

backwards, and the fore-arm forwards. Different terms have been employed to express the various modes of progression, according to the rapidity or the succession in which the limbs are advanced.

185. PROGRESSION is a forward movement of the body, effected by successively bending and extending the limbs. WALKING is the ordinary and natural gait, and other paces are only occasionally employed. When walking is accomplished by two limbs only, as in man, the body is inclined forwards, carrying the centre of gravity in that direction; and while one leg sustains the body, the other is thrown forwards to prevent it from falling, and to sustain it in turn. For this reason, walking has been defined to be a continual falling forwards, continually interrupted by the projection of the legs.

186. The throwing forwards of the leg, which would require a very considerable effort, were the muscles obliged to sustain the weight of the limbs also, is facilitated by a very peculiar arrangement; that is, the joints are perfectly closed up; so that the external pressure of the atmosphere is sufficient of itself to maintain the limbs in place, without the assistance of the muscles. This may be proved by experiment. If we cut away all the muscles around the hip joint, the thigh bone still adheres firmly to the pelvis, but separates the moment a hole is pierced, so as to admit air into the socket.

187. In ordinary walking, the advancing leg touches the ground just before the other is raised; so that there is a moment when the body rests on both limbs. It is only when the speed is very much accelerated, that the two actions become simultaneous. The walking of quadrupeds is a similar process, but with this difference, that the body always rests on at least two legs. The limbs are raised in a determinate order, usually in such a manner that the hind-leg of one side succeeds the fore-leg of the opposite side. Some