

plate or shield, to obviate any risk of the cannula head sinking beneath the surface of the skin when this is highly oedematous; and, simple as it may seem to contrive an armature which may thus secure and help to maintain the cannula in position, I may say that I have not yet quite mastered the matter. As to the length of the shield or cross-beam, one inch appears ample—i.e., half an inch each side of the cannula. The shield may be round or square with rounded edges, or, as I have had mine made, as elongated plates, one inch long by a quarter of an inch broad, and about a thirty-second of an inch thick. Whether the cannula was best fixed immovably to the shield or otherwise, was the next point to decide. It was found that the immovably fixed shield, held fast by two strips of plaster, by dint of the movements of the abdominal muscles in respiration either worked away from its plaster moorings or tended to work out the cannula end from the peritoneal cavity. Messrs. Ferguson therefore contrived a shield for me which held, but allowed the cannula a limited play in every direction, and in practice this has worked admirably. One instrument I had made for those particular cases in which, although the ascites has been considerable, and its relief urgent, the presence either of cancerous tumours in the abdominal cavity or an enlarged liver has rendered a hard and pointed body, like the cannula end, abutting on the peritoneal aspect of the abdominal parietes, undesirable; for as the fluid drains away the abdomen collapses and the parietes sink, and large, soft-surfaced masses, moved up and down by the descent of the diaphragm, might be torn and fretted against the cannula, and made to bleed. To meet this emergency a cannula which merely traversed a shield-plate, and was not fixed at all, appeared best adapted. If anything pushed it from within, out it could come.

*Mode of operation.*—Trivial as this is, it appears to me from experience that there is a right and a wrong way of introducing the cannula. Instead of driving the trocar in quite perpendicularly, it is best to slope the point downwards somewhat towards the pubes, and to avoid making the cannula point upwards towards the sternum. The wound made is so slight