

longer arm, and unsteadiness will result, and the limb be permitted to move about the joint as a fulcrum. I show you here two splints to illustrate the improvements referred to.

Fig. 1 shows a splint for affording support at the perineum and extension of the leg. The stem AB is made of iron sufficiently strong to bear the weight of the body. The perineal based CBD is iron, covered with leather and padded inside, and capable of motion at B, but immovably fixed to the stem at that point when in use. The straps EF and GH are attached to the pelvic band, and, passing under the perineum, afford counter extension, and support the body in locomotion. The straps K and L are attached to a piece at right angles to the stem, which is placed on the ground in walking. The upper ends of these straps are buckled into others secured to the limb by adhesive plaster; and by tightening these, extension of the limb is produced.

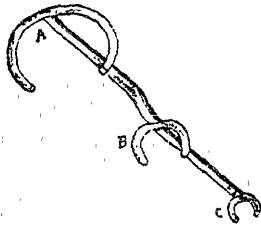


Fig. 1.

This affords a general representation of the American hip splint. It does not secure perfect immobilization for the joint, because of the greater mechanical advantage afforded the lower arm of the lever. The band MN is movable on the stem, and made of soft iron so that it can be made to fit the limb at any part. It thus serves to steady the limb.



Fig. 3.

also of iron, and are made to encircle, in part, the thorax, thigh and leg.

Fig. 2 represents the Thomas' posterior hip splint. It is made of wrought-iron, which must be sufficiently yielding to permit of being moulded to the shape required by the deformity. The bands at A, B and C are

also of iron, and are made to encircle, in part, the thorax, thigh and leg.

Fig. 3 shows the splint in use. A patten three or four inches high is worn on the sound side, and thus the diseased limb is kept off the ground entirely. While the iron of the splint must be such that it can be bent by the surgeon, yet it must be sufficiently unyielding to keep the hip joint immovably fixed.

Fig. 4 shows the double hip splint applied. This splint has this advantage over that shown in fig. 1, that the upper arm of the lever is prolonged and given a power equal to that of the lower arm.

Fig. 5 shows the Thomas' knee splint. The ring at the top is made to fit the thigh, is padded, and is attached to the outer bar of the splint at an angle of 55°.



Fig. 4.

AB is a leather trough, which affords support to the limb, which is fixed by means of bandages passing outside of the bars of the splint. As in this manner spaces are left on either side of the limb not compressed by bandages, effectual fixation can be secured without interfering with the circulation. In walking, the ring C is placed on the ground, and thus concussion at the diseased joint avoided.*

The much-praised and much-abused plaster of Paris may be efficiently employed to immobilize nearly every joint in the body. It has the advantage that a perfect fit may always be obtained, the moist plaster adapting itself to all inequalities, and, having set, it affords, if the arms of the lever extending each way from the diseased joint as a fulcrum, be long enough, a more effectual and agreeable support in many cases than the most expensive machines constructed from wood, metal or leather.

It is most gratifying to notice how soon the reflex muscular action ceases when the diseased bones have been so immobilized that the joint

*The instruments here shown are made by Mr. Swinbourne, King Street East, Toronto.