

## INCUBATORS and BROODERS.



We invite correspondence for this important department of commercial poultry raising, which is growing so rapidly in Canada.

### FIRST EXPERIENCE WITH AN INCUBATOR.

NEVER SAW ONE BEFORE BUT MADE A SUCCESS FROM THE START. INCUBATOR-HATCHED CHICKS GROW FASTER AND BIGGER.

BY A. B. ARMSTRONG, CODRINGTON, ONT.

SINCE you wrote me asking for the details of my experience with an incubator, I have been very busy with harvest work, but now have time to give you in a rough way some of my experience.

About the last of March of this year, we bought an incubator with the intention of going into the poultry business in a small way, our object being to raise pullets for winter layers and try to work up a trade for fresh laid eggs, when the price is likely to be at its best, viz. in the winter season.

We concluded that pure bred fowls would not eat any more than non-descripts, and would probably give better returns in the egg basket, and so we chose barred Plymouth Rocks, white Wyandottes, S.C. and R.C. white and brown Leghorns, S.C. and R.C. black Minorcas and S.C. white Minorcas. As we can't hatch all pullets, we have a number of cockerels which will be sold at reasonable prices.

On April 2nd, we started the machine at its work. I may say at the outset, that we never saw an incubator until we saw ours, and so we were new at the business. Before the first batch came off, the eggs met with an accident, and hatched only thirteen chickens, twelve of which we put in the brooder and have succeeded in raising strong, well-developed fowls. Of this batch, we will say no more. The regulator on our machine, up to this time, did not seem to work freely and we were compelled to keep close watch of the machine to keep the temperature nearly right. About this

time, we discovered the trouble. The brass wire which connects the thermostat with the lever on top of the machine was placed a little to one side of the tube through which it passes and just touched the side, enough so that it could not play up and down freely. However, we fixed that and from that time forward the machine received no attention except night and morning. We had the machine in an unused room upstairs in the house, and found that it gave good satisfaction.

The next time we placed 150 eggs in machine, tested out forty-nine unfertile eggs and hatched seventy chickens, nine of which died in less than one week. The rest we raised



BLACK LANGSHAN COCK, BEAUTY, bred and owned by John F. Hill, Aqueduct Poultry Yards, Welland, Ont. Winner 1st in open class, special and diploma for best specimen on exhibition at Sherbrooke, Sept., 1900.

and they have done fairly well, some of the barred Plymouth Rock and white Wyandotte cockerels weighing four lbs. at three months and fourteen days old.

The next time we filled the machine, we placed it down cellar, (our cellar is well ventilated and quite dry) but we did not think it gave as good satisfaction down there, as it did upstairs. I suppose it is unreasonable to expect the germ in an egg to be as strong and healthy in a cellar as in a room that is meant for people to live in. Probably there are more or less impurities in most cellars that we would not expect to find in a room

upstairs. Perhaps there is too much moisture in the driest of cellars, as we found difficulty in getting eggs dried down enough, so that chick would not smother, if its head happened to be on the under side at hatching time. At any rate, upon examination of eggs after hatch was over, we found several eggs that were pipped and the moisture had filled the nostrils of the chick that was trying to get out, and which was probably strong enough had it not been smothered. And just here, in our opinion, is the point at which so many fail to hatch, the difficulty being in getting them dried down enough so as not to smother and still leave moisture enough, so that any chicken that happens to take a little longer than it should, (perhaps on account of its being on the weak side, or perhaps the shell is quite thick and tough) in getting out after the shell is pipped, would not dry fast to the shell, or rather the inside skin of the egg.

The results this time were not as satisfactory as when the machine was upstairs, as out of 120 fertile eggs, we got only 60 chicks. We thought the cause of the failure of some of them to hatch was too much moisture, together with more or less impure air that is generally found in a cellar.

The next time we did a little better. We placed 150 eggs in machine. On the seventh day we tested out thirty unfertile eggs and out of the 120 fertile eggs, we had 100 chicks. We still had the machine down cellar, but we kept the windows of cellar always open and the machine directly between them so as to get as much pure air as possible, and we left the ventilators of the machine wide open from the beginning of hatch to the end, and still some of the chicks were smothered by too much moisture, while one or two chicks when hatch was about half done, dried fast to the shell. To obviate the last named difficulty, we placed water in the machine on the twenty-first day and had no more of that trouble. Another thing we did during the last hatch, which we were not told in the directions with the machine to do, was to air the eggs longer than we had done before. Mr. Graham advised us to air them once each day, until they cooled down to about 85 degs. We used a hot thermometer in letting them cool down, and we believe the chicks were stronger because of the