

**59. Disarticulation at the Wrist-Joint** (Fig. 245). Very different methods are admissible for this operation, as for amputation through the forearm, the object being to obtain as long a stump as possible. In contrast to the main rule for the foot, an amputation must not be performed transversely through the wrist as long as a movable finger or portion of the hand can be retained.

An oblique circular incision is made, the upper end of which is placed at the level of the wrist-joint behind, while its lower end extends down on to the palm, the width of the flap corresponding to the diameter of the wrist. With the hand fully flexed towards the palm the extensor tendons and the posterior ligament are divided, whilst, below the projecting styloid processes, the lateral ligaments and tendons (extensor carpi ulnaris and the three extensors of the thumb) are cut across and the joint is opened. The bundle of flexor tendons is separated from the carpus and divided along with the skin at the extremity of the palmar flap. The palmar flap has the advantage of being very well nourished, of possessing fine tactile sensibility, and, in certain circumstances, of forming a movable muscular stump, while it further avoids leaving a scar on the palm, which would be exposed to undue pressure. The latter advantage is shared by Dubreuil's method, recommended by Treves, in which a flap is taken

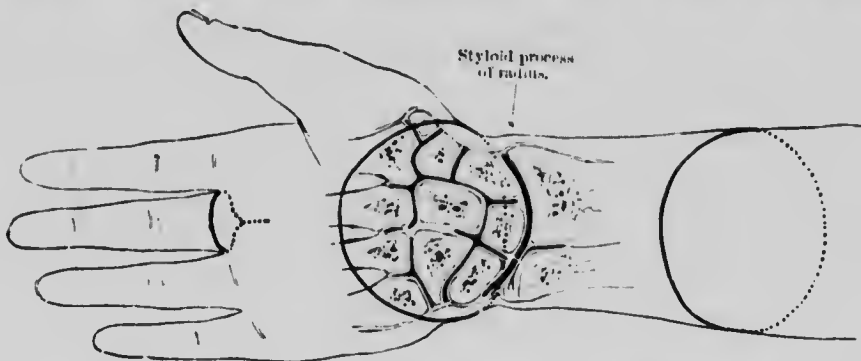


FIG. 245.—Disarticulation of middle finger. Disarticulation of the hand at the wrist-joint. Amputation through the forearm.

from the radial side and the muscles of the thumb are preserved. But care must be taken not to have the cicatrix over the end of the radius, where it is exposed to the greatest pressure. As the stump is not directly exposed to any pressure, an oblique incision (dorsal flap) or a circular incision extending half the diameter of the limb below the joint, may also be adopted. The flexor and extensor tendons should be sutured over the end of the stump to ensure that their function will not be impaired.

### (1) Amputation of the Arm

**60. Amputation of the Forearm** (Figs. 245 and 246). As there is no necessity to provide a stump capable of bearing pressure, either a circular or oblique incision may be made, the flap in the latter case being taken from either aspect of the arm. Treves rightly states that in the muscular part of the forearm flap operations are preferable to either of the above methods on account of the difficulty of reflecting the skin and fascia.

Further, in the upper half of the forearm, where there is a considerable thickness of muscle, the racket incision should be adopted, the bones being shelled out subperiosteally, and the divided muscles carefully sutured over the end of the stump.

**61. Disarticulation at the Elbow** (Figs. 247, 248, 249). As in amputation in the region of the knee-joint, so also at the elbow, disarticulation at the joint itself is