

is very, very limited, but he appears to have some voluntary control. Thus, he can slightly waggle the 4th and 5th digits of the right foot. He is unable to make any other movements of the digits of either foot. With a great effort he can draw the limbs up as he lies in bed, bringing about flexion of the thighs on the abdomen to an angle of about 100 degrees of flexion; flexion of the knees occurs at the same time, probably brought about by the weight of the legs when the thighs are flexed. With still greater difficulty he is able to extend the limbs again, but this he is able to accomplish, provided there is not too much resistance offered, for example, by a fold of the bedding. No other movement of the lower extremities of a voluntary type could be observed.

The marked atrophy of the muscles of the upper extremity, as compared with the lower, is remarkable. The bony prominences about the shoulder stand out very markedly. The coracoid processes appear almost on the point of penetrating the skin. The muscles of the arm and forearm are similarly wasted, and in the hand the thenar and hypothenar eminences have mostly disappeared. The digits tend to assume the attitude of the "*main en griffe*", due to the flexor action with *interossei* paralysed (Fig. 2).

The intercostals are paralysed; he can expand the chest somewhat, but this is apparently accomplished by bringing into play the sterno-mastoids and the scalene muscles. The breathing is diaphragmatic in type, and in quiet respiration the anterior wall of the chest recedes slightly as the diaphragm descends in inspiration. One could not discover any activity of the muscles of the abdominal wall.

Sensation.—There is little or no impairment of sensation observed anywhere. The sensations of touch are everywhere appreciated. Testing him with the aesthesiometer it was found that he had lost, to some extent, the possibility of making the finer distinctions which may be considered normal, but possibly this condition is due to disuse. For example, he cannot distinguish two points touching the palm of either hand until they are separated $2\frac{1}{2}$ cm. The same distance is necessary on the flexor aspect of the index finger and the back of the hand. On the anterior aspect of the chest 3 cm., anterior aspect of abdomen 6 cm., front of leg 4 cm. He can appreciate the distinction between heat and cold.

Reflexes.—One is unable to elicit reflexes in the upper extremity. In the lower extremity the knee jerks and ankle clonus are greatly exaggerated. The superficial reflex usually elicited by tickling the sole is not present. The cremasteric reflexes were absent. Babinski's reflex is present. The organic reflexes (bladder and rectum) are normal and are under voluntary control. The bladder at the time of examination