1.—Lamp and Box for Candling Eggs.

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HOW TO CANDLE EGGS.

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The producer who wishes to build up a good market for his eggs should candle them. Why? Because, first, it is not honest to sell a stale egg for a fresh egg, or a rotten egg for a good egg. Second, because it is good business; the producer will soon lose his best customers if he sells them eggs of poor quality. He should candle all eggs and thus be able to guarantee their quality.

The dealer who purchases eggs from the farmers should, in turn, candle them, and pay for them on a loss-off basis. He should not pay 30 cents a dozen to one farmer for stale and rotten eggs and the same price to another farmer for fresh eggs.
There are various kinds of eggs—fresh eggs, stale eggs, rotten eggs, and others that need not be mentioned here.

An egg that has just been laid and is still warm has no “air space.” The contents contract as the egg cools, leaving a small space, called the air space, between the inner shell membrane and the shell itself. The shell being porous, air comes in and fills the space as the contents contract. Cooling of the egg, therefore, makes the air space.

The air space, however, continues to grow larger. This is due to evaporation. Since the shell is porous, the water in the egg evaporates and the air space increases in size. There are two things that are responsible for the increase in the size of the air space: first, the length of time the egg is kept; second, the temperature at which it is kept. An egg may not show much increase in air space at a month old, if it is kept in a cool place. At two weeks of age it may show a larger air space if kept in a warm place than if kept a month in a cool place. Evaporation increases as the temperature rises. A large air space means a stale egg, and a stale egg is a libel on the hen and an imposition on the consumer.

The way to discover the stale egg is to candle it. Take a shoe box; set a lamp or candle in it; light the wick and put the lid
on. Cut a hole the size of a small egg in the box opposite the light, and in a dark room hold the egg up to the hole. The air space will be clearly visible. You can tell its freshness without the date mark on it.

A suitable box and lamp, ready for use, are shown in Figure 1. In place of a kerosene lamp or tallow candle an electric bulb may be used, as shown in Figure 2. Most any kind of a box will do, one that will fit around the bulb—a shoe box or cereal box.

With the use of this device a fresh-laid egg will look like that in Figure 3. A very stale egg is shown in Figure 4. An egg may pass as fresh though the air space is a trifle larger than that shown in Figure 3. Another thing about the stale egg, the yolk is likely to be found close to the shell at one side, or sticking to it. If such an egg be turned around before the candle, it will show darker on one side than the other, as in Figure 4. That means that the yolk is close to the shell or adhering to it. An egg that is rotten will show black, or black in spots.

The consumer, as well as the producer and the merchant, can use this method of candling, to satisfy himself that the eggs he buys are of good quality.

Fig. 4.—Stale Egg. A large air space. The yolk has also settled to one side of the egg.