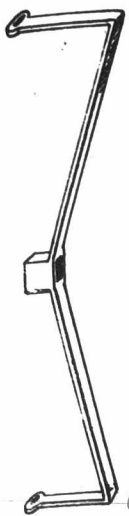


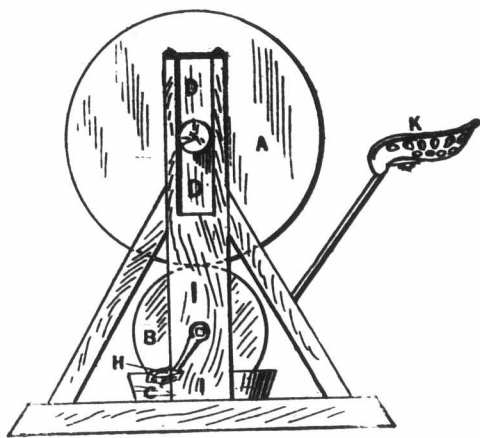
## THE HELPING HAND.

## A Wagon Wheel Wrench.



MENNO WEBBER, Waterloo Co., Ont.: "The casting is shaped as in the cut. The square box fits over the nut, and the crooked arms reach around the rim of the hub. At the ends are attached straps, one long and one short, both passing between the spokes and coming together on the inner side of the wheel. A buckle is then fastened to the straps. The wrench having been attached, it is only necessary to raise the axle with a jack to clear the wheel, and give the wheel a whirl. The nut is thus turned off by the motion of the wheel. The wheel is then slipped nearly off, the axle greased, and the wheel slid back in place, twirled round, and the nut is on. If the nut is inclined to stick, the wheel also acts as a lever."

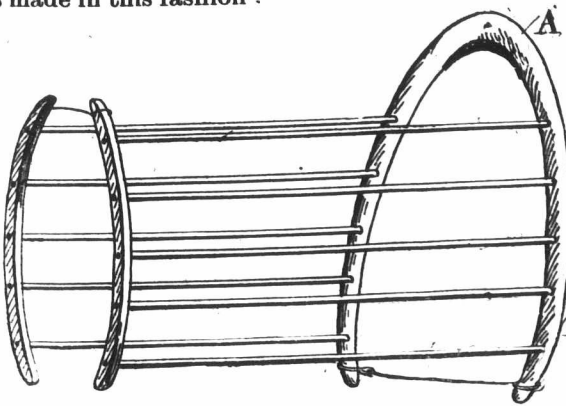
## A Bicycle Grindstone.



MENNO WEBBER, Waterloo Co., Ont.: "Two solid triangular pieces of framework should be made, as shown in the cut, in each of which is a strong upright piece (1D) with a groove (DD) in which the axle of the grindstone rests. Between the triangles should be placed a pan (C) to hold water. A wheel (B) is hung between the grindstone (A) and water pan (C). The wheel should be of iron and as wide as the stone. The wheel also has pedals on the outside of the triangle, so the grinder, as he sits in the old mowing machine seat (K), turns the small wheel. The small wheel is kept wet enough to moisten the grindstone. As the wheel wears away it gradually drops in the slot."

## To Prevent a Cow Sucking Herself.

E. C. T.: "I will give you my plan for stopping a cow sucking herself, although I do not claim much credit, as it is made on the plan of a cradle for a horse's neck, and had I been near any manufactory of such articles should have gotten them to make me one to fit the cow; but not having that chance, I had to try myself, and can now say I have fairly beaten her. I have tried the nose flaps, a surcingle with sticks on either side attached to the halter, then a single stick between the front legs to the same place, but found all of them wanting in some way or other, chiefly from the cow putting her legs over the sticks. The arrangement I have is made in this fashion:



"The back part (A) fits against the shoulders, and is a crotch of a tree, smoothed at the sides, with a strip of leather on the top to ease the neck, and fastened at the bottom with a strap. The crotch being in one piece I found had less give to it than if in two pieces, as the pieces of the front end are little bowed sticks with holes to receive the ends of the sticks projecting from the crotch. In the article I have on her now I have five little sticks in preference to having larger ones and not so many, as the frames had to be so heavy and cumbersome to stand a one-inch hole. The side sticks can be made long or short to suit the case. When I first tried the rigging the cow was so determined to circumvent it that I had to stretch it to the utmost, but now, after a couple of months use or thereabout, I have it much shorter, thereby giving her more freedom as she begins to accept the inevitable."

## QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

## Legal.

## WORKING FARM ON SHARES—KEEPING BEES.

"FRONTENAC":—"I bargain with a man to operate my farm 'on shares,' each to furnish one-half the stock and implements, seed, etc. Man to do all the work, draw produce to market, etc. He (the man) is to operate my farm according to my directions in all details. Each to share one-half the products of the farm. In our agreement, nothing is said about keeping bees. Man brings several hives of bees to my farm, and thinks he has a right to keep them without my permission or giving me a share of the proceeds. He occupies part of my 'farm dwelling'; I reserving part of it so that my family can go in summer or at any time. I offer to buy one-half of the colonies and take half of risk, and receive one-half of proceeds. He demurs and thinks he has a right to keep them in spite of me. I think not. Who is right?"

[The tenant, under this agreement, has no right, without the consent of the owner, to keep bees for profit on the farm. The keeping of bees might easily be conducted on so large a scale as materially to affect the general farming business, and so greatly prejudice the owner. Strictly, we think the tenant could not keep any bees at all if the owner objects.]

## Veterinary.

## "STRAINING" IN OX.

F. C. L., Napinka, Man.:—"I have a working ox; a change in the weather will bring on an attack, and an extra feed and drink of water will sometimes stop it. The symptoms are: Constant straining; back arched; passing small quantities of thick, watery matter; when anus is open the rectum appears red and inflamed; almost constant noise from passing gas or wind; sometimes coat dry and staring. The feed all winter was oat straw, hay, and oat sheaves; now he gets oat sheaves and grass."

[The condition you have mentioned is difficult to treat successfully, and if the animal is old the chance of recovery is very much lessened. Give, morning and evening, in chop mash, for two weeks: Bicarbonate of potash, two drams; powdered nux vomica, one and a half drams; powdered gentian and anise, of each three drams. When the straining is violent give an injection of water, in which hops have been boiled, two quarts; tincture of opium, two ounces. Do not work the ox. W. A. DUNBAR, V. S., Winnipeg.]

## MALFORMATION OF TEATS.

J. B. BOWELL, Kissina, Assa.:—"I have two grade Jersey heifers with two teats (a front and a hind one) grown together. Can they be split? I notice there is an opening in each teat. Would there be any danger in cutting the two apart?"

[The operation might be successfully performed, but it should only be undertaken by a competent veterinary surgeon. W. A. DUNBAR, V. S.]

## INDIFFERENT OLD BULL.

"LANSDOWN," Bagot:—"I have a Shorthorn bull, six years old, too lazy for service. He is running in same pasture with cows. Can you advise anything to make him more active?"

[Give the bull a purgative as follows: Epsom salts, one and a half pounds; nitrate of potash, and powdered ginger, of each six drams; dissolve in one quart of hot water, add half a pint of treacle, and give in one dose. When the purgative has ceased to operate, give morning and evening, in mash, for eight days: sulphate of iron, two drams; powdered fenugreek, four drams; powdered capsicum, one dram. Put the animal in small field or paddock by himself, and when a cow comes in season put her in beside him. You may find it expedient to get another and younger bull. W. A. DUNBAR, V. S.]

## MARE WITH WORMS.

SAMUEL W. BISHOP, Sinaluta:—"Mare four years old; low in flesh all summer, and last spring and winter; had foal which was dead last May; is troubled with large worms; have given for worms two tablespoonfuls of spirits of turpentine on an empty stomach twice, about a week apart. Did not see her pass any worms after turpentine, except one. Last time I gave her turpentine, fed her bran mash for two days beforehand. Could you prescribe something that would help her? She works all right, but seems dull. I think the cause of death of foal was suffocation, as when I went out to the stable in the morning the foal had not got out of bed, but was dead."

[Give on an empty stomach the following drench: Raw linseed oil, one pint; oil of male fern, one dram; sulphuric ether, one and a half ounces. Repeat in one week. W. A. DUNBAR, V. S.]

## Miscellaneous.

## SQUASH BUGS.

Mrs. S. J. C., Lambton Co., Ont.:—"Kindly tell me how I can successfully combat the little striped beetle and the larger squash bug which threaten to destroy my squashes. Is kerosene emulsion a specific?"

[A great many remedies and preventives have been suggested for the little striped beetle (*Diabrotica vittata*). Good success has been obtained by applying liberal quantities of refuse tobacco powder to the hills. The application should be repeated occasionally. Perhaps the best remedy is to prevent the access of the beetle by covering the vines with gauze or very open muslin. Sprinkling the vines with a mixture of Paris green and flour, in proportion of one part of the former to 20 parts of the latter, has also been recommended. The rusty black, flattened squash bug is best treated by hand-picking. This can best be done in the morning and evening, when the bugs are sluggish. Kerosene emulsion is not effective in destroying bugs with hard wing-covers. It is useful to spray upon soft-bodied insects which suck the sap of leaves or branches.]

## PERMANENT WALK.

P. G. ROBSON, York Co., Ont.:—"What could be mixed with coarse sand that would make a good permanent walk suitable for around the house? Do you know of any other material that could be used that is not too expensive? What would it cost?"

[An excellent and cheap walk can be made of cement concrete, the same as is used for stable floors, as well as for city and town sidewalks. The first consideration must be adequate drainage. Then excavate a few inches so that the finished walk will be the desired depth. Cover the ground with two or more inches of gravel, well rammed—especially if the ground is not very solid—before putting down concrete. Cover this with, say, two or three inches of rough concrete, gauged six parts of coarse gravel to one of cement. Ram this solid and put on a finishing coat, half an inch thick, of three parts clean, sharp sand to one part of cement. The cement and sand must be well mixed dry before adding water, and the concrete must not be made sloppy. A barrel will lay from fifty to seventy square feet of such walk, and the cost would probably run about two cents per square foot, varying according to thickness, cost of cement, etc. The work can be best done by setting a scantling on edge along the borders of the walk. Ram the rough concrete approximately level within a half-inch of the top of the scantling, then spread on fine concrete level with the top of the scantling. The walk should be covered with boards for a few days after being finished, to avoid injury by animals, etc. It should be occasionally sprinkled for a few weeks after finishing, to cause it to harden properly.]

## TUSSOCK MOTH.

R. O'T., York Co., Ont.:—"In portions of this county, notably in Toronto, many of the shade trees are threatened with destruction by the larvae of the Tussock moth (*Orgyia leucostigma*), which are stripping the limbs of foliage and destroying the young wood. All kinds of deciduous shade trees are attacked, but the horse-chestnut has suffered to perhaps the greatest extent. Can you give us a means of successfully combating this destructive pest?"

[At this late stage little can be done to destroy this year's worms, because they are now entering the pupa or dormant stage. The only thing to do is to spray thoroughly with a solution of three-quarters of a pound of Paris green to 60 gallons of water. This strength seems necessary, and will prevent further defoliation. As the female is unable to fly, future attacks can be prevented by placing bands of tarred canvas or inverted, funnel-shaped collars around the trunks to prevent the female ascending to lay her eggs. These also prevent the ascent of great numbers of worms which are blown off by the wind. Dr. Mole, V. S., Toronto, has compounded a tenacious mixture which has proved a great success for painting upon the trees, as it does not become dry. From its description, we decide it is much like that used upon sticky flypaper. The Doctor paints it on with a brush, and has saved his trees from defoliation. We find that nature has already come to the rescue, as there is a parasite upon the track of the enemy which lays eggs on the outer covering of the caterpillar, and when the cocoon stage is reached the parasite develops and the moth succumbs. No doubt great numbers will be destroyed in this way. The females that escape will soon after maturing lay great numbers of eggs within or near cocoon from which she emerges. These cocoons are gray in color, and are easily seen on the trunk and limbs in the fall and winter, and can be easily destroyed along with the numerous eggs. The eggs when deposited on the trunk or limbs are in clusters, and covered with yellowish-white hairs from the body of the female. These egg-clusters are usually found in sheltered places on the bark, under the branches, or in cavities and crevices of trees, stumps, and the like. These can be destroyed during the fall and winter months, as they do not hatch before spring.]