

clamps, the application of the clamp being preferable to division of the muscles at their attachment to the bone.

A finger is now inserted into the anterior incision (Fig. 242, No. 1), two pairs of clamp forceps being introduced along it and the abdominal muscles are clamped just above the crest of the ilium. They are then divided between the forceps as far as the line of section of the crest posteriorly.

The ilio-psoas is next dealt with. The external iliac vessels, together with the ilio-inguinal and genito-crural nerves, are raised and retracted; but the nerves which descend at the side of the psoas and iliacus, namely, the anterior crural and the external cutaneous, are divided. The ilio-psoas is cut across between two forceps, and the bone is divided with a chisel, bone-forceps, or Gigli's saw, from the sacro-sciatic notch upwards along the selected line.

The anterior portion of the flap incision (No. 4, Fig. 242) is now carried vertically downwards on the anterior surface of the adductors, thus exposing the horizontal and descending ramus of the pubis, with the femoral vessels lying externally. The latter are ligatured above the origin of the profunda so that the internal circumflex vessels may be retained in the flap. The pubis is next divided with a chisel or bone-forceps as shown in Fig. 240 or Fig. 241 (Keen), separating the attachment of the internal and external obturator muscles from the foramen ovale. The obturator externus is then cut across. The innominate bone can now be drawn downwards and outwards, being only held by the levator ani. The pelvic fascia and periosteum are divided at the entrance to the true pelvis as far as the horizontal ramus of the pubis, preserving the obturator vessels and nerve, and the strip of fascia by which the levator ani and coccygeus are attached.

Finally, the skin incisions 4 and 5, Fig. 242, are completed, the adductors and the hamstrings are divided at their origin from the tuber ischii, and the vessels are tied seriatim.

The forceps, which still grasp the muscles, are now removed one at a time and the vessels are tied. After transfusion, the temporary clamp on the common iliac artery is removed and any branches of the obturator, circumflex, gluteal, and sciatic arteries which may still be bleeding are immediately secured. Our incision corresponds in the main with that of Savariaud and Keen.

### (k) Amputations of the Hand and Fingers

**58. Amputation and Disarticulation of the Fingers** (Figs. 243 and 244). The chief rule in the case of the fingers is to endeavour to retain a stump, no matter how short, provided the tendons remain connected with it, and that it can be covered with sound skin. A flap from the palmar aspect is preferable, as it avoids a palmar cicatrix, which is exposed to pressure. The oblique circular incision is most to be recommended, and is better than Farabœuf's lateral-palmar incision for the index and little finger. For a disarticulation the line of the joints is easily made out, because with the finger flexed they are always placed on the distal side of the dorsal bony prominences (Fig. 243). In disarticulations at the interphalangeal joints the knife is applied over the joint line, and directed obliquely downwards towards the palmar aspect. The attachment of the extensors at the base of the phalanx, then the dorsal part of the capsule, the lateral ligaments, the anterior part of the capsule, and lastly the flexor tendons, are divided, the latter being divided at the base of the phalanx, while the finger is held in the semi-flexed position. The ends of the extensor and flexor tendons are then carefully sutured to the remains of the capsule.

In amputations the palmar flap must be turned back in order that the rest of the incision may be carried round the bone. In dividing the tissues down to the bone the finger must be held midway between flexion and extension, so that both tendons are put slightly on the stretch and retain their function. The ends of the tendons are stitched to the corresponding tendon sheaths or to each other.

In disarticulation of a finger at the metacarpophalangeal or at the carpo-metacarpal