

# EXCELLENT STUDY FOR FARM BOYS DURING WINTER MONTHS

Plant Growth in Its Various Stages Described Especially for the Benefit of Our Youths Who Wish to Make it Object Lesson During Severe Cold Months—Useful Things.

(By MRS. L. GRIMES.)

From fall till spring seems like a long time to a boy, especially if he has a choice lot of seeds that he is anxious to put into the ground. But there is a great deal to be done during the time of waiting.

The boy who does not mean to waste his time and labor must learn something about what his plants will need before he is even ready to prepare his ground.

The first thing needful is to understand something about the make-up of the seed itself. As seeds are quite similar in general characteristics, studying one closely will give a fair understanding of others.

The common white bean is easy to get, and to study, so we will take in as an example.

Soak a few beans in water overnight. Then take one and cut the tough outer covering around the edge with the point of a pin. The halves can then be easily spread apart, and



Seeds need air for germination. The beans in both bottles were soaked 24 hours and then were put in dry bottles. Bottle A contained sufficient air to start the few seeds. Bottle B had not enough. The water in the tumbler C did not contain sufficient air for germination.

the tiny plant discovered. It lies snugly cradled in one end of the bean. You will see that it has two parts, a small waxen point, and a tiny, yellowish, folded leaf. The point is the root, and a tender, delicate thing it is.

This little root must work its way down into the ground, both to feed and to hold in place the little plant. If the ground is not well prepared, if it is too hard and cloddy, the little root may become so broken and bruised as to hinder, or perhaps entirely check, its growth.

The tiny leaf, too, which must push upward, needs a soil that is soft and loose, if it is not to be injured.

Plant a few seeds in a bed of wet sand, and you will soon see, branching out from the main root, many little rootlets. A little later, a set of fine hairs, called root-hairs, will appear on the rootlets.

It is through these that the plant gets its nourishment from the soil. They take up all the elements that the plant needs, and send them up through little veins to the stems and leaves, as your food is taken through your body by the veins, in the shape of blood.

The plant's blood is called sap. The tiny mouths can only use the food in the soil when it is "in solution," that is to say, when it is thoroughly dissolved. You can see that it will need considerable moisture to do this, if the ground is too light and loose,



How the Bean Plant Gets Up. The water will all drain and dry away, and no matter how rich the soil may be, the plant will die for want of food.

So an important thing to keep in mind, when preparing the seed-bed, is that the top soil, to the depth of several inches, should be worked up lightly and loosely enough so that the root can readily push through, and still be pressed firmly enough so that the moisture can not all escape.

All over the stem and leaves are little openings, called "pores." It

## WIRE STRETCHER IS POWERFUL

My wire stretcher is made out of an old mowing machine guard, writes Willie Ballard, rural route 5, Weston, W. Va., in an exchange. Get a pole about four and a half feet long, fasten the wire, which should be about two and a half feet long, to the guard, and then about two feet from the end of pole, you have a stretcher that is a dandy for stretching barbed wire.

# For the LITTLE ONES

## LEGEND OF THE MISTLETOE

Some Claim Goddesses Kissed All Who Passed Under Plant as Symbol of Love.

(By E. R. GAILLARD.) According to Scandinavian mythology, Loki (the god of evil) was the sworn enemy of Baldr (the god of light), and tried by every means in his power to kill him, but failed because he was invulnerable to everything that came from earth—air, fire, or water.

Loki, at last, conceived the idea that the mistletoe, springing from neither, would serve his purpose, and, having an arrow made from that wood, he helped Hod (the blind god of darkness), to aim it, and Baldr fell dead—shot through the heart.

All the gods and goddesses prayed for his restoration to life, and when the prayer was granted it was decreed that the mistletoe should nevermore have power to do harm unless it touched the earth, and the goddess of love was appointed to guard it.

Some legends claim that the goddess kissed all who passed under the plant as a token that it was no longer a weapon of death, but a symbol of love, while others assert that she exacted a kiss from each as a propitiation, or the hough should be allowed to work harm.

Another reason for the kissing privilege conferred by the plant is said to be that a lovely maiden preferred death to the kisses of an old monk who pursued her, and her prayers for deliverance were answered by transforming her into a mistletoe branch and placing her in a tree.

The monk waited for her return, but rather than that, she clasped the tree and remained clinging to it, leaving the waiting monk to kiss whom-ever he could catch.

The custom of "kissing beneath the mistletoe" is so old that no one knows when or how it originated; but when young people are found selecting the branches that have the



Mistletoe.

most berries on, it is fair to suppose that they know a kiss must be given for each berry plucked, and that the ceremony is never complete until every berry is off the branch.

There was once a common, though mistaken belief that the mistletoe grew on oak trees only, but that was so far from true that the Druids, who held the oak as absolutely sacred because they believed it to represent the One Supreme God, deemed the mistletoe doubly sacred if found on one, and carefully guarded it until the sixth day after the first new moon of each year.

When this time arrived, priests robed in white surrounded the tree and held solemn ceremonies, among which was the sacrifice of two white bulls.

After the ceremonies, a priest in spotless robes ascended the tree and with a golden knife, cut the mistletoe and let it fall on to a white cloth held by other priests.

The branches were then formally "blessed" and divided among the people who believed the sprays given them to have miraculous powers.

The common belief in the efficacy of the plant was such that it was called all-heal; but according to an old legend, a certain lover searched many days for a specimen growing on an oak tree, that he might secure its branches for the cure of his betrothed, who was sick unto death, but when he found it he touched the sap while cutting the branches, and fell dead near the tree, indicating that the sap was a deadly poison.

The plant thrives in America from New Jersey southward and westward, and those who know it only as a part of Christmas decorations can have little idea of how often it overruns trees to the extent of being a nuisance.

### Appropriate Locations.

- The place for baby carriages—Wheeler.
- The place for bank savings—Port Deposit.
- The place for politicians—Boss-ton.
- The place for an auto center—Mobile.
- The place for a laundry town—Washington.
- The place for the national game—Baltimore.
- The place for earthquakes—Cleveland.
- A place for connoisseurs of rare old wine to avoid—New-port.



See the soldiers all in line! Now the battle's on! Every man will have to test His mettle and his brawn.

Ammunition's piled up high To use throughout the fray Which just begins when school is out And ends at close of day.

The Big Snow Fort is near at hand, And soldiers great and small, Will strive to win the victory With the powerful snowball.

## HOME-MADE MOTOR ICEBOAT

One Constructed to Take Place of Regular Sail Iceboat and Used With Success Last Winter.

This motor-driven iceboat was constructed to take the place of the regular sail iceboat, and the one from which the accompanying illustration was made was used with success all last winter.

The boat is 4 1/2 feet wide at the widest part and ten feet long. The



Iceboat Propelled by Engine.

runners are about ten inches high, shod with steel ground concave the same as a skate runner. The motor is a three-horsepower air-cooled engine which was taken from an old motorcycle. The power is transmitted by a belt to a spiked driving wheel, giving a reduction of about 7 1/2 to 1, says a writer in the Popular Mechanics.

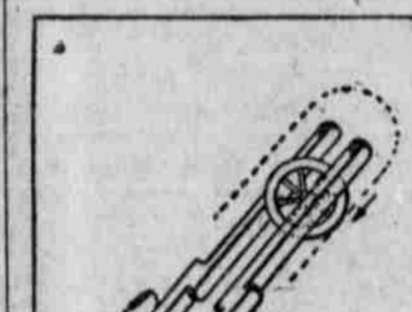
The rear wheel of the motorcycle was also taken and an iron band shrunk on to a tire, and steel horseshoe calks attached at four-inch intervals for the spikes. The two pieces that support the spiked driving wheel are hinged so as to allow the wheel to rise and fall over any bumps on the ice and to let the engine run free when desired. The entire boat with its propelling equipment weighs 120 pounds.

The boat is operated from the rear with one lever for controlling the spark, another for the throttle and the third for directing the course of the boat.

## EDUCATIONAL TOY IS QUEER

Wheel Rolls Round Ends of Magnet, but Doesn't Fall Off—Amusing Plaything Patented by Ohioan.

A toy that is both amusing and of educational value has been patented by an Ohio man. A horseshoe magnet with unusually long poles has the ends of these poles rounded. A single wheel, with a round steel bar running through it for an axle, rests upon this axle on the poles of the magnet, which form an endless track for it. The wheel, of



An Educational Toy.

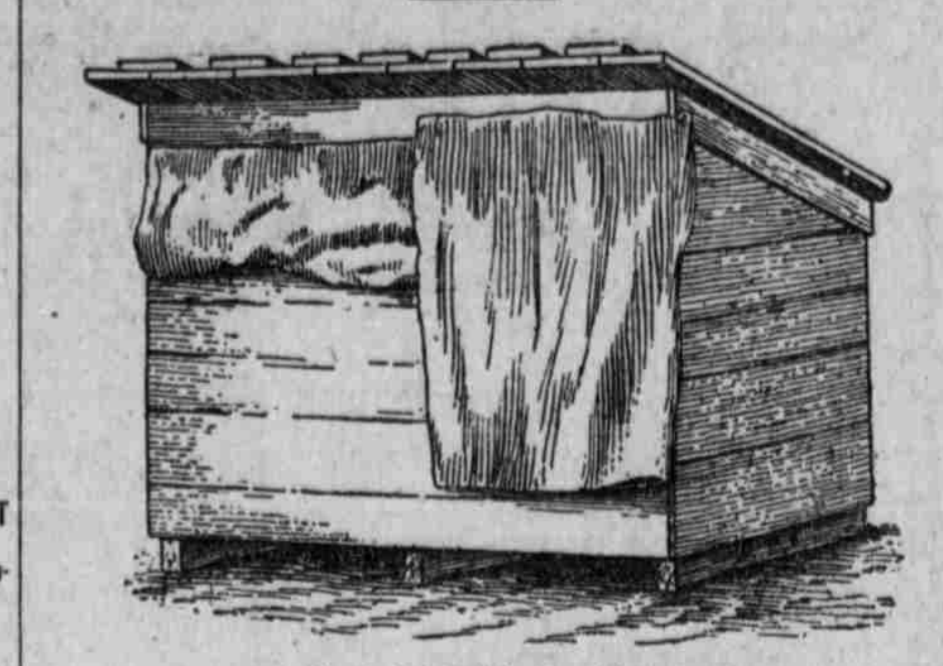
course, is made light enough that the attraction of the magnet keeps it from falling off, yet the wheel can roll about easily on what is practically an endless track. To a child this toy brings home more forcibly than any lecture by his school teacher the power and principle of magnetism and he will delight in "fooling" his friends with it. The uninitiated will naturally expect the wheel to roll off the arms of the horseshoe and will be amazed to see it merely roll down the ends and back on the upper side.

Served Two Purposes. "George, my son, don't you think it is rather extravagant of you to eat butter with that delicious jam?" "No, mother; it is economical. The same piece of bread does for both."

Every Letter in Sentence. This sentence contains every letter in the alphabet: "A quick brown fox jumps over the lazy dog."

# TREMENDOUS LOSS WROUGHT BY PESTIFEROUS LITTLE LOUSE

Many Farmers Do Not Realize That Lice Cause Much Damage to Swine—Parasites Worry Animals and Prevent Feeding and in Many Cases Cause Sores Retarding Natural Growth.



A Simple, but Satisfactory, Hoghouse.

(By R. G. WEATHERSTONE.) Not long ago in looking over a bunch of hogs in western Illinois we observed that most of the animals were afflicted with little sores, red spots, on the thin places in their skins.

These eruptions were particularly noticeable back of the ear and on the flanks. The farmer complained that his hogs were not eating well and he could not understand what caused the sores to break out.

This bunch of hogs of all ages, from three-months-old pigs to three-year-old sows, ran on a pasture during the day but at night slept in houses which were used for the winter quarters.

I suggested that the trouble might be caused by lice, and the farmer caught two or three pigs and found them almost alive with parasites. He was astonished and admitted that he had never examined one of his animals before.

Many farmers do not realize that lice are a source of tremendous loss in the raising of hogs. They worry the animals and prevent their feeding well, and in many cases produce sores or eruptions which naturally retard growth.

It is not difficult to rid the pig of lice by dipping or spraying, but these remedies are of no use unless the pens and sleeping quarters are rid of the lice as well.

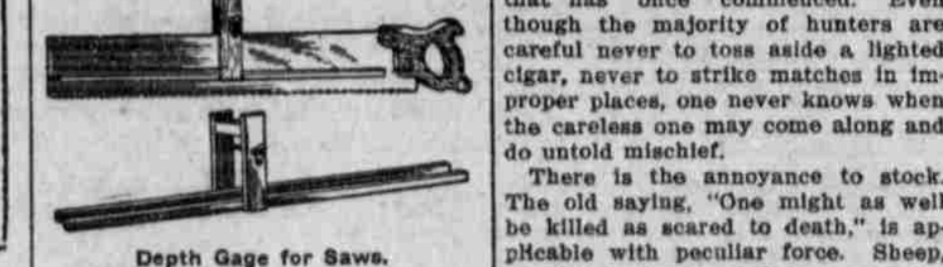
The best dip to use is some of the tar solutions, as they are harmless. We do not believe in kerosene emulsion because unless great care is taken to keep the solution very weak the animals will blister if allowed to run in the hot sun after being sprayed.

When a bunch of hogs is badly infested the animals should be dipped, although spraying may be used, provided the hogs are tied and thrown so that the spray may cover every portion of the body. It is no use to

## SPECIAL DEVICE FOR DEPTH SAWS

Gage Shown in Illustration Will be Found Useful When Cutting to Any Uniform Depth.

It is frequently necessary to make a saw cut of uniform depth, and unless a special device is provided for the purpose the task is an extremely difficult one, says the Scientific American. The accompanying illustration shows a small gage which may be applied to any saw and may be adjusted thereon to prevent the saw from cutting deeper than desired. Two thin strips of wood of about the length of



Depth Gage for Saws.

the saw blade are fastened to a pair of arms secured to a block at the upper end. A thumb screw below this block may be tightened to clamp the two strips against the blade of the saw. These strips may be secured at any desired point on the blade, and thus provide an easily adjustable depth gage.

### Horses Susceptible to Cold.

Horses are exceedingly susceptible to cold on the chest, and a horse will oftentimes contract pneumonia or other ill if left standing unprotected, which he would escape if provided with a thick apron of carpet or oil-cloth suspended from the hames and reaching to the lowest portion of the chest. It is a little thing and inexpensive, but it is worth attending to.

Italian Cotton Imports. Italy now imports more than \$50,000,000 worth of cotton each year. Hence the government is carefully fostering all attempts to produce a native crop.

## PROTEST MADE AGAINST HUNTER

No Reason Why Farmer Should be Expected to Tolerate Band of Trespassers Every Fall.

(By BESSIE L. PUTNAM.) A few years ago, when the pioneers along the line commenced to object to the depredations of the hunter, they were charged by hunter and surrounding farmers alike as stingy and unaccommodating. But more and more is there a growing sentiment against having one's farm used as a hunting ground.

At this season it is very easy to start a fire, very difficult to check one that has once commenced. Even though the majority of hunters are careful never to toss aside a lighted cigar, never to strike matches in improper places, one never knows when the careless one may come along and do untold mischief.

There is the annoyance to stock. The old saying, "One might as well be killed as scared to death," is applicable with peculiar force. Sheep, worried by hunter and dogs, soon become so wild that not even the owner can approach them readily.

Cattle have been known to stampede when a gun was fired in close proximity. Such treatment is ruinous to the dairyman, to say nothing of the frequent accidents, when a valuable animal is sacrificed, the hunter making off with his game and leaving the owner of the land that much poorer for his generosity.

Finally, the game is rapidly being exterminated, and much of it is really the farmer's friend. The quail, the clear note of which fills all bird lovers with joy, is one of the best insect and weed destroyers.

A flock of quail in the potato patch renders the use of Paris green unnecessary, and the detested cut-worm is their favorite dessert.

The farmer "feeds the world" but there is no reason why he should be expected to tolerate a band of trespassers every fall, endangering the life of his possessions. In many communities farmers are banding together against the hunting nuisance.