

has perfect rest. Children who cry out frequently in their sleep because of the pain arising from reflex muscular action at the hip bringing the inflamed parts forcibly together, will rest quietly when a well-fitting plaster of Paris spica has been made to secure the leg, thigh and body as high as the thorax.

Having immobilized the structures which control the joint, no half-way measures must be adopted. It has often been said that "meddlesome midwifery is bad"; there is no doubt that a vacillating mode of treatment, leading to the frequent removal of the retentive apparatus, and the occasional resort to passive motion, can result only in disaster, unless the curative power of nature be sufficient to rectify all mistakes.

Much has been said and written about the great danger of prolonged rest in joint diseases; great diversity of opinions has been expressed. Sayre says, at p. 12 in his work on "Diseases of the Joints," "a second cause of acquired deformities is perfect and long-continued rest of joints. Such rest, even of a healthy joint, will produce

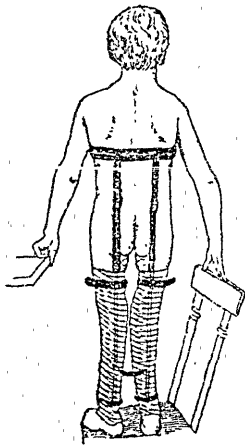


Fig. 5.

deformity by terminating in ankylosis." At p. 274 he says: "I must again warn you of permitting the patient to wear such fixed dressings too long. If employed at all, they must be frequently removed, and passive motion employed, else ankylosis more or less complete will take place, and the last state of the patient may be worse than the first."

Sir James Paget, in one of his clinical lectures, says: "Admirable as is the rule of treating injured joints with rest, such rest may be too long continued, and in every case in which it has done full good, it must in due time be left off. With rest too long maintained, a joint becomes, or remains, stiff and weak and over-sensitive, even though there be no morbid process in it." Similar words of warning might be quoted from Hilton, Little, Taylor, Barwell and others. It

may be noted that there are other factors to be accounted for, and modifying the results in the cases referred to by those who fear dire results following long-continued rest. Some of Sayre's cases which he holds up for warning were undoubtedly rheumatic, and it is especially in these cases that the opponent of immobilization finds his strongest arguments. Paget refers to cases which not only were kept at rest, but which were also tightly bandaged, and treated by the cold douche. Further, it is highly probable that the immobilization was in some of the cases imperfect, and that perfect rest would have contributed to a better result. We do not deny that joints kept at rest may become ankylosed, but we think it not proven that ankylosis ever results as the consequence of rest. When all signs of disease have subsided, and when motion may be obtained without pain, then the patient should voluntarily exercise the joint, this being much better than passive motion. In the elbow and shoulder the patient may, in six months, nearly always get rid of the plastic adhesions resulting from fractures.

Thomas has laid down rules for determining when the retentive apparatus may be safely removed and motion permitted. My observation of cases has led me to believe that his dicta, in this, are sound and based upon right principles. He says that immobilization should be maintained till all symptoms of inflammation have subsided; and then, having set the joint free, active movement is to be permitted, while the joint is kept under observation. If the arc of movement increases with use, and if the limb can be brought by voluntary effort to the position in which it had been held by the apparatus, or if the joint be ankylosed, and no motion takes place through use of the limb, then the joint may be said to be sound. But if after attempting active movement for some time, the arc through which motion is permitted is lessened, or if there is a tendency to assume a fixed position of deformity, or if on removing the apparatus no motion be obtained, but use of the limb causes it to assume a less practicable form, then the joint is unsound, and the fixation apparatus should again be employed. The limb that has any unsound joint should first be placed