it in the direction of valgus, and the increasing weight of the child is a powerful force acting in the right direction, or away from varus, so long as the foot is held, though never so little, looking toward symmetry. It may be said that the child stamps his foot straight. If, on the other hand, the foot is held, or allowed to fall, on the wrong side of this line, though never so little, each footstep is a blow, driving the foot more and more into the varous position.

This point may be illustrated by the hand placed with its ulnar border on the table. If considerable pressure be made on the table, by the hand so placed, it becomes evident that there is a boundary line between pronation and supination. If the hand is pronated, never so little, additional pressure will force the palm into pronation, which represents valgus in the foot, and if the hand be supinated in the slightest degree, additional pressure will force the palm into complete supination, which represents varus in the foot.

By the application of this idea, the weight of the body may be made a benificent, instead of a harmful, factor in the progress of a case of talipes varus, and the walking brace should be constructed with this in view. It should be made of steel, and by an instrument maker. One of its functions is to act as a lever, but the leverage is applied not chiefly to overcome the deformity by direct force, as in the retentive brace above described, but to hold the foot on the right side of the boundary line above mentioned, so that the weight of body may straighten the foot, or overcome the varus in a direct and forcible manner without general or local inconvenience.

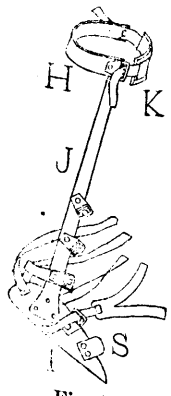

Fig. 9.

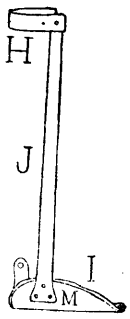

Fig. 10.

The walking brace consists, as usual, of leg-band, H, Figs. 9 and 10, foot-piece, I, and upright, J, riveted firmly together. A movable joint at the ankle should be discarded, as it undermines the lever by introducing an element of instability, and in this brace, serves no good purpose. Mild steel alone should be used, to facilitate alterations in shape, as point after point of improvement is gained, and to make easy the shifting of buckles and straps, as may be required, all of which may be done by the use of a few simple tools. The upright is to be on the inner side of the leg, as in Fig. 14. The upper part of the brace makes counter-pressure on the inner side of the leg, but it has another important function, in previously neglected cases, which is secured by the steel band passing across the back of the leg, to which are fastened two buckles for the attachment of piece of webbing, K, in Fig. 9, which passes across the front of the leg. The steel band should make no pressure on the limb, as its use is simply to furnish attachment to the buckles. A piece of webbing spanning the front of the leg in this manner, and carrying a pad, performs an important service in cases, like the one shown in Fig. 12, in which, from previous neglect, the varus has not been reduced before walking begins. It transfers a part of the weight of the body from the anterior part of the sole of the foot, where it interferes with the correction of the varus, to the upper part of the anterior surface of the leg, where it is powerless to interfere with the treatment. That the weight-pressure thus transferred is considerable, is shown by the callus and bursa, which appear where the padded strap crosses the leg near the tubercle of the tibia. This mechanical effect is similar to that of the brace, shown in Fig. 11, used in the treatment of paralysis of the muscles of the calf, resulting in talipes calcaneus.

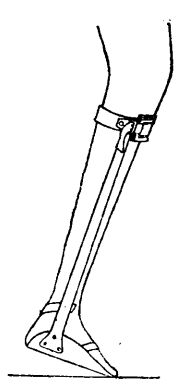
Fig. 11.


Fig. 12.

The upper part of the brace is also to be considered in another light, as follows: In previously neglected cases it is well to incline the upright 15° or 20°, or more, backward from the vertical of the foot-piece, as is shown in Fig. 9. Although correction of the equinus is postponed by this inclination of the upright, we are thus enabled to apply a better leverage against the varus, and when the varus is reduced, and the time arrives