a little finger. The degree of development of these bones varies in different tribes of birds.

Feathers are attached to all these divisions of the limb, namely, to the humerus, the fore arm, the hand, and occasionally to the single phalanx of the thumb. The structure of feathers is calculated in an eminent degree to combine the qualities of lightness and of strength, which we elsewhere rarely find united. The horny materials of which the stem of the quill is made are tough, pliant, and elastic; and, as we have already seen, are disposed in the most advantageous manner for resisting flexion by being formed into a hollow cylinder. But the vane of the feather is still more artificially constructed; being composed of a number of flat threads, or filaments, so arranged as to oppose a much greater resistance to a force striking perpendicularly against their surface, than to one which is directed laterally; that is, in the plane of the stem. They derive this power of resistance from their flattened shape, which allows them to bend less easily in the direction of their flat surfaces than in any other; in the same way that a slip of card cannot easily be bent by a force acting in its own plane, though it easily yields to one at right angles to it. Now it is exactly in the direction in which they do not bend that the filaments of the feather have to encounter the resistance and impulse of the air. It is here that strength is wanted, and it is here that strength has been bestowed.

On examining the assemblage of these laminated filaments still more minutely, we find that they appear to adhere to one another. As we cannot perceive that they are united by any glutinous matter, it is evident that their connexion must be effected by some mechanism invisible to the unassisted eye. By the aid of the microscope, the mystery is unravelled, and we discover the presence of a number of minute fibrils, arranged along the margin of the laminæ, and fitted to catch upon and clasp one another, whenever the laminæ are brought within a certain distance. The fibrils of a feather from the wing of a goose are represented magnified