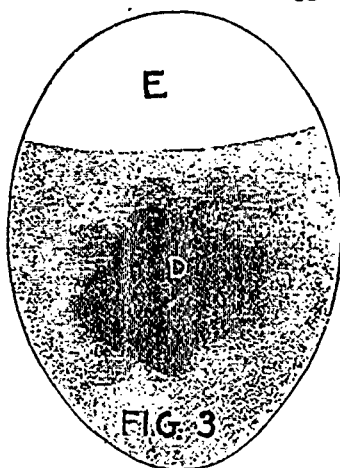


though it may vary according to the freshness of the egg, and some eggs have larger air bulbs than others.

Fig. 2 shows a weak or imperfectly fertilized egg as seen in the tester on the fifth or sixth day. H is an oblong or circular blood vessel which has started, but nothing more, there is no heart, nor any part of a chick started. This egg will not hatch, but will decay if left in the hatcher. G shows a small dark spot, a weak germ, without blood vessels, only partially fertilized; it has died, after a start, and of course will not hatch. Both H and G may sometimes be seen in the same egg. It will not hatch. F, the air bulb, may be seen in the same egg. The egg may be comparatively fresh, and yet show both H and G. See following notes which explain why such eggs are found.



A Stale Egg, a Clouded Egg, a Doubtful Egg, an Egg not to be desired. Many such should be broken and examined.

muddled appearance as indicated by D (which generally moves about when the egg is turned before the tester) it is certainly stale and will not hatch. Do not confound the fresh egg which is not fertile with the stale egg; in an unfertile fresh egg you can see the yelk, which will look somewhat darker than the rest of the egg, but does not look muddled.

Fig. 4 shows a live egg on the sixteenth day. K is the space occupied by the chick; the lines I and J show the air bulb, which may be on top or at the side, as indicated by the respective lines. This is about the average air space on the sixteenth day, but it will vary according to the thickness of the shell, and age of the egg when set; then some eggs are not as full as others. At this stage of incubation (sixteenth day) a live chick darkens the egg, except the air bulb, when seen with the tester, and by watching the line I or J the chick may often be seen to move.

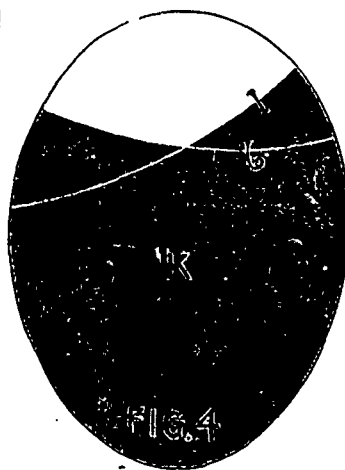
Eggs should be tested in a warm room one tray at a time.

The chick is harder to see after the seventh day, because the egg becomes more clouded by the growing chick.

NOTE.—In regard to G in Fig. 2, "a partially fertilized germ" means one that from one of several causes was not strong

enough to live and grow. Among those causes are cocks that are too old, an insufficient proportion of male birds for the number of females; old or debilitated hens, over fat hens, too close confinement of breeding stock, etc.

Again you may find G (Fig. 2) among eggs which you believe or know are not over a week old, and ordinarily the eggs were good and fertile. It frequently happens that an egg will remain in the nest, while several, or may-



The Air Space on the 16th Day. A Live Egg.

be a dozen hens lay there, and the succession of layers keeps the egg warm enough to start incubation, or it may happen that some eggs may have been subjected to a heat of 100°, in some warm place, unknown to or unnoticed by you. In either case, these eggs are taken from the nest or warm corner to a cooler place, and kept a few day, or over night, until a sufficient number has been accumulated to set, they become cold, and the germ dies before they are put under the hen or in an incubator.

In testing the first time, on the fifth or sixth day, a dead germ may be mistaken for a live weak germ, and if left in the incubator for three weeks would decay; so it is always best to test the eggs again on the tenth day, and remove all that have been marked doubtful and prove not good.

Some persons think it is just as well to leave all of them in until hatching is finished, but this is not right, the decaying eggs generate objectionable gases, and if broken are very offensive. A dead egg or an unfertile egg, does not contain the animal heat the live ones do, and are apt to have an undesirable effect upon the egg next to it, either under the hen or in the incubator.

An unfertile egg—one which has not been impregnated and in which life will never start or develop—is clear when shown at the tester. This egg, under the powerful lens of a first class tester, will show the yelk, which must not be mistaken for a doubtful or a fertile egg.

Use only the very best egg-tester.