A NOTE ON THE THOMAS SPLINT FOR FRACTURES OF THE FEMUR.

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To many surgeons the Thomas splint for fractures of the thigh is one of the "finds" which they will take back with them into civil practice, if they are lucky enough to reach that desired haven. Nearly every fractured femur travels to the base now in a Thomas splint, and this universal adoption is its greatest testimonial.

Too little care is taken in the method of use, however, and in no case, out of a very large number coming under my observation, has the fixation been such that I felt justified in passing the patient along without completely readjusting the splint. Badly fitting splints, with wrong material for slings and poor extension, improperly fixed, tend to bring a first class and extremely simple and good method into disrepute. Accordingly an endeavour is here made to illustrate and describe a technique which has proved satisfactory and has given good results.

The Splint and Slings.

The splint must be of a suitable size. The ring must not be too much padded. Some rings are padded so as to make it impossible for the patient to pass urine because of direct pressure on the urethra, and also make the use of a bedpan very difficult.

The slings must be made of a suitable material. Calico, linen, and strong flannel have all proved satisfactory. Gauze, gauze bandages, and perforated zinc have proved unsatisfactory.

Three different types of slings are illustrated (Figs. I, II, and III). Linen, calico, or flannel may be used.

FIG. I.—Slings prepared in advance; stocked in three sizes.

FIG. II.—Alternative methods of using a triangular bandage folded up into short slings of varying breadth.

FIG. III.—Alternative method with double layer of linen, calico, or flannel material. Loosely woven bandages and gauze are quite unsuitable. s, Safety-pin.

The breadth of the sling must be properly regulated. Triangular bandages also can always be obtained. The special slings illustrated in Fig. I (1, 2, and 3) require

previous preparation, and should be stocked in three sizes. The wooden rods (w) may be shaped from pieces of Gooch splinting, so that all the necessary materials are easily had. Tape, strong string, and good strong safety-pins complete the armamentarium.

The Extension Bands.

No adhesive strapping which I have tried, and I have tried many, has proved satisfactory. But the problem is perfectly solved by making use of a double layer of ordinary white gauze as it is unwound from the package, snugly bandaged with a flannel bandage to the limb which has been previously well smeared with Sinclair's glue.¹ (Mastisol is reported to act well also.) Where possible, the extension is always carried above the knee, and when it has been properly applied there will be no need to remove it for weeks. In no case in which I have used the glue has any skin irritation arisen. Care, however, must be taken to prevent pressure on prominent points, and the glue must stop well short of the ankle. As an extra precaution, a layer of gamgee tissue may be bandaged on to the ankle so that it will take all direct pressure off the malleoli.

The "give" in the extension bands requires to be corrected daily, and in order to do this without completely loosening the bands I make use of a method illustrated in Figs. IV and V. The long tail of one of the bands (A) is

FIG. IV.

FIG. V.

FIG. IV and V.—A method of keeping the extension up in using the Thomas splint. A, Long tail. B, Crossing. C, A reef knot is tied here in Fig. IV, one strap having come below and the other above the splint. In Fig. V a slip-knot is tied so that the daily adjustment may be easily done.

slipped through above the crossing (B) and pulled well down. Thus all the slack is taken up and the quadrilateral space is converted into a triangular one with the base toward the sole of the foot. A slip knot is then tied at the point c with the tail of the other extension band, and each morning, or whenever it is found necessary, it is the easiest matter to take up the slack and retie the bow. In this way the extension is kept up perfectly.

The last sling is put well behind the ankle and the foot left unsupported, so that the patient may keep the ankle-joint exercised. I have had no reason to regret this, or to adopt any foot fixation when dealing with fractures of the thigh. For all of the so-called "improvements" and "modifications" of the Thomas splint, in the way of spats and mechanical extension producers, etc., there is but one fitting use in my opinion, and that is to make a bonfire on which to burn the originators.

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REFERENCE.

¹ BRITISH MEDICAL JOURNAL, July 14th, 1917, p. 601.