These principles are illustrated by the methods in common use for opening the abdomen for the removal of the appendix. In the "gridiron" incision, the muscles are split in the direction of their fibres, and additional strength is gained by the fact that the fibres of the split muscles run in very different directions. In the incision through the rectus sheath the muscle is displaced, and, after the operation, the strength of the abdominal wall is ensured by the uninjured muscle intervening between the incisions in the anterior and posterior layers of its sheath. If a muscle is divided at its insertion, whether this is by muscular or tendinous fibres, subsequent stretching and weakening are particularly likely to ensue, since this is the point of maximum tension when the muscle contracts. In order to apply these principles to the operative treatment of inguinal hernia, it will be necessary first to consider the structure and anatomy of recurrent hernias and the causes of the failure of the operation. This subject scarcely seems to have received the attention which its importance merits, but Mr. Battle read a most interesting paper on this subject as long ago as 1908,* on which many of the following remarks are based. Recurrent hernias fall into the two following groups, of which the second is by far the more common. In the first, there is a sac of somewhat similar character to that of the original hernia. It follows the course of the spermatic cord, projecting from the external abdominal ring, or even extending down towards the scrotum, much as it did in the original hernia. In the second and more frequent group, there is chiefly a bulging forwards along the whole length of the inguinal canal. Further examination shows that there has been a splitting up of the aponeurosis of the external oblique from the external ring, which is elongated and enlarged, so that the intercolumnar ligament can scarcely be felt, or may have completely disappeared. In addition, the whole scar has stretched so that there is a general bulging forwards of all layers from the peritoneum to the skin. This condition can scarcely be regarded as a true recurrence of the original hernia, but is rather analogous to the post-operative ventral hernias which

* W. H. Battle, "Recurrence after the Operation for Radical Cure of Inguinal Hernia," *Lancet*, 1908, Vol. II., p. 1601.