

and fasciæ as may require cutting, sometimes a large amount of force must be employed to effect the necessary replacement. In such a case as that shown in Fig. 4, the part of the foot anterior to the mid-tarsal joint must be brought upward, and when the plantar fasciæ and ligaments have been cut, it requires a powerful force to accomplish the desired result. It was largely to meet the indications in such a case as this that an instrument was devised, calling into exercise the use of the lever. By this means the foot may be thoroughly straightened out and the concavity of the plantar surface obliterated.

A second means of dealing with tendons has also been largely practised within recent years. If the peronei muscles be unable to counterbalance and antagonize the muscles at the inner border of the leg and foot, a condition of balance may be restored by transferring one of the inner groups of muscles to the outer border of the foot and inserting it so as to reinforce the outward pull. This has been referred to quite largely as "tendon grafting," "tendon transposition," "tendon transplantation," etc. The efficient muscle thus transferred may be grafted into the tendon of the parietic muscle at the outer border, or it may with great advantage be carried under the periosteum there and so sutured as to give direct insertion into the bone.

This mode of restoring balance has given a fair degree of satisfaction, but has proved less satisfactory than was expected. It is a plan which is very attractive and reasonable looking, and increased thoroughness and efficiency in technique is bringing about results which are more satisfactory. It permits of being employed over a large field, as there are few joints where the relation of parts may not be altered by such muscular transference.

Both operations are sometimes called for, and may be employed so as to greatly increase efficiency. The term "flail joint" is sometimes employed to signify a joint the muscular control of which has been entirely lost. If all the muscles about the ankle joint have been so disabled that there is no power to move the foot in any direction, then there results a condition of great insecurity and danger in the attempt to have the foot bear the body weight. A mechanical appliance may sometimes be employed so as to accomplish this end with a fair degree of success, but an operation which will secure a synostosis between the leg and foot is much more satisfactory. If an incision be made, horse-shoe shaped, about the external malleolus, so cutting the ligaments as to permit the entire inversion and dislocation of the foot, the bones at the ankle joint will be fully exposed, and if sufficient be removed from the upper surface of the astragalus and from the lower ends of the tibia and fibula, and the parts removed be so adjusted as to permit an exact fit of the remainder of the