

locked. When there is a fracture of the bones of the leg, the knee and ankle must both be locked, and it was on this account that he had modified the caliper splint of Thomas in the way already described. This objection applied with even greater force to the well-known splint of Dr. H. H. Smith, of Philadelphia.

Dr. N. M. Shaffer said that his experience with ununited fracture dated back to 1876, when he saw in consultation an ununited fracture at the junction of the upper with the middle third of the femur. The injury had been received about three months previous, and there was much overlapping. He applied pressure by means of a felt coaptation splint and a traction apparatus, which allowed of the patient walking about with crutches. After a few weeks, he walked on the limb, with the traction splint, and in about three months the parts were united. He had had since then three other cases of fracture of the shaft of the femur, which he had treated in the same manner, and with equally good results. He thought that the method advocated in the paper was not necessary, and that as much could be done by securing apposition of the fragments, direct pressure at the point of fracture by means of a coaptation splint, and the maintenance of the good position by the use of some traction apparatus. Change of climate also exerted a strong influence.

Dr. A. B. Judson thought that cases of this kind, which had been treated by Dr. H. H. Smith, as well as some treated by the late Dr. E. D. Hudson, of New York, showed that the desired result could be obtained by the use of an apparatus which would permit the patient to walk around. Union was brought about under these circumstances, probably by the friction, irritation, and congestion of the parts caused by the walking. Dr. Thomas' experience seemed to confirm this view, but the treatment by hammering he considered cruel. He was reminded of a suit for malpractice which was brought against Dr. Garcelon, of Maine, on account of an ununited fracture. In order to excite sympathy in his behalf, the patient had applied a rough home-made apparatus, and had gone about the country in this way for some time previous to the trial; but when the case came to trial it was found that union had taken place.

Dr. S. Ketch spoke of a boy who had received

a compound fracture of the femur, which by injudicious treatment had failed to unite. When he saw the case in consultation, the boy was suffering great pain; and partly with a view to relieving this, he applied a long traction splint without any coaptation splint. The pain was almost immediately relieved, and the local condition also improved, so that within a month he was walking about on a hip-splint.

Dr. R. H. Sayre related his experience with a case of delayed union in a fracture of the leg, occurring in a syphilitic subject, who was also in the early stages of locomotor ataxia. He was a very heavy man, and there was a marked angular deformity. After irritating the ends of the bones by rather severe manipulation with the hands, he applied plaster of Paris, and renewed it from time to time for six or eight months. During the first month he used crutches, but after this he was able to put the foot to the ground. At present there is firm union of both bones. In this case there was much œdema without the use of a constricting band, for the patient's heart and kidneys were in bad condition. Dr. Sayre thought that the hammering which the weight of the body produced upon the parts after they have been placed in position was more efficacious than a hammering of the sides of the fragments by means of a mallet. He thought it quite possible that too prolonged traction in cases of fracture of the femur might be responsible for some of these cases of non-union, for it was not improbable that more traction was often exerted than was sufficient to overcome the already tired muscles, and as a result the bones were drawn too far apart to secure good union. He could not accept Dr. Ridlon's criticisms upon the use of plaster of Paris as a surgical dressing for fractures in general. If properly applied immediately after an injury, and after the parts were in proper position, they could be immobilized, and there would be very little swelling. The swelling was often due to obstruction of the circulation by the abnormal position of the bones.

Dr. W. R. Townsend spoke of a case which he had presented to the Surgical Section last year. The boy had fractured his femur at Seabright, and notwithstanding skilful surgical treatment, there was no union after three months. He was brought to the Hospital for Ruptured