

which forms part of the posterior wall of the canal. The aponeurosis of the external oblique completes the anterior wall of the canal, and the spermatic cord emerges at the external abdominal ring, deriving a covering from the intercolumnar fascia which stretches between the two pillars. Thus the canal is bounded by two muscular structures, the internal oblique and the aponeurosis of the external oblique, while the transversalis also enters into its formation in that it arches above the internal abdominal ring, and also takes an important part in the formation of the conjoined tendon. We have now to consider the action of these structures, and the part each takes in strengthening the inguinal canal. As regards the internal oblique, I cannot do better than quote Mr. Hamilton Russell's words * :—

“ The inguinal canal has this curious peculiarity, that it is formed by a rigid tendinous half and an actively contracting muscular half, and this anatomical arrangement in itself serves to invest the inguinal canal with an interest of its own ; it is, so far as I am able to recall, anatomically unique—it certainly holds a unique position among the various seats of hernia, and must, therefore, be placed in a special category, and be accorded a study and examination proper to itself alone. Now when curved muscle fibres contract they straighten, and the effect of the straightening of these curved fibres is to cause them to descend towards a position parallel to the floor of the canal and so to close the opening. In other words, the action of the curved fibres is sphincteric, and the inguinal canal is a half sphincter and is closed, so far as the structures passing through it permit, by this sphincter action. I need not, of course, remind you that the region of the internal ring is covered in and further supported by a portion of the internal oblique as it springs from Poupart's ligament ; that the conjoined tendon fortifies the inner part of the canal, and that the whole region receives support from its covering of external oblique aponeurosis ; but the enormously preponderating factor in the prevention of hernia is the sphincter-like action of the arched fibres, which limit the canal above as they pass to their insertion into the conjoined tendon. The immediate cause of the production of hernia is,

* *Lancet*, 1899, Vol. II., p. 1353.