

The hen that leaves and returns regularly to her nest, hatches much better than the one that does not. In moderate weather, in the spring, the hen does her best hatching. She leaves her nest for a limited time and returns. The eggs do not get chilled, but are properly cooled.

In hot weather, the hen is often driven from the nest by lice or mites. The eggs get plenty of cooling but do not hatch well. This is partly due to neglect of *the hen* and to lack of vitality in the eggs.

It cannot be laid to too much cooling, because eggs will stand considerable exposure in hot weather. And it is so with eggs in the incubator. They may be left out much longer in hot weather than in the spring or winter. In early spring and winter the hens sits closer; she moves the eggs from centre to outside and they are cooled quicker than in warm weather. When she leaves her nest once a day for food, she returns quickly. The same course must be pursued with the incubator, i. e., the eggs must not be exposed so long in cold as in warm weather. Once a day, beginning with the second and ending with the eighteenth day, the eggs should be cooled to about 80° Fahrenheit: not lower. This can be done after turning them in the morning. One soon learns to tell the degree of heat by laying the hand on the eggs, or by holding an egg against the face. When the surface of the egg indicates 80°, the inside is of course warmer.

The incubator should be closed while the eggs are out cooling, for it is not desirable to cool the machine. When the hen leaves her nest she does not dive into the water or sit upon a cake of ice. When the eggs are out of the incubator, it takes more heat to keep the egg chamber at the proper temperature, and the regulator if it is a good one (and an incubator without a regulator is behind the time), will turn on extra heat and when the cooled eggs are replaced, will turn on still more, automatically, which is turned off again in the same way when the egg-chamber recovers its proper temperature.

Nine-tenths of the successful users of incubators cool the eggs; so do the manufacturers of incubators when they want to make a good hatch. Cooling the eggs is one of the important items in incubation, but *not the only one*. You will not succeed if you neglect the others.

#### Testing Eggs.

This a very important part of the business, and

if properly attended to will throw a flood of light upon many perplexing problems in natural as well as artificial incubation. It not only elucidates but proves the truth or fallaciousness of our *Theories in the line of hatching*. Men are frequently heard to say that they never bother with testing eggs! That they cannot replace the infertile eggs with others and therefore nothing is *gained*. They are told by the best authorities that boiled eggs are not good food for chicks, and as for themselves of course they would eat only fresh eggs!

Then there is a risk of taking out *hatchable eggs*; so they run all the eggs *through together*.

They say that they can break the unhatched eggs when the hatch is over, and see which were infertile and who cares whether they were or were fertile if they not hatch. To those men we can only repeat "Where ignorance is bliss 'tis folly to be wise."

To obtain the best result it is absolutely necessary to test the eggs in process of incubation. If the eggs all come from one farm or yard and they prove a large percent infertile, weakly fertilized or stale, you will notify the party from whom you got them, and he can look into the matter and rectify it if he will, and afterwards serve you with vigorous fresh ones. If he will not do so, then you can avoid him and procure better (or worse) ones. If the eggs are from your own stock, and you know that they are fresh and prove infertile or lack strength, you will know it, and can proceed at once to remove the cause, and thus *save time*, eggs, and complaints from your customers, to whom you sell eggs for *hatching*.

If you have several yards you should mark the eggs from each yard so that you can tell which are the best and which the poorest and then treat the stock in each yard according to the requirements indicated by the testing of the eggs. There is a cause for each imperfection and you should discover and remove it.

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(To be continued).

#### SAVE THE DROPPINGS.

Chemists assert that hen manure analyzed is composed of the following ingredients:

Phosphoric acid, 3.43 per cent; potash, 2.26 per cent; nitrogen as ammonia, an organic matter, 2.35 per cent.

The manure of birds is valuable from the fact