

the fragments or by the injury, the resulting inflammatory edema and the great depth of the muscular structures surrounding the bone all combine to render the ends of the fragments indistinct to the operator, so that the position must be largely inferred rather than actually determined. Out of all the cases that I have seen and examined, some 34 in number, I have yet to see any that was perfectly adjusted without the use of X-rays. To secure the best results the fluoroscope ought to be used after the reduction of the fracture, and the adjustment of whatever mechanical appliances are used for retention of the fragments. If this is done in all cases, I am satisfied, that there will result a great improvement in this class of fractures. The disability and shortening will not only be lessened but the delay in recovery and expense to the patient will also be curtailed.

I want to show you a number of skiagraphs which indicate, probably in an exaggerated degree, the character of many results. These skiagraphs were never intended for exhibition and I show them to you only to impress the necessity of making use of all available aid in this difficult class of fractures.

*X-ray Burns.*—In view of the great amount of X-ray work that is being done, it might not be uninteresting to say a few words, even if it is apart from the title of the paper, on the subject of X-ray burns. Besides the medico-legal aspect of the question which renders it in a way interesting, the practitioner may desire to know the danger his patient submits to when he sends him for an X-ray examination or skiagraph. The personal experience of any single operator being inconsiderable, I shall, therefore, give you, in a very brief form, what I have been able to glean from available records. At the outset one is struck with the fewness of the cases and the great publicity that has been given to these injuries. The recorded cases are exceedingly small in number and the unrecorded ones are not likely to be numerous. One would infer this from the fact that bad news travels faster and farther than good. The number of burns is every year diminishing, although the number of exposures is rapidly multiplying as time goes on. More satisfactory and better adapted apparatus, a more exact knowledge of the radiations and the technique required have been the means of bringing about this desired result. Omitting repeated exposures for therapeutic purposes, but including the experimental work done in the early stages, the journals of ten of the chief cities of England, Germany, Austria, France and the United States have furnished the records for the following statistics. Less than 175 burns, if we omit the cases occurring in X-ray operators have so far been reported, and less than half of these