

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

PUMPING WATER FROM DISTANCE.

I have a windmill pumping water from a deep well to a stone cistern at my barn. This cistern is 40 ft. long, 10 ft. wide and 5 ft. deep. I want to carry water from this cistern to a pasture field, which is about two thousand feet distant, and about on the level with the bottom of the cistern. I intended using a ball cock at the drinking trough in the pasture field to regulate the flow of water. I thought of using three-quarter inch pipe.

1. If I use three-quarter inch pipe, how much fall will I require in the two thousand feet to insure a flow of water?
2. Provided I use one-inch pipe, what fall will I require in the two thousand feet to insure a good flow of water?

3. What amount of water would each of these pipes deliver per hour, with a fall of three feet below the bottom of the cistern—that is, three feet lower at the drinking trough in the pasture field than it is where it taps the bottom of the cistern?
S. H. B.

Ans.—The first two questions can be answered only in a general way, since it is rather indefinite what is meant by a good flow of water. Of course, the slightest possible fall would produce a flow of water, even in that distance, since the water in the whole system would seek a level, and if the mouth of the pipe were lower than the surface of the water in the tank, water must leak out at the end of the pipe. I shall reply definitely to the third question, and the correspondent may judge for himself which size would suit him best.

It is obvious that, whatever the size of the pipe and whatever the amount of fall from the bottom of the tank to the outlet, the rate of flow will depend upon the depth of water in the tank, as well as upon the fall from the tank downwards. Whether we suppose the tank to be full, half full, or nearly empty, will govern the calculation of quantity of flow.

The size of the pipe controls the volume of water delivered, in two ways: (1) The smaller pipe offers relatively the greater resistance to flow, and, consequently, with the same head, the linear velocity in a three-quarter-inch pipe would be less than in an inch pipe; (2) the capacity of the smaller pipe being less, it would deliver less water, at the same linear velocity, than the larger pipe.

When the tank is nearly empty, there is a head of about three feet, as given in the third question. Under this head a three-quarter-inch pipe, 2,000 feet long, will deliver 25 imperial gallons of water per hour. When the tank is full, the head is 8 feet, and under this head the same pipe will deliver 45 gallons per hour. Probably the average condition would find the tank about half full. Allowing 5 feet of head for this condition, the three-quarter-inch pipe will deliver 36 gallons per hour. With the tank nearly empty, the inch pipe will deliver 53 gallons per hour; tank full, 94 gallons per hour; tank half full, 76 gallons per hour. J. B. REYNOLDS.

Q. A. C., Guelph.

Veterinary.

UMBILICAL HERNIA.

About six weeks ago my filly, four months old, was noticed to have a soft lump as large as a duck's egg at the navel. It remains about the same size.

A. C.

Ans.—This is umbilical hernia. Apply a truss with a protrusion half the size of a baseball, pressing the rupture back into the abdomen, and keeping it there. Fasten truss with straps or strings to colt's neck, to keep it from slipping backwards. If this does not effect a cure in a month or six weeks, get your veterinarian to operate. V.



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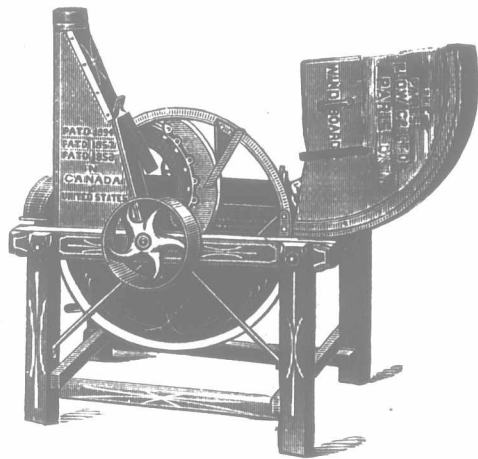
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SPRAIN OF FLEXOR METATARSII MUSCLE.

Mare got foot fast in hole, and in pulling it out she hurt her leg. She lifts her foot with the stifle rather than with the hock, and fetches it forward in an unnatural manner, and the large tendons behind the hock become slack.

G. L. S.

Ans.—This is sprain of the muscle in front of the leg, between stifle and hock. Give long rest, and blister the muscle with 2 drams each, biniodide of mercury and cantharides, mixed with 2 ozs. vaseline. Clip the hair off; tie so that she cannot bite the part. Rub well with blister daily for two days, and on the third day wash off and apply sweet oil. Let her head down now, and place in box stall; oil every day. Repeat the blistering in a month, and again if necessary. V.

STRINGY MILK.

What is the nature of "Black Terry" in cows? What effect has it on the milk? What causes it, and what is the remedy? I have a cow in good condition, but after her milk stands for a day it becomes stringy.

D. H. C.

Ans.—I have not the slightest idea what you mean by "Black Terry." There is no such disease known to the veterinary profession, and I never heard of it; neither is there any disease that causes the milk or cream to become stringy after standing for a day. This is caused by a germ that enters the milk during or after milking. By being very particular to have the udder of the cow and the hands of the milker very clean, and the vessel to receive the milk also thoroughly cleansed, and removing the milk at once to thoroughly clean quarters, and cooling properly, the stringy condition will be avoided. V.

FEEDING COLLIE PUP.

Please tell me the right quantity of food for a collie pup of eleven weeks. At present he is getting two cups of milk and a piece of bread for breakfast; a small quantity of potatoes with gravy for dinner, and nearly two cups of milk and a little porridge for supper. He is gaining about a pound a week, and is very lively.

LANARK.

Ans.—There is no rule as to quantity. Feed all it will take three times a day until six months old, then feed twice a day until a year old, after that age once a day. Feed mixed foods, do not confine him to one kind. Do not leave food around where he can get it at will. Feed only at stated times, and then all he will take. R.