

THE EGG, ITS STRUCTURE.

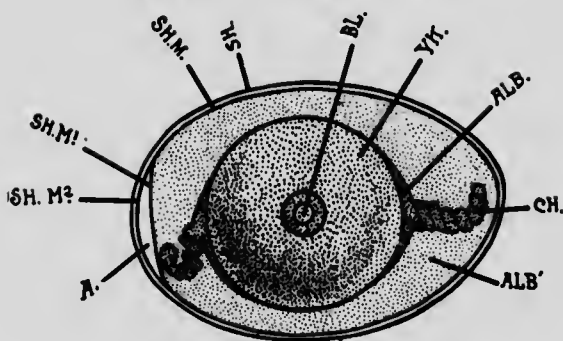


FIG. 2.—A HEN'S EGG.

a., air space; *alb.*, dense layer of albumen; *alb'*, more fluid albumen; *bl.*, blastoderm; *ch.*, chalaza; *sh.*, shell; *sh. m.*, shell membrane; *sh. m'*, *sh. m²*, its two layers separated to enclose air space.

The egg of the chick (Fig. 2) is protected by a more or less hard shell of organic material, impregnated with calcareous salts. Lying close to the inside of the shell is the shell membrane, which is of two layers, sometimes called the inner and the outer shell membranes, closely attached to each other, except at the large end of the egg, where they are separated somewhat to form the air space (Fig. 2a). The shell and the membranes are sufficiently porous to allow gases to pass through them slowly. Filling the space inside the shell membrane is the white or albumen of the egg, in the centre of which, in turn, lies the yolk. At opposite poles seem to be merely more condensed parts of the albumen, that of the yolk, and apparently attached to it, are the chalazae, which are twisted and have been said to serve to hold the yolk in the centre of the egg, though it is difficult to see how they can serve any such purpose, as they are not attached at their outer ends. The yolk is bright yellow in colour, spherical in shape, and about an inch in diameter. It is surrounded and held in shape by the thin elastic vitelline membrane, and exhibits on one side, normally the upper one, no matter how the egg has been opened, a small, whitish circle, the blastoderm or cicatricula.

DEVELOPMENT OF THE CHICK.

The development of the chick embryo in a fertilised egg starts within the blastoderm. The yolk serves as food for the growing chick, and towards the end of the incubation period the remaining