases to blow, the top drops from the spool, and if allowed to fall on a plate or other hard surface will continue spinning for a long time. The accompanying illustration will render its construction sufficiently clear to any one desiring to make one.

Willie's Dream.

Willie had been very peevish. Nothing had gone right with him. Tea-time came too soon and spoiled his play. He was put to bed in the dark, and again it rained or snowed all day, just to break up all his fun. Late in the afternoon, and tired with fretting, and wishing to have such a world as he liked, he fell asleep, and dreamed that an angel came to him and said, "Come! I have been sent to grant your wish—you shall have a world just as you like."

And Willie felt himself borne, he knew not how, through the air, off, off, until he lost sight of the earth. When they stopped the angel said, "Here, a world shall be made just as you wish. But remember that after it is once fairly arranged to your taste, you cannot change it, unless you wish to go back to the old earth."

Willie was too intent on the first sentence to hear the last one. He began to give his orders with marvellous rapidity. Soon there were beautiful green fields, dotted here and there with little hills, covered with bright flowers. Willie did not want high hills to climb. Then a cluster of fruit trees sprang up at the little boy's bidding, with apples, pears, plums, peaches, bananas, and oranges for climate had nothing to do here. Two or three times Willie was on the point of declaring it finished, and each time recollected something else he liked. At last, adding a little brook dancing merrily in the sunlight, and asking for two or three of his playmates to help enjoy it, he said it was all just as he wished. Then the angel left him, saying, "Remember my words."

The boys had any amount of fun. They cut switches, climbed trees, ate fruit, hurled stones and threw balls, with no fear of broken windows, or of any one to complain of them. But at length, wearied with play they quarrelled, and Willie was left alone. It was a nice world, however, and he enjoyed himself in various ways. After a while his eyes began to smart and he wanted to sleep. But it was always noon, and the sun very bright and hot here. He could not get asleep. He went into the shade and rolled over this way and that, put leaves on his head, but somehow the brightness would shine through to keep him awake and he wished it was dark. At last he did fall asleep. When he awoke he was very hungry. Looking into the trees he saw the fruit had all dried

and burned up with the hot sun. He ran to the brook for a drink, but found that it was dried up too. "Oh, dear," he muttered, "I wish it would rain." As he started away from the dried brook to look for an orange, he saw a bright flame sweeping along, burning up trees, bushes and grass in its swift march.

Hungry, thirsty, and frightened by the fire he threw himself upon the ground and cried: "Oh, angel, angel, please do take me back."

Just then he awoke to find a touch as gentle as an angel's upon his head, and to hear his mother's voice. Willie told her his dream, and said: "I'll never be fretful again because of a rainy day or the darkness at night."—*Child's World.*

The Children's Room.

It is not possible for every one to have a nursery proper for the children, but there are many good-sized country houses where a room might be set aside for them and fitted up with such simple contrivances as would not only make them happy, but would often relieve the busy mother of their care. The furniture for such a room should be of the simplest. A closet in the corner for the toys is made by fitting a triangular board about three feet from the floor. It is finished by a curtain in front shirred on a wire. The table should be low enough for the children to work at comfortably when seated on a settee, or chairs, which will allow their feet to touch the floor, and should have no sharp angles but round corners, that no little heads may be bruised during a merry game or romping. Both of these articles may be made by an ordinarily skillful father. A space on one side of the room, or on more than one side, for the matter, should be painted with a prepared blackboard mixture; under this, fasten a narrow cleat of wood to the wall, on which may rest pieces of chalk and a cloth, chamois or sponge for erasure. This may foster the genius of an embryo artist, and will certainly afford a pastime for many hours if the mother or some older sister will now and then give them simple lessons in writing numbers, making letters and playing slate games such as "fox and geese" and "tit-tat-too."

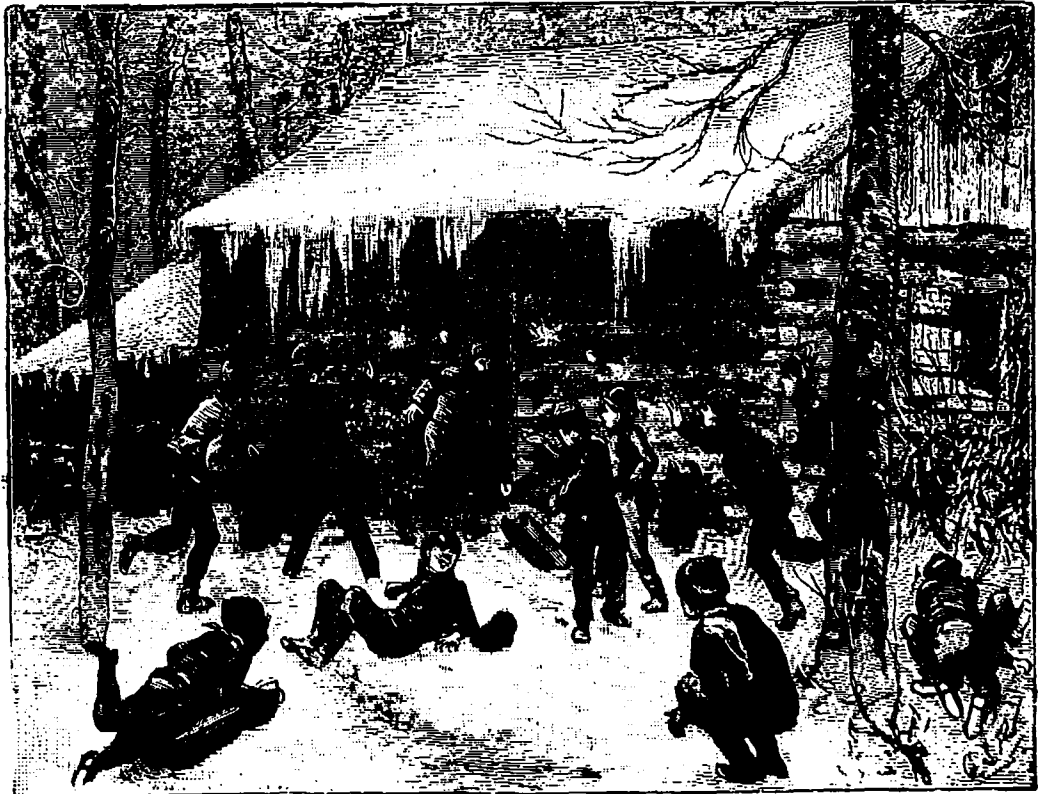
Many parents spend more in a single year in toys for their children, which are often unsatisfactory as a means of amusement, than would suffice to furnish such a room as we have

described. No carpet is required; indeed, it is better without it. Have the floor stained a dark oak color and varnished. Here and there lay strips of gay rag carpet, or a cheap fur rug or two, or rugs of home manufacture. Across one corner fasten a six inch strip of board, and in the enclosed space put a bushel of clean sand, sea sand, if possible. Provide several toy tin pails and some little shovels, and teach the children that this sand is to be kept well in its corner. This will be needed only for the very little ones who cannot go out of doors in winter.

Many lessons of order and neatness can be taught in this room. Have a tiny dustpan and broom, let the children take turns in using it and have separate days for each to assume the care of the room. The youngest child can be made to feel a pride and proprietary interest in what is his very own, and they will soon take pleasure in "tidying up" their room at night, and they can be encouraged by the promise of a visit from mamma before supper.

Don't give them everything at once but let one simple amusement be added after another. On some stormy day in winter, when everything else has failed, look over your piece bag and select all the pieces of bright silesia or paper muslin from which you may cut folios of any given size. Set the older ones at work in cutting out pictures from illustrated papers that you have laid aside for the purpose. One of the girls may be allowed to make the paste for this scrap book, and all will be interested in pasting in the pictures. There may be a pleasant rivalry as to who shall arrange the prettiest pages, and it will be a continued source of pleasure to them to look over this little book with their little schoolmates.

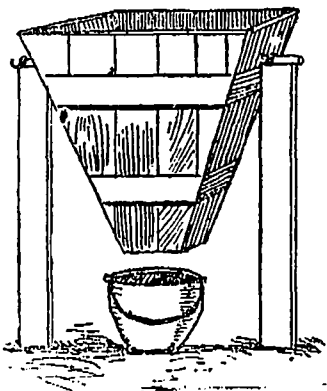
This is practically a home kindergarten. If the children are too small to be left alone, then it is pleasant to have such a room where the mother can spend an occasional hour with them at her sewing. You will need no better adornment for the walls than the colored illustrations which come with many weekly papers and texts of mottos in the simplest rustic frames of bark or moss. A set of scripture texts in large type will afford a means of instilling one now and then into their baby minds, and will act as a stimulus toward learning to read, for a child will soon begin to spell out the words which he has before committed to memory, and consequently can pronounce without difficulty. Later in life, years of exile from home will not efface from the memories of sons and daughters the delights and scenes of this "children's room."





Ash Hopper.

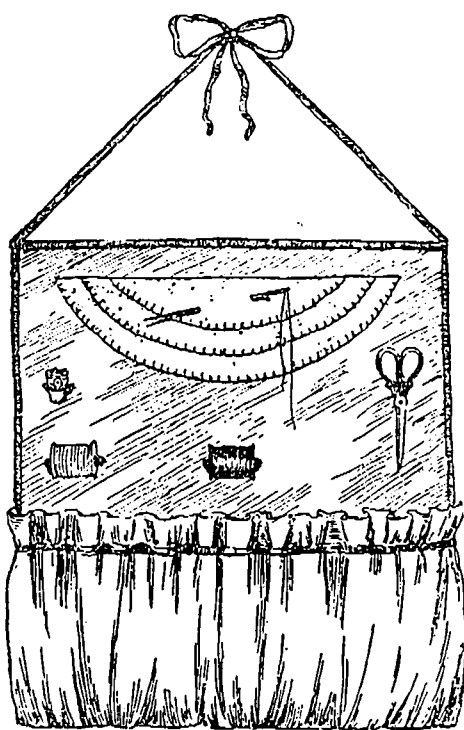
TAKE planks and nail them together, and saw them and nail together as shown in illustration. Nail a piece on opposite sides edge-wise. Nail a board from this piece to the top



of the hopper. Now bore a two-inch hole through this board and through the hopper, to put your pins in to hang your hopper by. Drive two good forks in the ground to hang your hopper on. When you want to empty ashes, just catch hold of bottom and turn hopper upside down and ashes will slide out. When through using, take down and store away in dry till needed. This hopper saves much trouble and vexation. The lye just runs through a small hole left in the bottom, into the pot, without any waste of lye.

Traveller's Work Bag.

THIS is one of the comfortable belongings that every woman who makes occasional journeys likes to have. When the pocket part is empty or nearly so, the bag can be rolled up and put in the satchel. The strings of narrow ribbon



which serve to hang it up by, in stateroom or hotel apartment, can be wound around it for security when it is rolled up. It is hardly necessary to describe very explicitly an article so plainly shown by the accompanying cut. The foundation is cut from the stiffener with which Medici colors are interlined; on one side is laid a sheet of thin wadding or flannel, and both

sides are covered with silk. The edges are sewed inside in a seam and turned. The pocket across the lower part, for work or additional sewing materials, is made of the same silk, with an elastic band in the shirr, to keep the contents from spilling out readily. The stuffed side should be the front in making up the article, and will be found convenient for sticking pins and needles in. Little straps of silk elastic are sewed on to hold thimble and scissors. Spools of black silk and white cotton are held on by taking a stitch through each spool with heavy embroidery silk. Near the top are flannel needle-book leaves, finished on the edges with button-hole stitch done with silk.

Recipes Arranged for use in the Boston School Kitchen.

BEEF STEW. $\frac{1}{2}$ pound beef, 2 large potatoes, $\frac{1}{2}$ small turnip, $\frac{1}{2}$ carrot, 1 onion, 1 teaspoonful salt, speck pepper, flour to roll the meat in, about 1 pint water. Cut the meat from the bones. Put bones, gristle, and small tough pieces of meat into the saucepan, cover with cold water, set it on the fire and let it come to boiling-point. Cut the meat into small pieces, roll them in flour. Melt the fat in a frying pan; slice and brown the onion, then brown the meat and put it with the onion into the saucepan with the bones. Add enough boiling water to cover. Simmer from 2 to 3 hours, keeping the saucepan tightly covered. Pare and parboil the potatoes. Prepare the carrot and turnip and cut them into $\frac{1}{2}$ inch dice $\frac{1}{2}$ hour before serving the stew; skim off all the fat, remove gristle and bones, and add the vegetables, salt, and pepper; let it boil gently. Serve with dumplings.

DUMPLINGS. 1 cupful flour, $\frac{1}{4}$ teaspoonful salt, 1 teaspoonful baking-powder, $\frac{1}{2}$ scant cupful milk or water.

Sift the dry ingredients, stir in enough milk or water to make a soft dough. Drop it by spoonfuls into the boiling stew, cover tightly, and let them cook 10 minutes. Serve at once. Put them round the edge of the platter and the stew in the middle.

CORNSTARCH PUDDING. 1 pint milk, $1\frac{1}{2}$ tablespoonfuls cornstarch, 2 tablespoonfuls sugar, $\frac{1}{2}$ teaspoonful flavoring, speck salt, and one egg. Scald the milk, mix sugar and cornstarch together and mix them with a little cold milk, add the scalded milk, stirring all the time, pour into top of double boiler or a granite pan, stir over the boiling water 5 minutes, add salt. When it has cooled a little, stir in the beaten egg and flavoring, pour into a buttered pudding-dish, and bake in a moderate oven 20 minutes, or till golden brown.

BROILED STEAK.—Wipe the steak with a damp cloth. Rub the broiler over on the inside with a piece of the fat, put in the meat and place it over a hot, clear fire. Turn it every 10 seconds. A steak $\frac{3}{4}$ inch, takes 3 minutes, if liked rare. Put it into a hot platter and sprinkle with salt and pepper.

PAN-BROILED MUTTON CHOPS. Trim and wipe the chops, get a frying pan very hot, rub it over with a bit of fat. Put in the chops and turn them every 10 seconds for 2 minutes, then let them brown on each side, they will take about 5 minutes, sprinkle with salt and pepper, and serve hot.

MEAT CAKES. Chop tough, raw beef very fine, season with salt and pepper, and a few drops of onion juice if liked. Press it into little round cakes and pan-broil it for 4 minutes. Turn the cakes same as the chops.

LEMON SAUCE.—1 cupful boiling water, $\frac{1}{2}$ cupful sugar, 1 level tablespoonful cornstarch or flour, grated rind and juice of $\frac{1}{2}$ lemon, $\frac{1}{2}$ tablespoonful butter. Mix the sugar and cornstarch thoroughly; add the boiling water and lemon rind, cook 8 to 10 minutes, stirring all the time, then add the lemon-juice and butter; strain and serve hot. If the water has boiled away, add more boiling water. When the sauce is used for suet puddings, omit the butter.

POTATO SOUP.—2 moderate sized potatoes, 1 cupful milk, $\frac{1}{2}$ cupful water, $\frac{1}{2}$ small onion, 1 teaspoonful salt, speck white pepper, $\frac{1}{2}$ tablespoonful flour, $\frac{1}{2}$ tablespoonful drippings. Boil the potatoes till soft, then drain and mash them. Cook the onion in the milk. When the potatoes are mashed add the scalded milk, salt, and pepper. Rub it through a strainer. Melt the dripping in a small saucepan, add the flour, and a little of the soup if required, add the thickening to the soup, let it boil up, and serve with croutons.

TO CLEAN CURRANTS.—Put the currants into a basin and sprinkle them with flour, and rub them well in the hands. Then shake them in a squash strainer or colander to remove bits of dirt and the stems. Set the colander in a bowl of warm water, and again rub the currants, then dry them between towels, pick over carefully, spread them out in a warm place till perfectly dry.

PEA-SOUP.— $\frac{1}{2}$ cupfuls split peas, 3 cupful cold water, $\frac{1}{2}$ tablespoonful beef-drippings, $\frac{1}{2}$ tablespoonful flour, $\frac{1}{2}$ teaspoonful salt, speck pepper, milk enough to thin it. Pick over and wash the peas, put them with the cold water in a pan on back of the stove, let them soak $\frac{1}{2}$ hour, then simmer 2 hours or till soft. Rub them through a fine strainer, and put on to boil again. Add milk or water to make it like a thick soup. Cook flour in the hot drippings and add it to the boiling soup. Add the seasoning, and serve with croutons. A small onion may be boiled with the peas if liked.

BAKED BEAN SOUP.—Take the cold, baked beans, add twice the quantity of water, and let them simmer till soft. When nearly done add half as much tomato. Rub them through a puree strainer. Add more water till the right consistency, season to taste with salt and pepper and mustard. Heat again and serve with toasted crackers or fried dice of bread.

CORN CAKE.—1 cupful flour, $\frac{1}{2}$ cupful fine cornmeal, $\frac{1}{4}$ cupful sugar, $\frac{1}{2}$ teaspoonful salt, $1\frac{1}{2}$ teaspoonful baking-powder, 1 cupful milk, 1 egg, 1 tablespoonful melted beef-drippings. Mix dry ingredients together, add the egg (well beaten) with the milk, then the dripping. Beat well, and bake in well-greased shallow pan, or gem pans, in a hot oven, about 20 minutes. The egg may be omitted.

SOUP STOCK.— $\frac{1}{2}$ pound shin of beef, 1 quart cold water, 3 cloves, 3 pepper-corns, small bunch sweet herbs, small blade of mace, $\frac{1}{2}$ teaspoonful salt, $\frac{1}{2}$ small onion, $\frac{1}{4}$ small carrot, $\frac{1}{2}$ small turnip, sprig parsley.

Wipe the meat and bones, cut the meat small, and have the bones cracked into small pieces. Put marrow, fat, bones, skin, and meat, with the cold water, into the saucepan, let it stand $\frac{1}{2}$ hour before heating. Add the spices and herbs, and the vegetables cut small. Simmer 6 or 7 hours, then strain it. When needed for soup remove the fat, heat the stock to the boiling-point, season to taste, and pour it over whatever the soup is to be made of. Or thicken it and serve with croutons.

RICE SOUP.—1 cupful stock, $\frac{1}{2}$ tablespoonful rice, $\frac{1}{4}$ teaspoonful salt. Cook the rice in boiling water $\frac{1}{2}$ hour, or steam it till tender. Drain it, add salt, pepper, and boiling stock.

OATMEAL MUSH, WITH STEAMED APPLES.— $\frac{1}{2}$ cupful coarse oatmeal, $\frac{1}{4}$ teaspoonful salt, $1\frac{1}{2}$ cupful boiling water. Pick over the oatmeal, put it with the salt and boiling water into upper boiler, place it over the fire and boil rapidly 10 minutes; stir all the time. Then set it over boiling water and cook 45 minutes; stir occasionally.

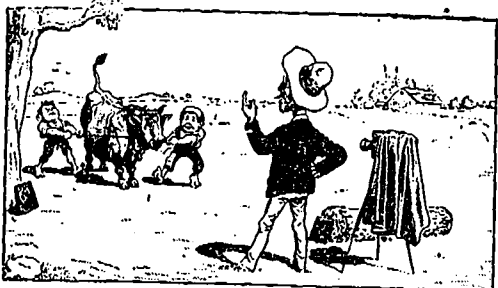
Whole or cracked wheat may be cooked in the same way, but requires five times as much water as meal, and take 5 hours to cook.

Fine hominy and granulated wheat only require three times as much water as meal, and will cook in 1 hour.

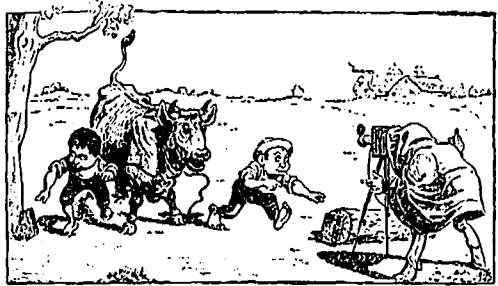
STEAMED APPLES.—Wipe, pare, and core two apples. Put them in a steamer over boiling water and cook about 25 minutes, or till soft.



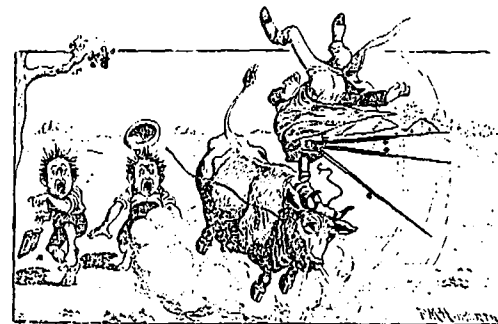
TWO TOO OBEDIENT ASSISTANTS.



PHOTOGRAPHER—Bring him up a little closer.



PHOTOGRAPHER—Hi, there! One of you hand me one of those plates, quick!



FREDDIE THOUGHT OF A WAY.

Freddie Gray and his Aunt Helen, who was visiting the Grays at their summer home, were one day crossing a pasture together. When they were half way across the lady noticed two oxen and paused doubtfully. "I don't know about going past those oxen, Freddie," she said. Freddie tightened his hold on her hand encouragingly. "Don't be afraid of them, Aunt Helen," he said; "they won't hurt us. The first time I came down I was afraid of them. I didn't dare to go behind them and I didn't dare to go in front of them. And I didn't want to go back and never go through the pasture at all, so I thought of a way to get by," and the three-year-old sage looked brightly up into Aunt Helen's face. "I just crawled under them."

JOHNNIE'S RELIEF EXPEDITION.

"Where are you goin', Johnnie?"
 "Don't bother me. I'm a relief expedition, I am."
 "Are ye playin' North role?"
 "Naw. I'm goin' to the drug store for paregoric."

LAST RESORT.

"Is this Mme. Pompon?" breathlessly inquired a man who had climbed several flights of stairs and been admitted into a darkened parlour.
 "It is," replied the stately personage whom he had addressed.
 "The famous clairvoyant and fortune-teller?"
 "The same."
 "Do you read the mind?"
 "With perfect ease."
 "Can you foretell the future?"
 "The future holds no mysteries that I cannot unravel."
 "Can you unfold the past?"
 "The record of all things past is to me an open book."
 "Then," said the caller, feverishly taking from his pocket a handful of silver. "I wish you would tell me what it is that my wife wanted me to bring home with out fail this evening and name your price. Money is no object to me."

SUSPICIONS AROUSED.

NEIGHBOR—"What a nice, big express wagon your papa has bought you."
 BOY (gloomily)—"I wish he'd got me a littler one."
 "Why?"
 "I'm 'fraid he'll want me to haul something with this."

IN BOSTON.

Street car conductor—How old are you, my little girl?
 Little girl—If the corporation doesn't object, I'd prefer to pay full fare, and to keep my own statistics.

A fire escape—Insurance.
 The health board—A good table.
 The deer never goes faster than when served as venison.
 The most deadly sin is the one we believe it will be safe to commit.
 The lazy laundress, as well as the flannel shirt, shrinks from washing.
 He is a poor architect of his own fortune who indulges in too much fretwork.
 There isn't a man in the world who is not serving some kind of a master.
 All men are born equal; but equality is the first thing they grow out of.
 People who cling to the Anchor of Hope often have to go down into the mud with it.
 Man is ninety per cent. water; and, like water, he finds it easier to go down hill than to climb.

A hypocrite always stretches himself up a little taller every time he sees a good man backslide.
 The man who puts his heart in his work often has very little of it left to bring home to his family.
 In the race for wealth, no man seems to object to taking a short cut across his neighbor's feelings.
 "That was a pretty hard story to swallow," said the cellar, when the upper part of the house fell into it.

In India cats sometimes have the cholera. Thus do the most terrible visitations prove blessings in disguise.
 Sharpe—Lambly has a taste for inventions. Keepe—Well, I presume that is why he swallows every lie that is told to him.

If the orator is referred to as a word painter, why not refer to the lecturer in the deaf and dumb institute as a sign painter?
 At an examination of students one young gentleman, being asked to describe Henry VIII, replied: "He was a professional widower."

When a man measures his neighbor he uses the best man he knows for the standard; when he measures himself he uses the worst.
 A stoic is a man who has so keen an appreciation of the intensity of sensations that he is ashamed to acknowledge his own real feelings.

The street gamon is never contented with any other place than the head of the procession; but in manhood he usually drops behind it.

"I told Soapier yesterday that the club he belonged to was a set of stupid fools, and to-day they have gone and elected me an honorary member."

Man has to begin at the foot of the ladder; and if he doesn't look out he often takes a tumble into the sub-basement, where there is neither sweetness nor light.

"I hear bandits are holding your boy Peter for ransom."
 "No," returned the banker. "They threaten to send him back if I don't pay. I shall pay."

The early bird catches the worm; but he finds it is a tremendously long wait until dinner time.

"Mama," said Georgie, who is just beginning to wrestle with figures; "how do you write thirty-three? Now I can make the three, but how do you put down the thirt?"

Genius is only another form of insanity. The genius is the only man who will put in hours of earnest labor when he doesn't know whether his wages are to be \$1.00 or \$100.

A Charming Souvenir.

We have received recently a little Souvenir Book, illustrated in colors and devoted to the description of the business of *The Youth's Companion*, and especially illustrating the new Building, which is just completed and occupied. Every one who is interested in the paper, and we know that the number of families in our vicinity who take it increases year by year, will desire to see and read this bit of history concerning a favorite paper.

While *The Companion* is one of the oldest newspapers in the country, having been started in the year 1827, it is one of the freshest and most vigorous of all our publications and has attained the unequalled circulation of six hundred thousand copies weekly. Its prospectus, containing the announcement of authors and articles for the year 1893, shows that the coming volume will be, if possible, better than any of its predecessors.

Any new subscriber may obtain the Souvenir book free by asking for it at the time the subscription is sent. Examine our Clubbing List for special rates. Price \$1.75 a year. Boston, Mass.

The following recipe ought to be useful. It is from an experienced feeder of horses:—We cut all our hay and grind finely all the grain we use for the morning and evening feeds, which is generally a mixture of oats and peas or oats and barley. We use mixing boxes and thoroughly saturate the hay with water twelve hours before feeding, just before feeding mix the ground feed with it, and give this to our horses night and morning; at noon we feed whole oats, only feed them dry. No hay or other food is used at the noon meal. Now our daily ration is this: 10 pounds hay, 10 pounds ground feed, of which 1 pound is bran and 9 pound dry oats, to each horse. The hay and ground feed is fed half each night and morning, and the dry oats at noon. In four years experience the result to us is that we made a very large saving on the cost of feed, our horses have been in much better condition in every respect, and we have not had one sick horse. To some readers our ration may appear large, but our horses are large and subjected to very heavy and constant work. A considerable less ration would be sufficient for horses employed at farm work or any ordinary work. The conclusion we have arrived at is that grinding grain to be fed to horses in the manner described is very profitable.

NATURAL ADVANTAGES.



Mrs. MOTHER—You have a kind look for a nurse; but you are so tall that if you should happen to drop Baby he would have an awful fall.
 Miss O'FLANN—Niver fear for that, Mum. Say, now, this book was th' Baby an' Oi should drop it, loike that—

—see what a chance av catchin' it Oi'd have afore it reached the flure.

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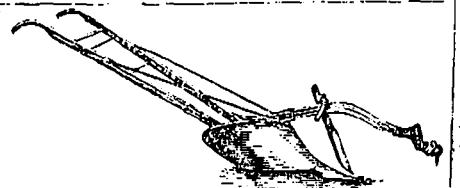
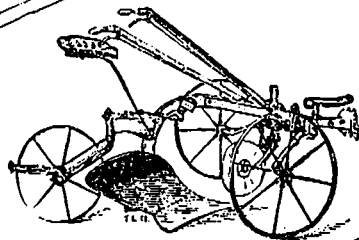
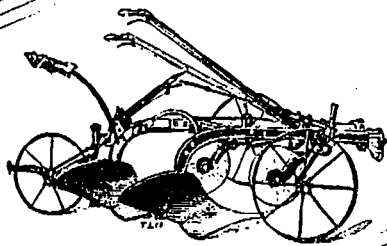
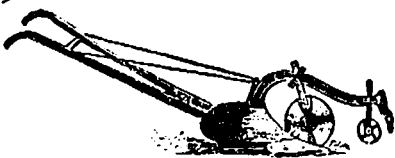
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BRANTFORD, ONT., CANADA.

Successors of W. H. VERITY & SONS, Exeter, Ont., and PATTERSON & BRO. CO. (Plow Business), Woodstock.

WE are now prepared to place on the market the most complete and best line of Plows ever manufactured in Canada. We have acquired the plant, patterns, patents and good will of W. H. Verity & Sons, Exeter, Ont., and of Patterson & Bro. Co., Ltd., Woodstock, and have recently purchased the greater part of the Plow plant of the Phoenix Plow works, London, Ont.

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



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If you want a Plow, examine our goods or you will miss it, for we use only the highest grade of material—none but Soft Centre Crucible Steel Mould Boards, and guarantee high class workmanship and finish in every particular.

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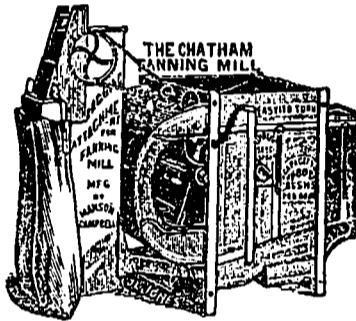
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1330 sold 1885
2400 sold 1886
2300 sold 1887
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More than have been sold by any ten factories in Canada put together.

ROTHSAY P.O., Nov., 1891.
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29,000 Chatham Mills now in use.
Over 7,000 Bagging Attachments now in use.
Bagging Attachment is run with a Chain Belt that cannot slip. The Elevator Clips are also attached to Endless Chain Belt that cannot slip nor clog.
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The New Massey-Harris Catalogues are now ready for distribution. They are very fine specimens of work. There are three, as follow :

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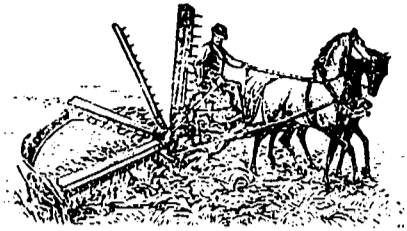
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The managers of Dr. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 5,000 children in these Homes, receiving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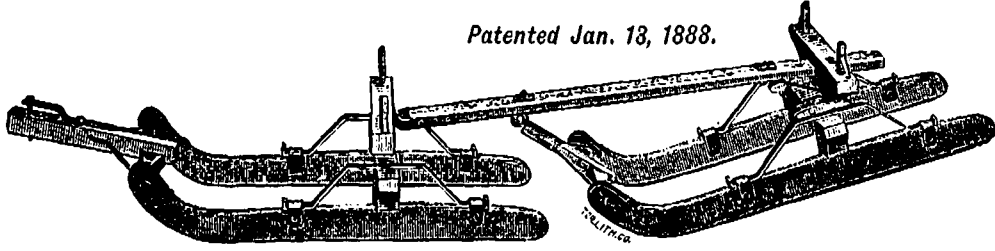
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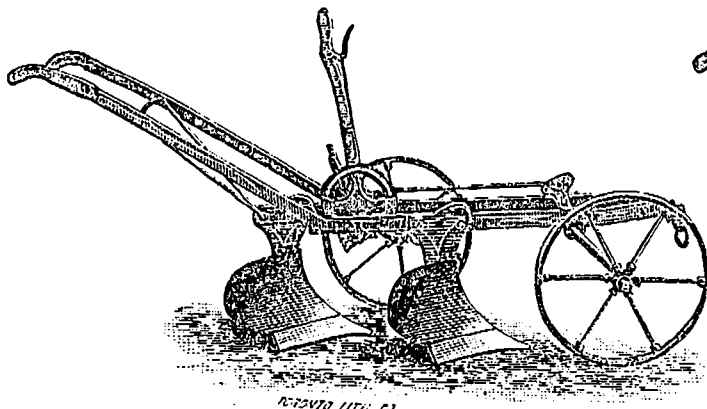


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Gems.

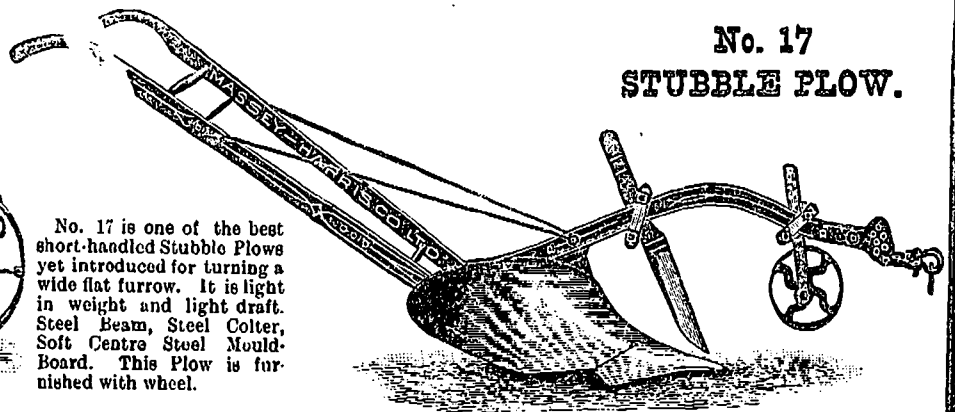


All Ye who would Reap Abundant Crops must Plough, Harrow and Cultivate Thoroughly and Well.

TO DO THIS, GOOD TOOLS ARE ABSOLUTELY ESSENTIAL, AND HERE THEY ARE.

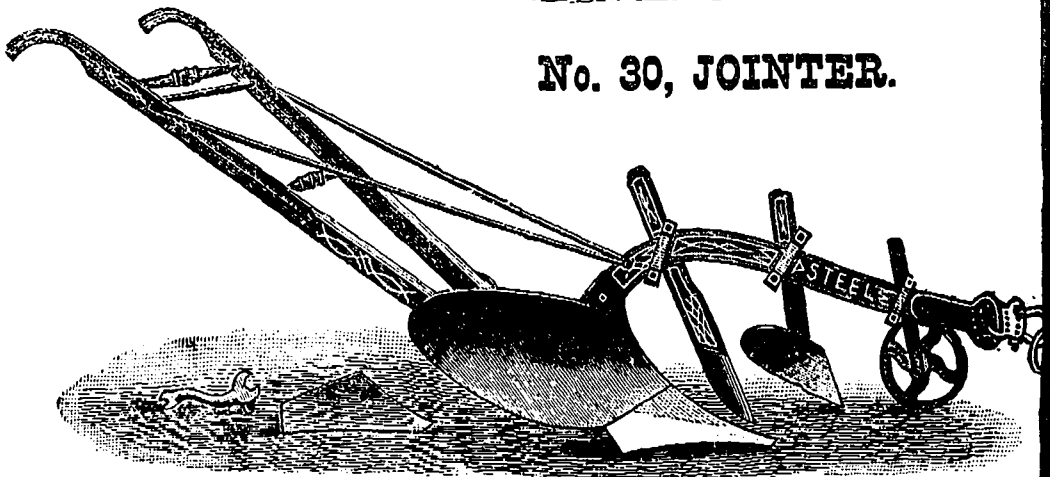


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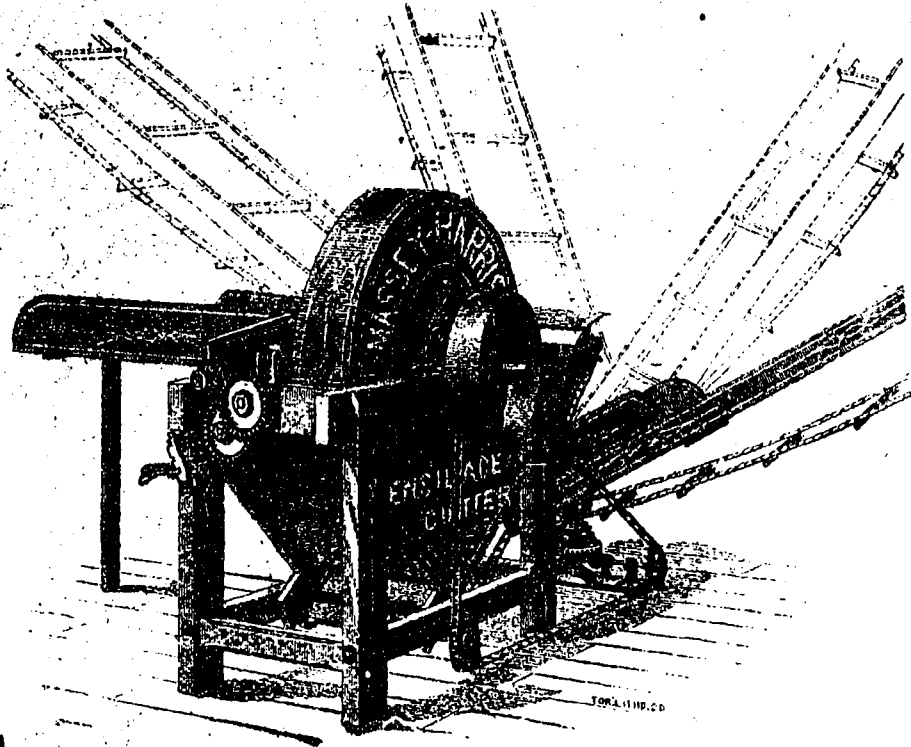
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THIS ENSILAGE CUTTER is the one you want; that is, if you want the best,—one that can be relied on to do first-class work,—one that is sufficiently heavy and strongly built, well fitted, and finished in a manner creditable to high-class mechanical skill.

The Gearing is well made and carefully put together. The Cutters are closely fitted, and the Knives are made of a high grade imported "Sheffield" steel.

The Feed Rollers can be instantly stopped or reversed—a most essential feature in a machine of this sort.

A machine of this character must be heavy and strong to ensure the necessary rigidity, to secure smooth, even running and lasting qualities. In this and other points, the **Massey-Harris Ensilage Cutter** is unsurpassed.

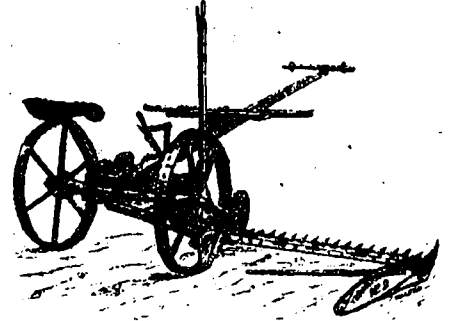
THE CARRIER can be quickly swung into any position within the radius of a half circle in the readiest possible manner. Notice that the Drive Belt runs directly away from the machine and not PARALLEL with the Feed Table. Hence the Feed Table is left entirely open and free, admitting of feeding from either side, and allowing a clear space for wagons, workmen, etc., to pass.

This Ensilage Cutter and Carrier will please you. It is furnished with a 16 foot Carrier.

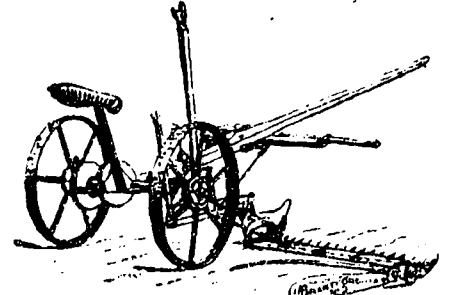
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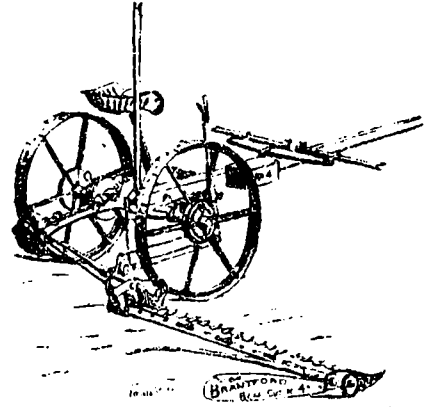
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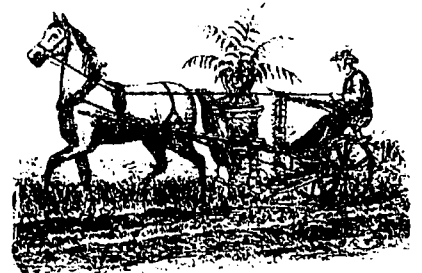
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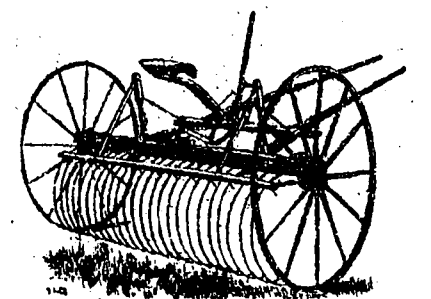
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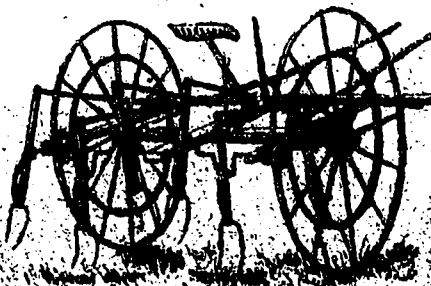
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