

severed, if not before. It is advisable to warm the air from the pump, but whether or not this is done, great care must be taken to see that the temperature of the preparation, observed by a clinical thermometer placed in the rectum, does not fall. For some time after the decapitation little reflex activity is shown by the preparation—why is this the case? In about one hour, however, many complex reflex movements can readily be elicited. Of these the following should be studied; the movements may be recorded by tying threads to the hind limbs and connecting with reducing levers.

1. THE FLEXION REFLEX, by applying stimuli (mechanical, electrical) to the skin of the foot or stimulating the central end of one of the sensory nerves (peroneal) with the tetanising current. The latent time, grading of intensity, summation, etc., may be studied by the procedures already described on p. 219.

2. THE KNEE JERK, by passively flexing the knee joint and tapping the patellar tendon. The prompt and limp-like return of the leg to its original position should be contrasted with the gradual and imperfect return observed in a decerebrate preparation (p. 227).

3. THE SCRATCH REFLEX, by stroking the skin at the side of the neck. The scratching movement of the homolateral hind limb is not so easily evoked as in a spinal dog that has recovered from shock, and it may not appear until the decapitated animal has been partially asphyxiated by discontinuing the artificial respiration for a minute or so. Sometimes the preparation shows a hyperexcitable scratch reflex, but this often depends on inadequate pulmonary ventilation. When it occurs, the respiratory apparatus should be examined and the tracheal cannula cleared of any mucus that may be interfering with the free passage of air into and out of the lungs. If the scratch reflex is marked, its inhibition may readily be demonstrated by stimulating the central end of the peroneal nerves of either leg.

4. STIMULATION OF THE POSTERIOR COLUMNS OF THE SPINAL CORD, by exposing the upper end of the severed cord and stimulating by the unipolar method. This observation is of value because it shows that stimuli descending by the main sensory pathways of the cord—because the fibres transmit in both direction (cf. p. 45)—flow into the collaterals which are adjacent to the point of entry of the fibres into the cord. To make the observation, place an indifferent