

carried on in ordinary daylight, since the plate is never exposed to it. The plate is developed and fixed in the usual way.

Nothing has yet been done, beyond what was accomplished by Dr. Roentgen himself, to elucidate the nature of the new rays, but his photographic experiments are beginning to be repeated. With the splendid McDonald collection of apparatus at hand, I found no difficulty in reproducing them at the first attempt, in which I was aided by Mr. Nevil Evans. Wasting no time over photographs of coins or other small objects, we have obtained the pictures of hands now exhibited.

What will mainly interest your Society is that within four days of our first attempt we have made two trials of the process as applied to surgery. On Wednesday Dr. Armstrong kindly brought me a case of injury to the hip; but I am sorry to say that after one hour's exposure we obtained not a trace upon the plate (22 in. x 18 in.). I am inclined to attribute this failure to the presence of lead in the black paint of the dark slide kindly loaned by Messrs. Notman, as lead even in a pigment has been found to obstruct the rays.

This morning (Feb. 7th) Dr. Kirkpatrick was good enough to give me the opportunity of trying to locate a bullet which had begun to cause trouble in the leg of a patient. As this is probably one of the earliest cases of the successful application of Roentgen's rays, especially in penetrating such a thickness of flesh, the negative, which clearly shows the flattened bullet lying between the tibia and fibula, will be seen with interest. The plate was a Stanley (sensitometer 50) and the exposure 45 minutes. It is clearly under exposed, and should have had at least an hour and a half. Near the top of the plate may be observed a copper wire tied round the leg, 3 centimeters above the entrance to the wound, from which to measure distances. (This wire does not show clearly in the print, although quite apparent in the negative.) The bullet was 6 centimetres below the wire, where indeed it had been suspected to lie. It may be said that in this case the new process converted a surmise into a certainty.

The tube which I have found by far superior to all others tried at present is a Puluj tube containing a brilliant fluorescing screen, and hence called the "Schirm-Lampe." It is No. 3080 in the catalogue, of Geissler, of Bonn, (price 15 marks).

This tube was excited direct from the secondary of the large Kukenkorff coil (10 inches spark) fed with 4 ampères at 8 volts on the primary.

The very perfect photograph of the hand showing sesamoid bones was taken with the same arrangements (except that the plate was wrapped in orange paper instead of being placed in a dark slide) by