



nected together by fibres, and by other plates, which cross them in different directions leaving cavities or cells. (Fig. 25.) These cells, or rather intervening spaces, communicate freely with one another; and, in fact, may be considered as one common cavity, subdivided by an infinite number of partitions into minute compartments. Hence the cellular texture is throughout readily permeable to fluids of all kinds, and retains these fluids in the manner, and on the same principle, as a sponge.

The cellular texture is not only the element, or essential material employed by nature in the construction of all the parts of the animal fabric; but in its simplest form, it constitutes the general medium of connexion between adjacent organs, and also between the several parts of the same organ. Like the mortar which unites the stones of a building, the cellular texture is the universal cement employed to bind together all the solid structures. Its properties are admirably adapted to the mechanical purposes which are required in different parts of the frame: and these properties are variously modified and adjusted to suit the particular exigencies of the case. When, for instance, different parts require to be moveable upon each other, the cellular substance interposed between them has its state of condensation adapted to the degree of motion required. That which connects the muscles, or surrounds the joints, and all other parts concerned in extensive action, has a looser texture, being formed of broad and extensible plates, with few lateral adhesions, and leaving large interstices; while in the more quiescent organs, the plates of the cellular substances, are thin and small, the fibres short and slender, and their intertexture closer and more condensed.

Besides being flexible and extensible, the cellular texture is also highly elastic, a property which is exceedingly advantageous in the construction of the frame. Not only the displacement of parts is resisted by this elasticity, but, when displaced, they tend to return to their natural position. This property performs a more important part in the mechanism