

wise furnished with two panes of glass. A tap and globe valve were placed in the piping under the tank so that water can be obtained in the foundation, which will be used to store milk during the summer. A wooden box, 1½ feet square, was placed around the pipe and filled with sawdust to prevent freezing. Up to date everything has been satisfactory. The accompanying illustration will explain the working of the moulds, etc., and will show the finished products. Although this size might not suit all, it will be found of sufficient size for any one or two hundred-acre farm.

COST OF TANK.

Material	
11 yards gravel @ 20c.....	\$ 2.20
10½ bbls. of cement	16.40
6 girders @ 1c. per lb. and 40c. each for cutting	13.21
Freight on girders	1.80
Inch pipe, tap, globe valve, union	2.25
14 inches of 2-inch pipe	.20
8 6-inch bolts	.40
Wire	.65
15 lbs. of 2½-inch nails	1.00
7 lbs. of 5-inch nails	
5 lbs. of shingle nails	3.80
4 bunches of shingles	
Building paper	.50
83 feet 2 x 4-inch scantlings	1.66
34 feet pine plank (door jamb)	.68
330 feet rough lumber	4.54
314 feet dressed lumber (pine)	8.16
1 gallon paint \$1.60, 3 pairs hinges 60c.	2.20
2 door latches 25c., glass 10c.	.35
Total	\$60.00
Labor.	
3 days hauling gravel @ \$4.00	\$12.00
1½ days hauling cement, lumber, girders, etc.	6.00
20 days labor @ \$1.50	30.00
Total	\$48.00
Total	\$108.00

The cost of material is accurate, but as the labor was done at intervals, part days, evenings, etc., when it was most convenient, it is difficult to vouch for its accuracy, however, a good estimate has been given.

Waterloo Co., Ont. James B. Hammond.

Hydraulic Ram Experience.

I notice in Christmas Number of your paper that G. C. R. is having difficulty with his hydraulic ram—the spindle sticks at the top.

I have had twenty years' experience with a ram. His difficulty is that he has too much pressure for the work his ram has to do. A ram works on the same principle as a three-horse whippetree, and if you don't have it adjusted properly, one horse will not be doing its duty. If G. C. R. will raise the foundation of his ram up to its proper place, it will work all right. He can soon find where that place is by raising it a little at a time. The rule is one foot fall for every ten feet you wish to raise the water. I would not advise a weight put on the plunger.

If he is not used to the running of a ram, he will find that about once a month he should open up the air chamber and give it fresh air, as the elasticity in the air seems to give out in that length of time, and he will find that the ram works stronger with fresh air.

I got tired of giving it fresh air in the winter time, so I conceived a plan of my own. I filed a place in the feed-pipe (with a three-cornered file) nearly through the pipe; then I filed a nail to a point and pricked a hole through the pipe about the size of a hair. At every pulsation of the ram it sucked a little fresh air, and I never had any trouble afterwards. This hole was about 16 inches from the ram.

Norfolk Co., Ont. CHAS. A. DUNKIN.

Editor "The Farmer's Advocate":

Having seen in the Christmas Number of "The Farmer's Advocate" a question by G. C. R. about trouble with hydraulic ram, I might say our ram acted the very same and gave us considerable trouble. Our ram is a No. 4, and after working with it from time to time, I discovered the reason why the plunger did not go back when forced up. If G. C. R. will take off the cap above the plunger, he can see the spring if it is vibrating. By placing his thumb on top of cap screw, it it does not rise up with the force of the plunger, put a pipe-wrench on the screw that the cap screws on, and screw it down until the spring forces the plunger back when it comes up. I think this will overcome his trouble. G. C. R. does not say how much head or what height he has to force the water, which has considerable to do with the working of the ram. Our plunger-spring had to be screwed down about three-sixteenths of an inch, and is working fine.

A. S. JENKINS.

Regarding the letters from Messrs. Dunkin and Jenkins, I would say that apparently the former does not know that an improvement has recently been invented for the hydraulic ram which can be so adjusted as to make the ram work under different heads without raising or lowering the foundation. This improvement is the spring referred to by Mr. Jenkins, who apparently does not know that rams were ever made without that spring. One has an old-style ram and probably doesn't know about the new; the other a new style and doesn't know about the old.

The spring and the bracket to fasten it on make the "permanent attachment" referred to in my answer to G. C. R.'s query. Judging from the query, I concluded his ram was of the old style, without the spring. Placing a proper-sized weight on the spindle will have the same effect as tightening the spring, and if G. C. R. will try the temporary weight to verify my diagnosis of the case (which is borne out by both Messrs. Dunkin and Jenkins) and then secure the permanent attachment, I think his difficulty will be overcome far more easily than by raising the foundation of the ram.

Regarding Mr. Dunkin's device for overcoming the difficulty with the air, I would say with new-style rams it is unnecessary, as there is a "snifter" valve which admits air at each pulsation. I might further remark that his explanation is hardly correct. The elasticity of the air does not "wear out," but the air in the dome gradually dissolves in the water, and goes up the supply pipe with it, the amount of air thus becoming less and less. When the quantity of air in the dome becomes too small, the elasticity of that small amount is not sufficient to make the ram work satisfactorily.

WM. H. DAY.

POULTRY.

Big Money for Poultry.

The fancy prices are not all obtained for fancy stock. The highest price on record was for a White Wyandotte Cockerel, \$1,000. A few days ago the champion laying hen at the Missouri experiment station egg-laying contest was sold at a Missouri poultry show for \$800. Sooner or later practical producing qualities must be recognized as of prime importance, just as is now the case with the most valuable specimens of other live stock. The difficulty with establishing the value of hens has been the uncertainty regarding the laws of inheritance among poultry and the difficulty that has been met in establishing strains with fixed and permanent laying powers. Recent discoveries suggest that the difficulties may soon be overcome, but apparently the transmission of laying qualities is along the male line, so that the fancy prices will be obtained for the cockerels rather than for the hens. [American Cultivator.]

The Egg-Laying Race at Storrs.

The second North-American egg-laying contest for one year at the Storrs, Conn., Experiment Station is now well under way, the total number of eggs laid by the one hundred pens of five birds each in the eighth week, December 20 to 26, being 688, and the total to that date 4,434. The highest score for the eighth week was 21 by a pen of Buff Leghorns, three other pens scoring 20 each. The highest score to date was the White Leghorn pen of Thos. Barron, England, 170

eggs. Another English pen of the same breed owned by Ed. Cam scoring 160. The next highest pen was one of White Leghorns from Pennsylvania, 132 eggs. The Canadian contestants do not appear to have got seriously into the race yet.

How Results Were Secured.

Editor "The Farmer's Advocate":

Re the article on poultry, in "The Farmer's Advocate", of Nov. 21st, 1912,—can you help me by letting me know:—

(a) What breed you used to get the excellent results you obtained?

(b) What quantities of food, and descriptions, you gave them?

(c) How you housed the birds? Any other information, which you think will help, will be most gratefully received.

Northumberland Co., Ont.

C. L.

Replying to enclosed queries beg to say,—We keep exclusively Barred Plymouth Rocks, bred to lay, not for feathers. We were particular to get for our foundation stocks eggs from parties whom we knew were getting lots of winter eggs. This stock, which at first numbered fifteen, were mated to cockerels from laying strains, principally Macdonald College and Guelph birds. Our male birds are sold immediately after the breeding season each year, and new ones of different strain purchased for next season.

The main house is 20 x 30, double-boarded on three sides, the front facing south has three windows and a door; we find this does away with any draft, as drafts are detrimental to winter-egg production.

Our hens are fed mostly wheat, winter and summer, with some oats, corn and bran. We endeavor to keep bran before them in a trough all the time, the wheat and other feed is fed in a heavy litter on a cement floor, our idea being to keep the hens scratching, as this causes good circulation and ensures healthy birds.

Our principal drink during winter is sour milk; water is kept before them at times as well. We are very particular to keep oyster shells and grit constantly before them. We provide them with dust bath, consisting of ashes from the furnace and stove. We feed what we find they will eat up clean. The house we consider large enough for 100 hens. We brood our chickens in colony houses, which are moved around through the alfalfa field. All are brooded with hens, as we find better results from this than when we were brooding artificially.

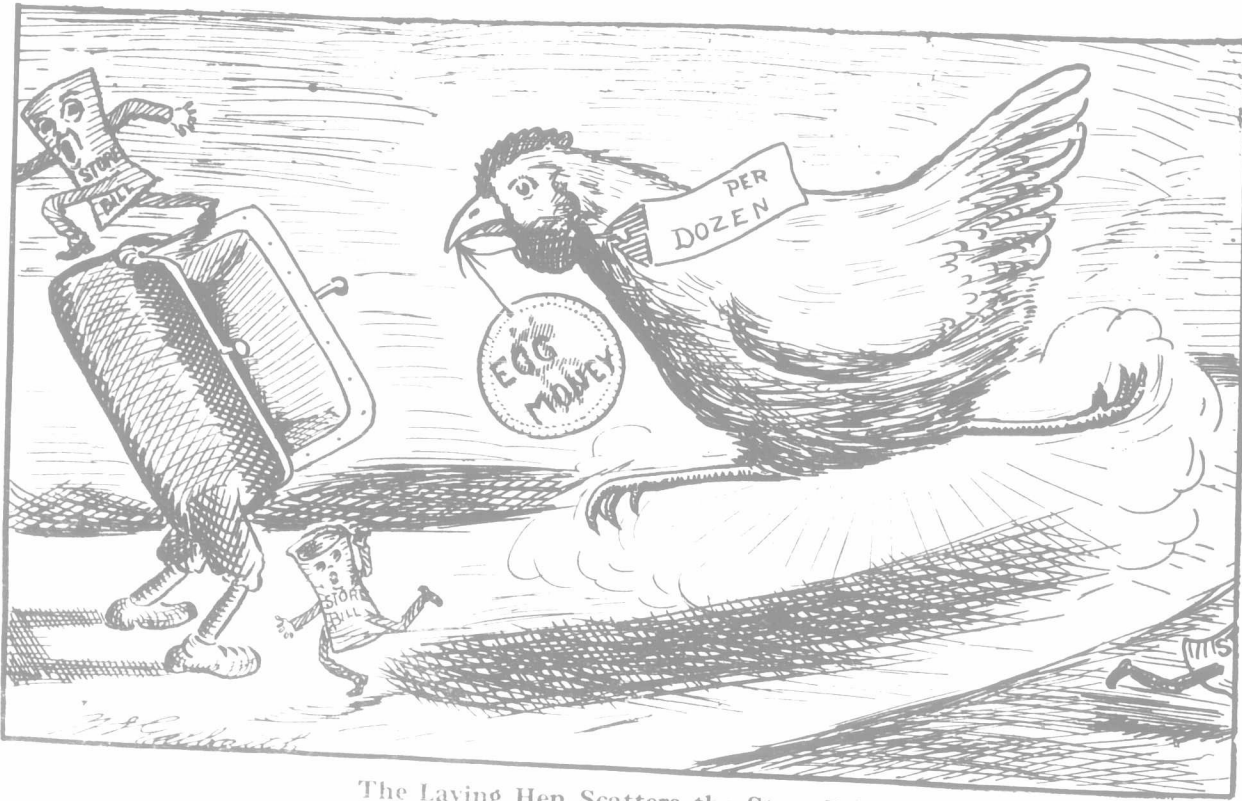
J. C. STEWART.

THE DAIRY.

Dairying in New Jersey.

Editor "The Farmer's Advocate":

I have been over here for a while investigating an offer from a gentleman who owns the Meadow Brook herd of Holsteins. The result is that I am to be managing partner here. With the price of milk and its products so high here and purchased feed no higher than in Ontario, the prospects are inviting. A good deal of the milk and cream from it goes to supply the students at the large academy, at about \$3.00 per cwt. for milk, and cream in proportion. Skim milk from cream gives us an extra chance to raise calves. High price for products enables the dairyman to pay the price to get men. We have ten here and if we want any more men we can



The Laying Hen Scatters the Store Bill.