

usually termed the *vascular layer*. The superficial layer (*c*) is the *epidermis*, or cuticle. The cells of which it is composed are distinct at its inner portion, but become dried and flattened as they are pushed outwards. It is supplied with neither vessels nor nerves, and, consequently, is insensible. Between these two layers, and more especially connected with the cuticle, is the *rete mucosum*, (*b*), a very thin layer of cells, some of which contain the pigment which gives the complexion to the different races of men and animals. The scales of reptiles, the nails and claws of mammals, and the solid coverings of the Crustacea, are merely modifications of the epidermis. On the other hand, the feathers of birds and the scales of fishes arise from the vascular layer.

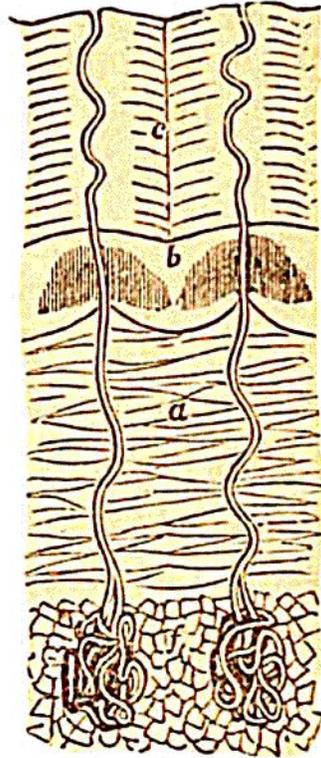


Fig. 94.

269. Of all the Excretions, if we except that from the Lungs, the bile seems to be the most extensive and important; and hence a liver, or some analogous organ, by which bile is secreted, is found in animals of every department; while some, or all, of the other glands are wanting in the lower classes of animals. In Vertebrates, the liver is the largest of all the organs of the body. In mollusks, it is no less preponderant. In the gasteropods, like the snail, it envelopes the intestine in its convolutions, (Fig. 52;) and in the acephala, like the clam and oyster, it generally surrounds the stomach. In insects it is found in the shape of long tubes, variously contorted and interlaced, (Fig. 51.) In the Radiata, this organ is largely developed, especially among the echinoderms. In the star-fishes it extends into