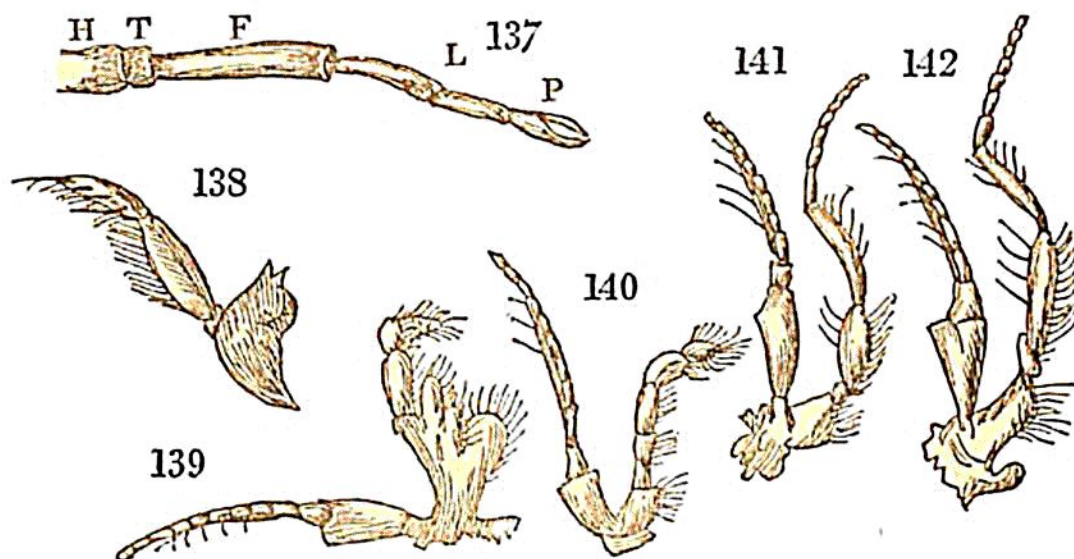


great care, and almost always compose hinge joints. The muscles, by which these solid levers are moved, are lodged in the interior, and their fibres either pass directly from one point to another, across the joint, or else they are attached to cartilaginous plates, which, for the purpose of receiving the muscles, are made to project into the interior of the upper portion of the limb, being themselves immoveably connected with the lower portion. By this expedient, not only is the employment of a tendon dispensed with, but a larger surface is presented for the attachment of the muscles, which, by acting also upon a longer lever, obtain great mechanical advantage. It would be superfluous to occupy more time in explaining the minutiae of structure in these joints, because the simple inspection of the limbs of a crab or lobster will give clearer ideas of this mechanism than can be conveyed by any laboured description. I shall therefore only give a brief sketch of the principal constituent parts of these external members of the Crustacea.

The number of pairs of legs is either three or four: each leg is divided into five pieces. The piece *h*, (Fig. 137.)



next the trunk, is termed the *haunch*, to which is united the *trochanter*, *τ*; after which comes in succession the *femur* or *thigh*, *F*; two portions of the leg, *L*; and the *tarsus*, *P*. The haunch is usually short, being interposed merely as a base for increasing the extent of motion of the pieces which follow; and sometimes it is itself composed of more