

**Report of a case of comminuted fracture of both femurs : one treated by plating, the other by extension and plaster-of-Paris cast, with radiographs before, after, and since recovery / by A. Vander Veer and E.A. Vander Veer.**

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REPORT OF A CASE OF COMMINUTED FRACTURE  
OF BOTH FEMURS: ONE TREATED BY PLATING,  
THE OTHER BY EXTENSION AND PLASTER-  
OF-PARIS CAST, WITH RADIOGRAPHS  
BEFORE, AFTER, AND SINCE  
RECOVERY

By A. VANDER VEER, M.D.

AND

E. A. VANDER VEER, M.D.

ALBANY, NEW YORK

MR. F. H. W., aged fifty years, a man of excellent habits and exceedingly good muscular development, was injured the morning of October 29, 1912. A horse attached to a heavy load of wet gravel stopped on a steep grade near Mr. W's. house, in the country, and began to back. Mr. W. hastened to assist the driver, and attempted to block the wheel. The wagon, cramped sharply at right angles to the road, plunged so quickly down a sharp, steep descent to the house that he did not have sufficient time to escape, and while in the act of jumping was struck squarely in both legs, about six inches above the knee, being held firmly fixed between the square end of the wagon and the house, with the load resting against his legs. He was only relieved when he directed the driver to cramp the wagon sharply in the opposite direction and drive down the hill. Mr. W., who was standing with his back to the house, fell on his back away from the building, and directly facing it. In doing so his legs became badly twisted. He soon discovered it was impossible for him to help himself in any way whatever. Dr. Stark, who

lived near by, was immediately summoned, and came to Mr. W's. relief in about twenty minutes. In attempting to straighten out his legs much suffering resulted, but it was soon evident

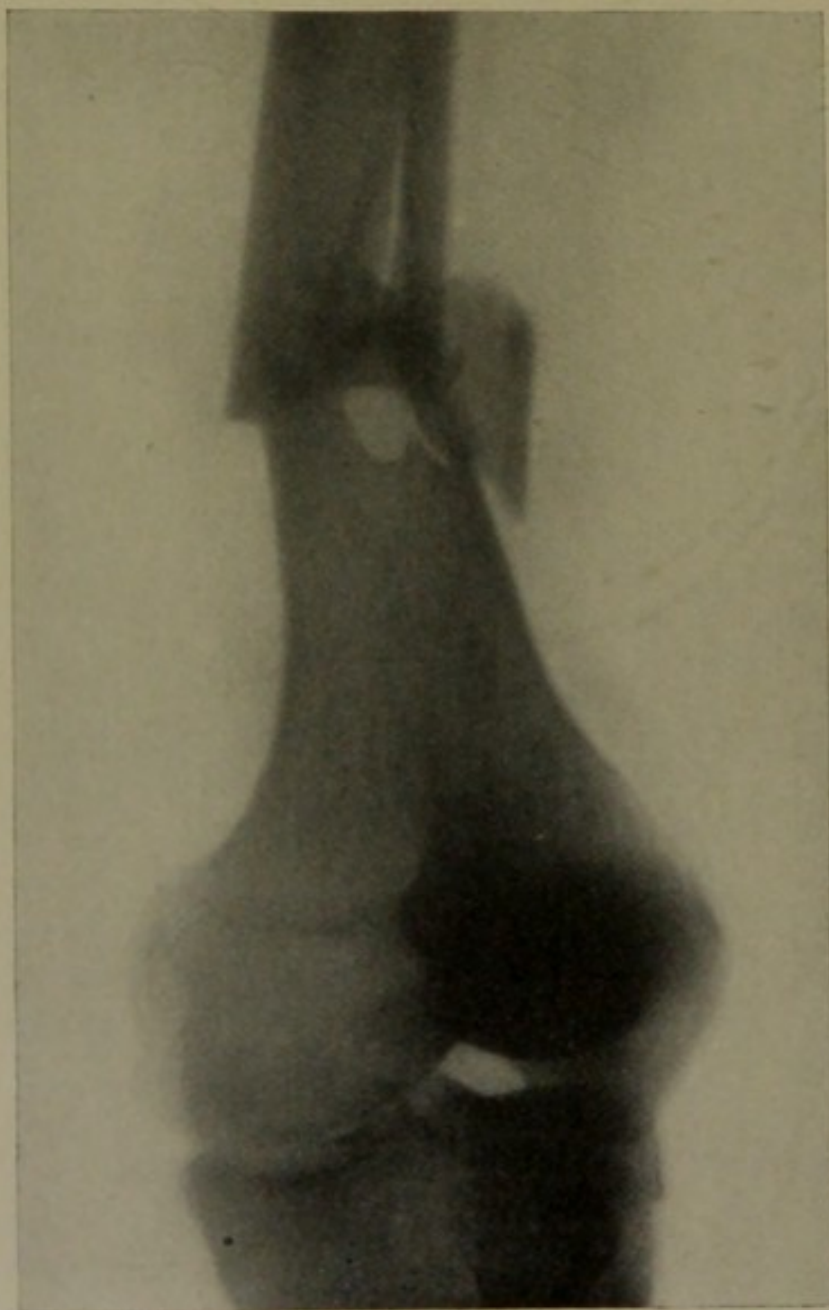


FIG. 1.—Left leg. X-ray taken October 29, 1912.

the soft parts had not been punctured, although plainly to be recognized there was a comminuted fracture of each femur. Mr. W. was placed in temporary splints, put on a stretcher,



taken a half-mile to the railway station, located in the baggage car, and brought to the Albany Hospital, a distance of about seventeen miles. Dr. A. Vander Veer saw him at the hospital

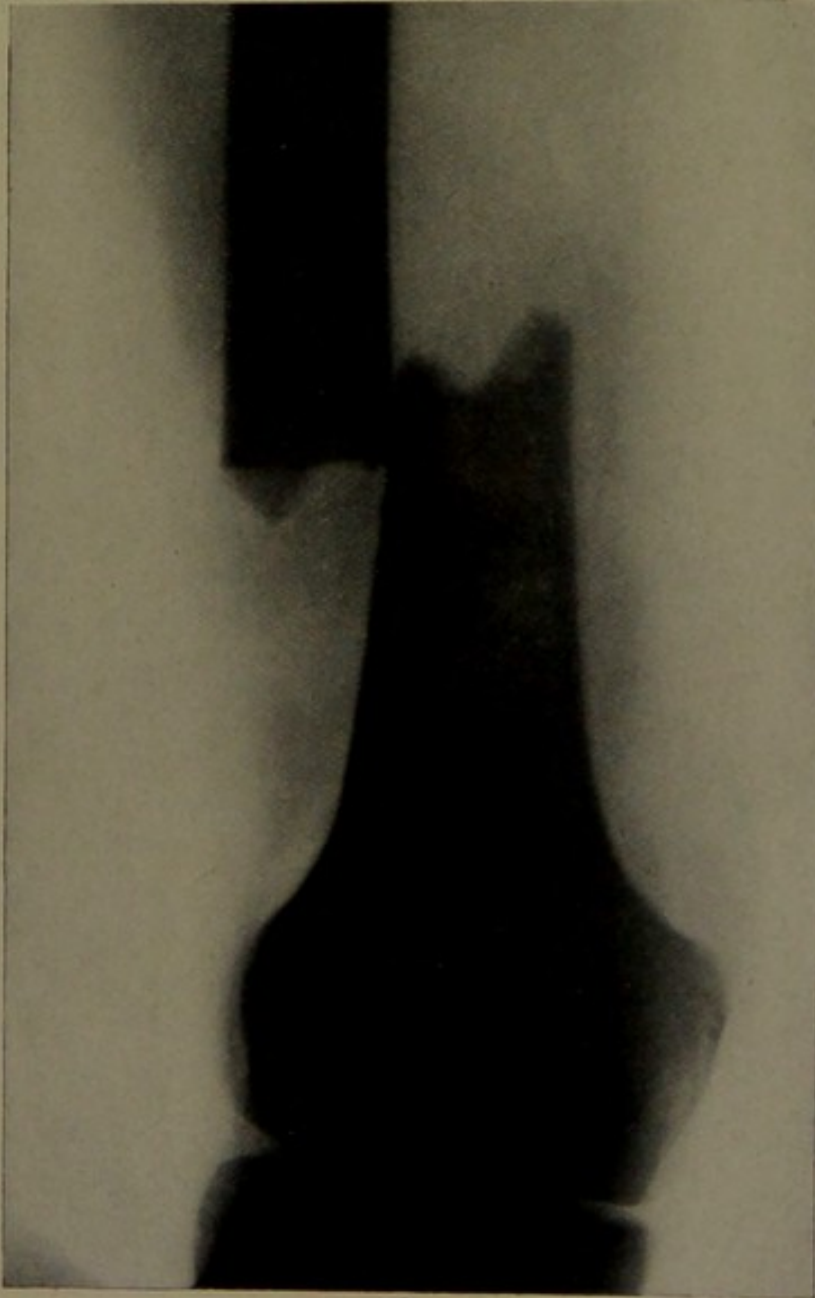


FIG. 2.—Right leg. X-ray taken October 29, 1912.

soon after his arrival. He was suffering from considerable shock, and great mental depression. In our consultation, after the first set of skiagraphs was taken (see Figs. 1 and 2) showing the

appearance of the two fractures, we determined it would be advisable—if his condition improved within a few hours—to

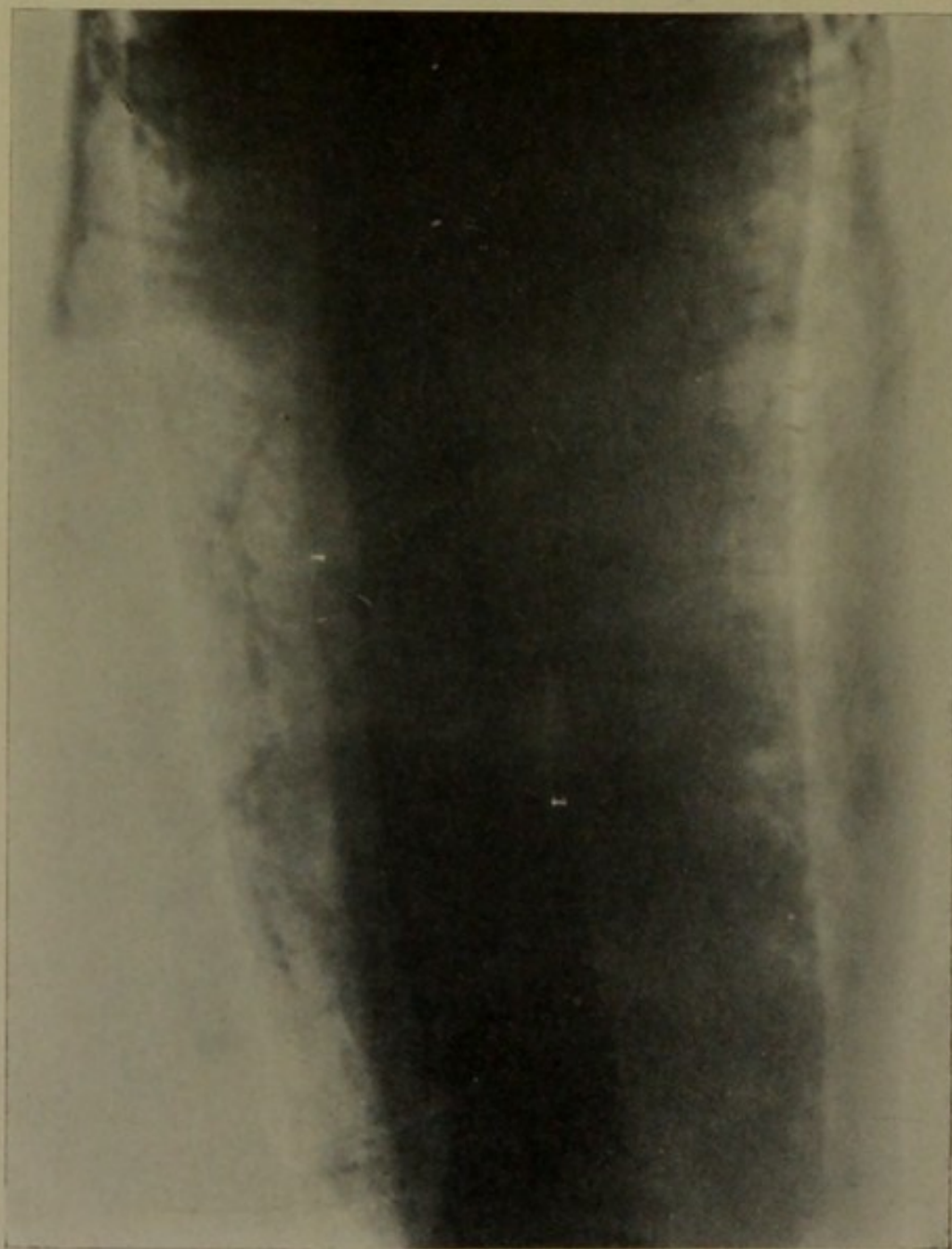


FIG. 3.—Left leg. Appearance of femur when dressing was removed, December 17, 1912.

reduce the fractures under an anesthetic. It will be observed that the left fracture is somewhat more comminuted than the right. Dr. E. A. Vander Veer arranged to plate the right femur, while



Dr. A. Vander Veer made use of the method employed for many years, of extension, reduction, and the application of a plaster-

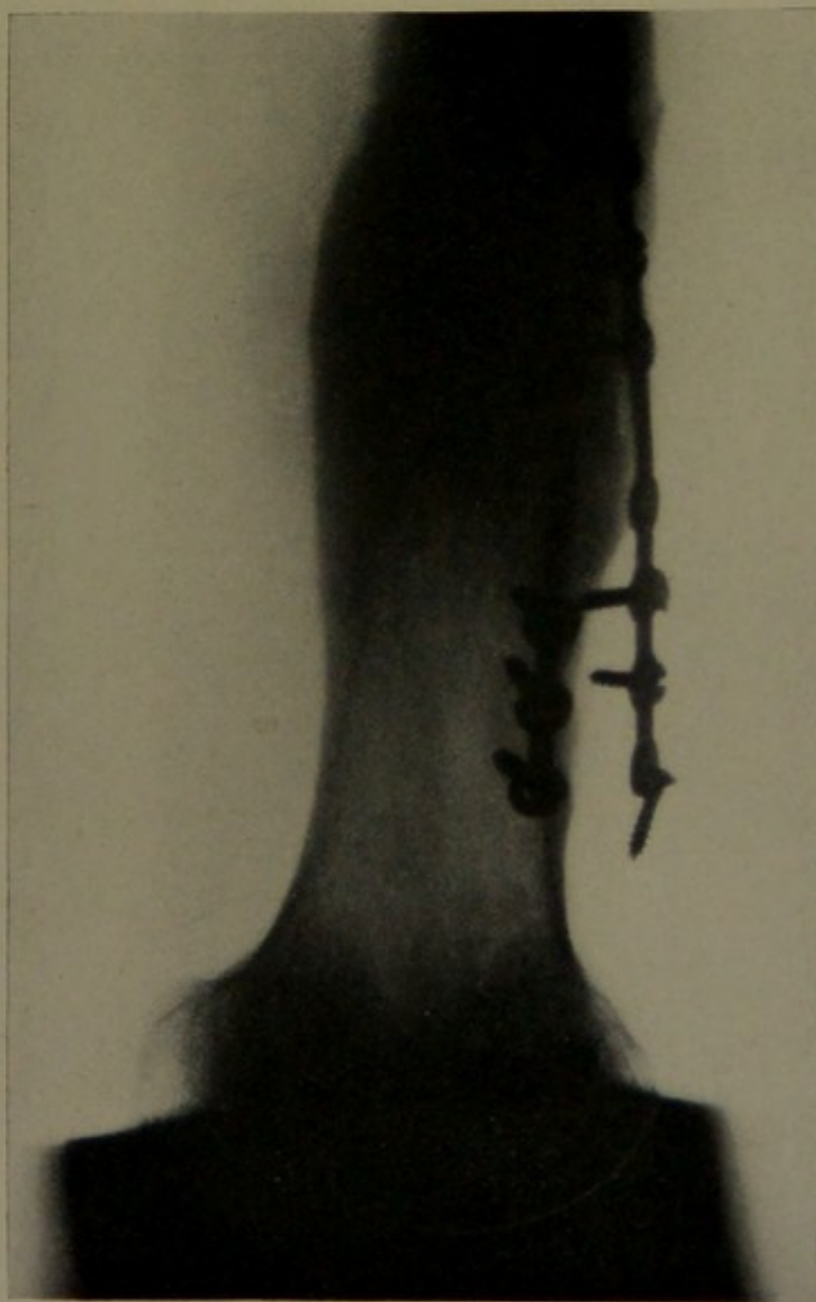


FIG. 4.—Right leg. Appearance of femur when dressing was removed, December 17, 1912.

of-Paris cast for the left femur. This was done about four o'clock in the afternoon. The patient was under the anesthetic a little over two hours. Owing to his exhausted condition it

was not thought wise to take him to the x-ray room for other skiagraphs, but to remove him to his bed as quickly as possible. His case was one of some anxiety for the following twenty-four



FIG. 5.—Appearance of right femur, April 10, 1914.

hours, when he reacted nicely and made an excellent recovery. The wound made by the plating operation healed kindly and without any complication whatever. The plaster bandage be-

coming somewhat loose was removed from the left leg December 17, 1912, an *x*-ray picture taken (see Fig. 3) and limb found to be in excellent apposition. Fig. 4 shows appearance of right leg on

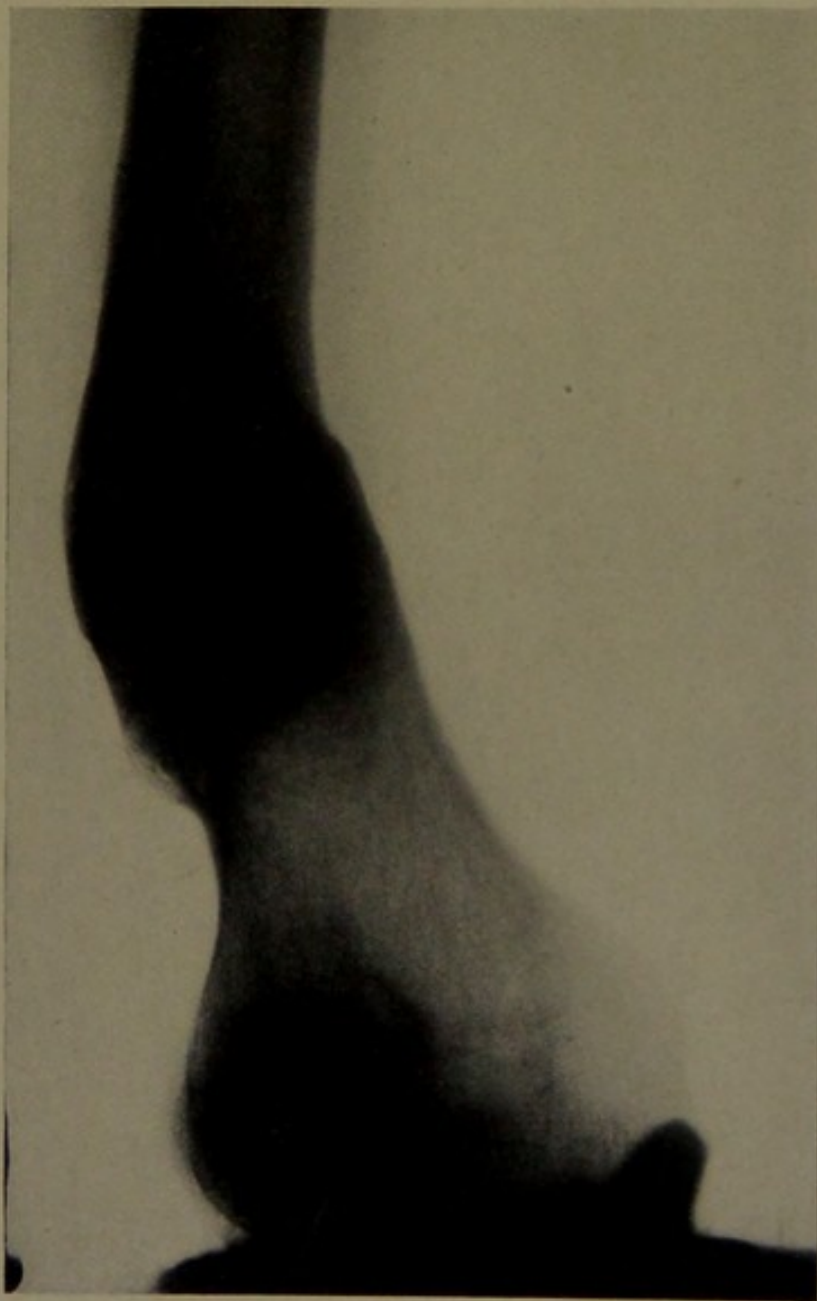


FIG. 6.—Appearance of left femur, April 10, 1914.

same date. By careful measurement, from the umbilicus, there was perhaps one-quarter inch shortening of the left femur. Plaster bandage reapplied to left leg, and a septic dressings, with bandage,



to right leg renewed. The patient was out of bed at the end of nine weeks, in a Morris chair, and encouraged to flex the knees and to begin the use of crutches, but this he found a very slow,

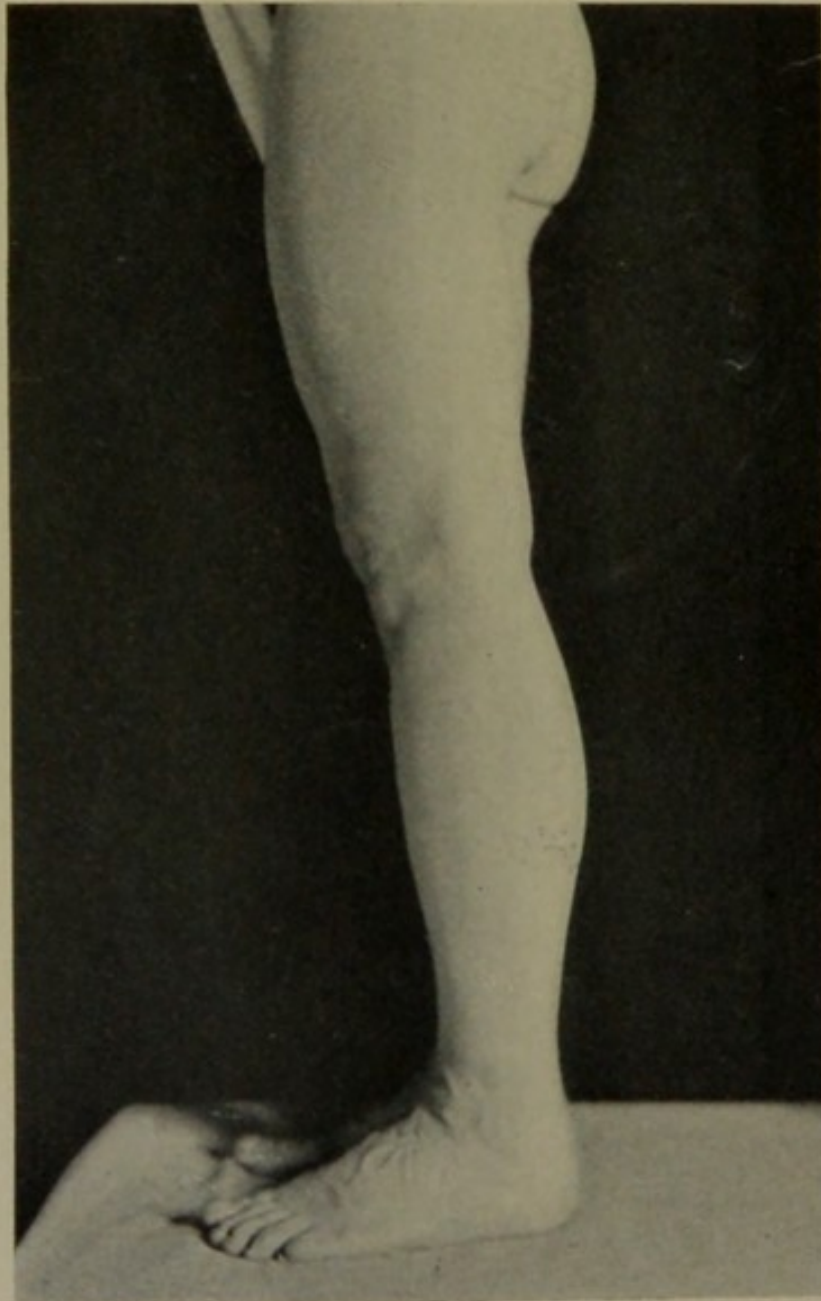


FIG. 7.—Side view of left femur.

painful process. There seemed to be a serious lack of confidence on his part in using the crutches; the fear of falling and not being able to bear much weight was very marked. February

25, 1913, plaster bandage removed from left leg, and there was evidence of good, firm union. Simple dressing applied, with bandage from the toes up, and the patient then began the use

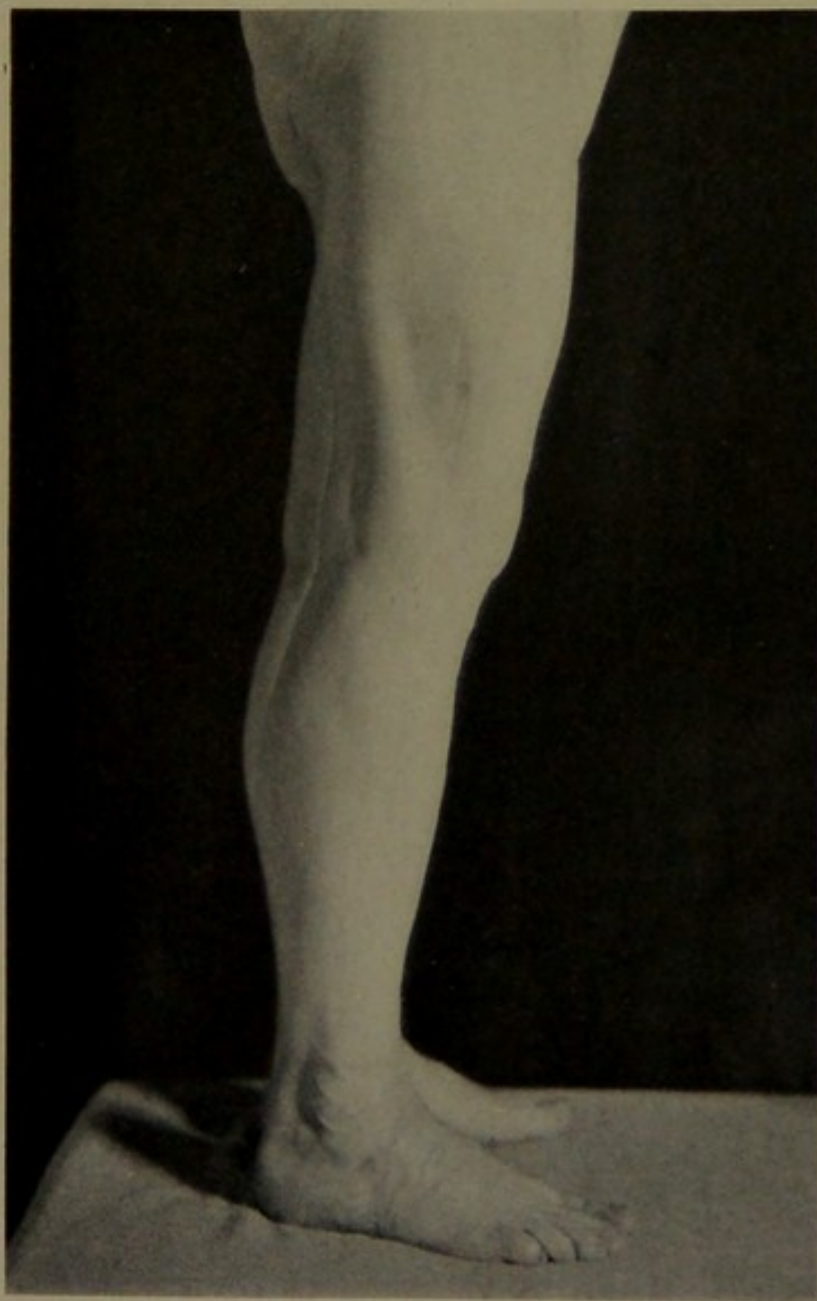


FIG. 8.—Side view of right femur.

of crutches with more earnestness. In time he found that one limb would support him quite as well as the other, using the crutches for two or three weeks, then two, and finally one, cane.

The latter was given up in October, 1913, a year after the time of the accident. Since then he has walked very comfortably, with full confidence, and scarcely a perceptible limp, giving full

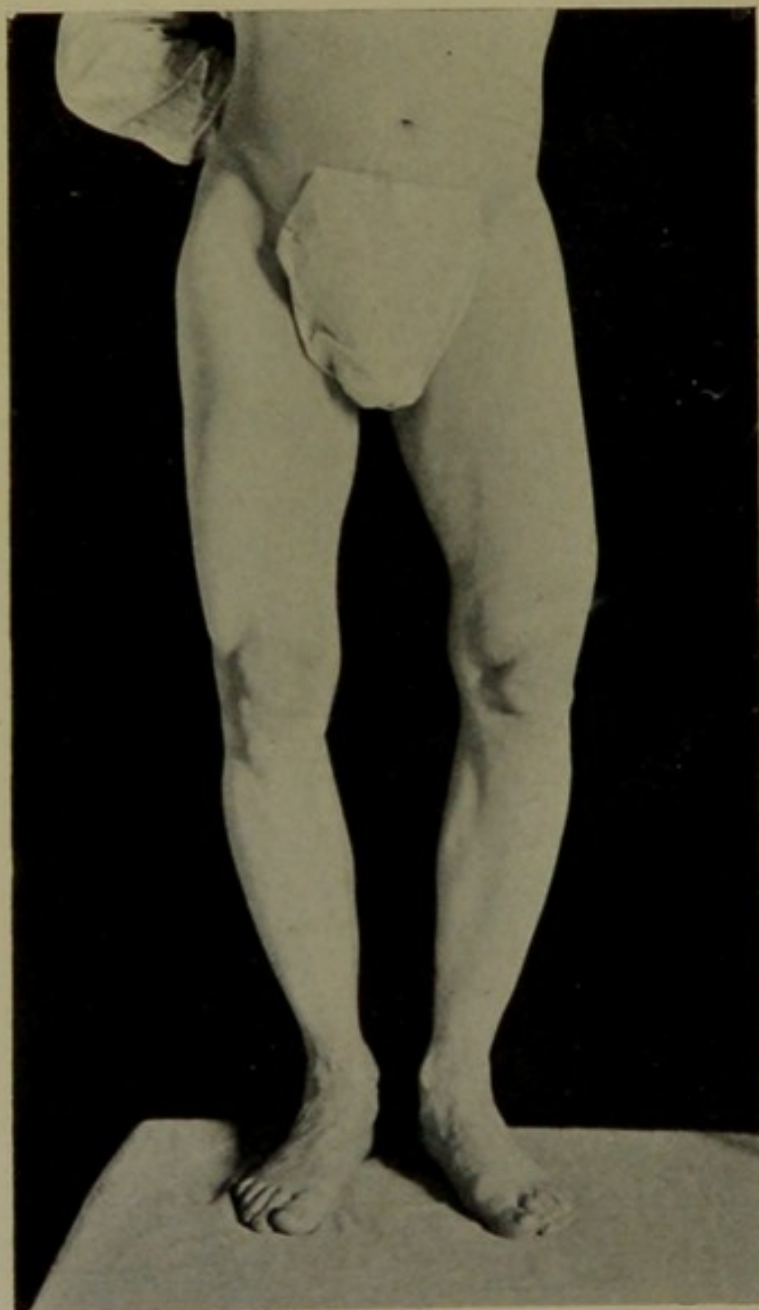


FIG. 9.

attention to his occupation as Chief of Inspections in the New York State Department of Education.

April 10, 1914 the x-ray pictures present fully the condition regarding the appearance of the right leg (see Fig. 5) and (Fig.



6) of the left. In the latter, it will be noticed, there is a decided bending at the point of union, yet the patient was able to walk with comfort.

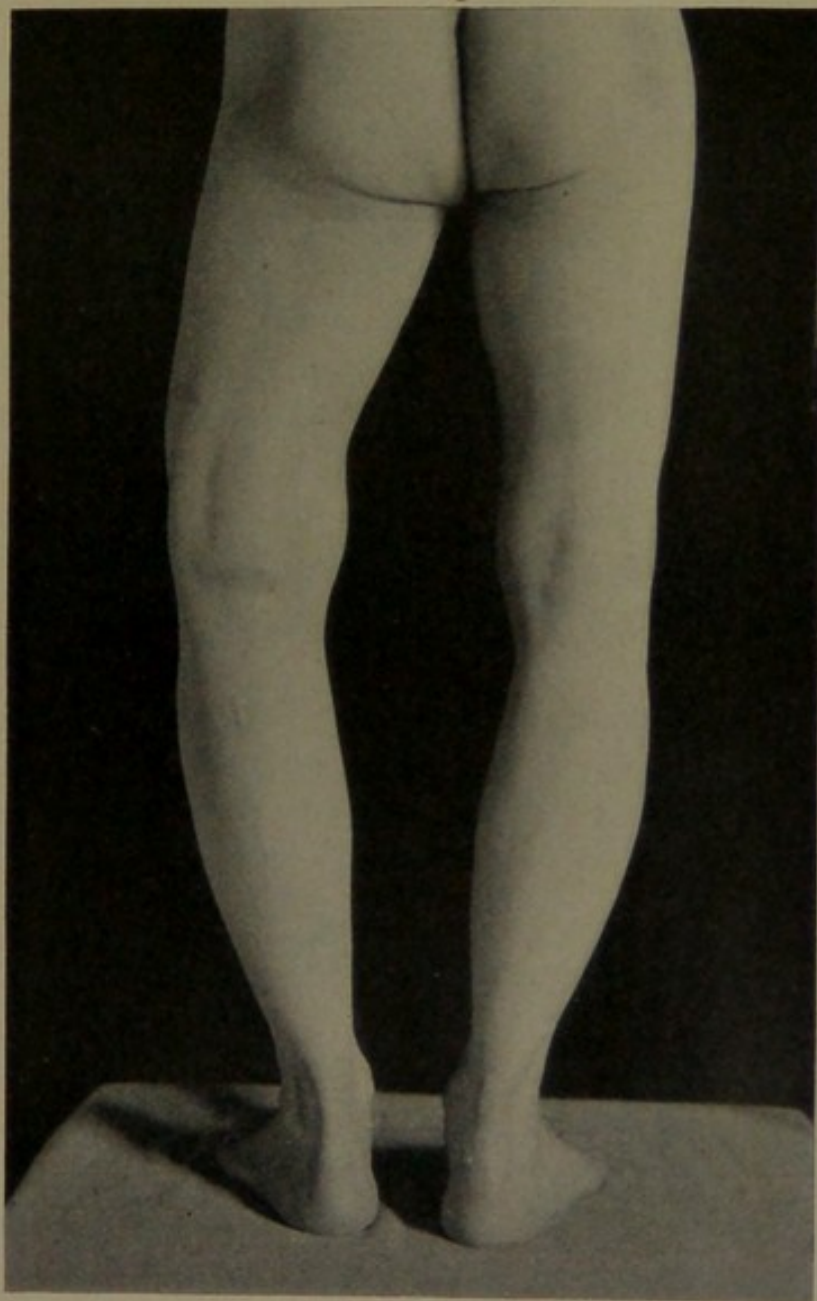


FIG. 10

April 18, 1914 (Figs. 7 and 8), photographs were taken from a side view, showing one limb to be about as straight as the other, while an anterior view (Fig. 9) shows a decided bowing outward

of the left femur. Fig. 10, taken posteriorly, shows the bending even more markedly.

The last two *x*-ray pictures, together with the photographs of the left leg, I think demonstrate quite clearly that consolidation of the callus of the left leg has not been quite perfect, and that there has been a gradual giving way at the point of union, *i.e.*, a bending of the femur a long time after the patient was able to walk.

From this one case it is pretty positively shown that much better union was secured in the right femur, by means of plating, than by extension and use of plaster-of-Paris for the left leg.

Is it possible that the *x*-ray shadow gives an exaggerated expression of the deformity of the left femur? At the point of union in the right femur will be noticed a distinct separate enlargement, as though it might be the remains of the metal plate. On careful manipulation the patient has no pain nor can any sensation of a foreign substance be recognized.

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**SIMULTANEOUS FRACTURE OF BOTH FEMURS**

ONE TREATED BY PLATING, THE OTHER BY EXTENSION AND PLASTER-OF-PARIS CASE\*

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AND

EDGAR A. VANDERVEER, M.D.

OF ALBANY, NEW YORK

PATIENT, a man, fifty years of age, of good habits and fine muscular development, was brought to the Albany Hospital, October 29, 1912, having sustained, at the same moment, a comminuted fracture of each femur as the result of having been pinned between the side of a house and the rear of a heavily loaded wagon. The skiagraphs (Figs. 1 and 2) show the condition of the respective femurs on admission. It was decided to reduce the fractures under anæsthesia, and to apply a plate to the right bone and for the left to use extension and a plaster-of-Paris cast. This was done upon the day of his admission after a few hours of rest, about four o'clock in the afternoon.

The patient was under the anæsthetic a little over two hours. Owing to his exhausted condition it was not thought wise to take him to the X-ray room for other skiagraphs, but to remove him to his bed as quickly as possible. His case was one of some anxiety for the following twenty-four hours, when he reacted nicely and made an excellent recovery. The wound made by the plating operation healed kindly and without any complication whatever. The plaster bandage becoming somewhat loose was removed from the left leg December 17, 1912, an X-ray picture taken (see Fig. 3), and limb found to be in excellent apposition. Fig. 4 shows appearance of right leg on same date. By careful measurement, from the umbilicus, there was, perhaps, one-quarter inch shortening of the left femur. Plaster bandage reapplied to left leg, and aseptic dressings, with bandage, to right leg renewed. The patient was out of bed at the end of nine weeks, in a Morris chair, and encouraged to flex the knees and to begin the use of crutches, but this he found a very slow, painful process. There seemed to be a serious lack of confidence on his part in using the crutches; the fear of falling and not being able to bear much weight was very marked. February 25, 1913, plaster bandage removed from left leg, and there was evidence of good, firm union. Simple dressings applied, with bandage from the toes up, and the

\* Read by title before the American Surgical Association, April 11, 1914.



patient then began the use of crutches with more earnestness. In time he found that one limb would support him quite as well as the other, using the crutches for two or three weeks, then two and, finally, one cane. The latter was given up in October, 1913, a year after the time of the accident. Since then he has walked very comfortably, with full confidence, and scarcely a perceptible limp, giving full attention to his occupation as Chief of Inspections in the New York State Department of Education.

April 10, 1914, the X-ray pictures present fully the condition regarding the appearance of the right leg (see Fig. 5) and (Fig. 6) of the left. In the latter, it will be noticed, there is a decided bending at the point of union, yet the patient is able to walk with comfort.

April 18, 1914, photographs were taken, from a side view, showing one limb to be about as straight as the other, while an anterior view (Fig. 7) shows a decided bowing outward of the left femur. A posterior view shows the bending even more markedly.

The last two X-ray pictures, together with the photographs of the left leg, demonstrate quite clearly that consolidation of the callus of the left leg has not been quite perfect, and that there has been a gradual giving away at the point of union; *i.e.*, a bending of the femur a long time after the patient was able to walk.

From this one case it is pretty positively shown that much better union was secured in the right femur by means of plating than by extension and use of plaster of Paris for the left leg.

Is it possible that the X-ray shadow gives an exaggerated expression of the deformity of the left femur? At the point of union, the right femur will be noticed a distinct separate enlargement, as though it might be the remains of the metal plate. On careful manipulation the patient has no pain nor can any sensation of a foreign substance be recognized.

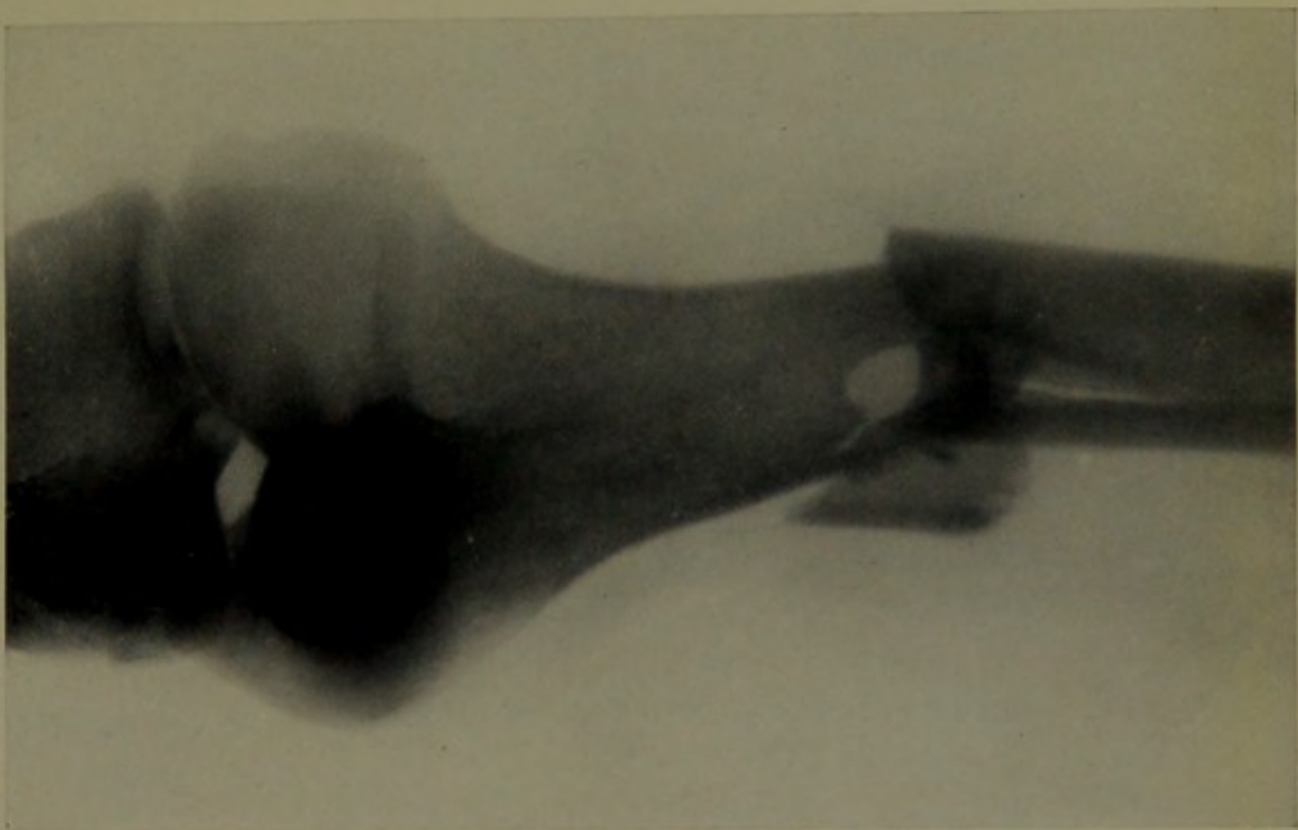


FIG. 1.—Left femur.

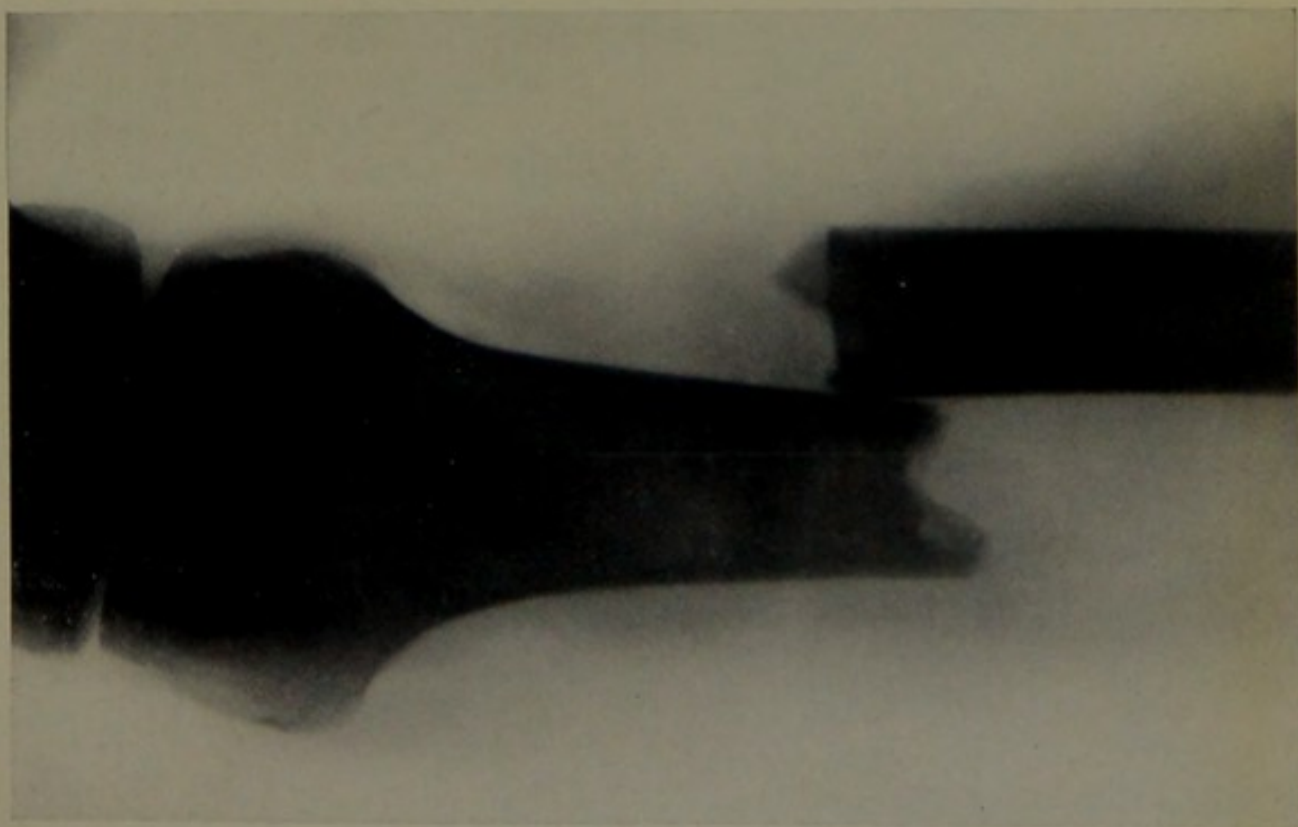


FIG. 2.—Right femur.





FIG. 3.—Skiagraph of left femur, 49 days after treatment by extension and plaster-of-Paris bandage.

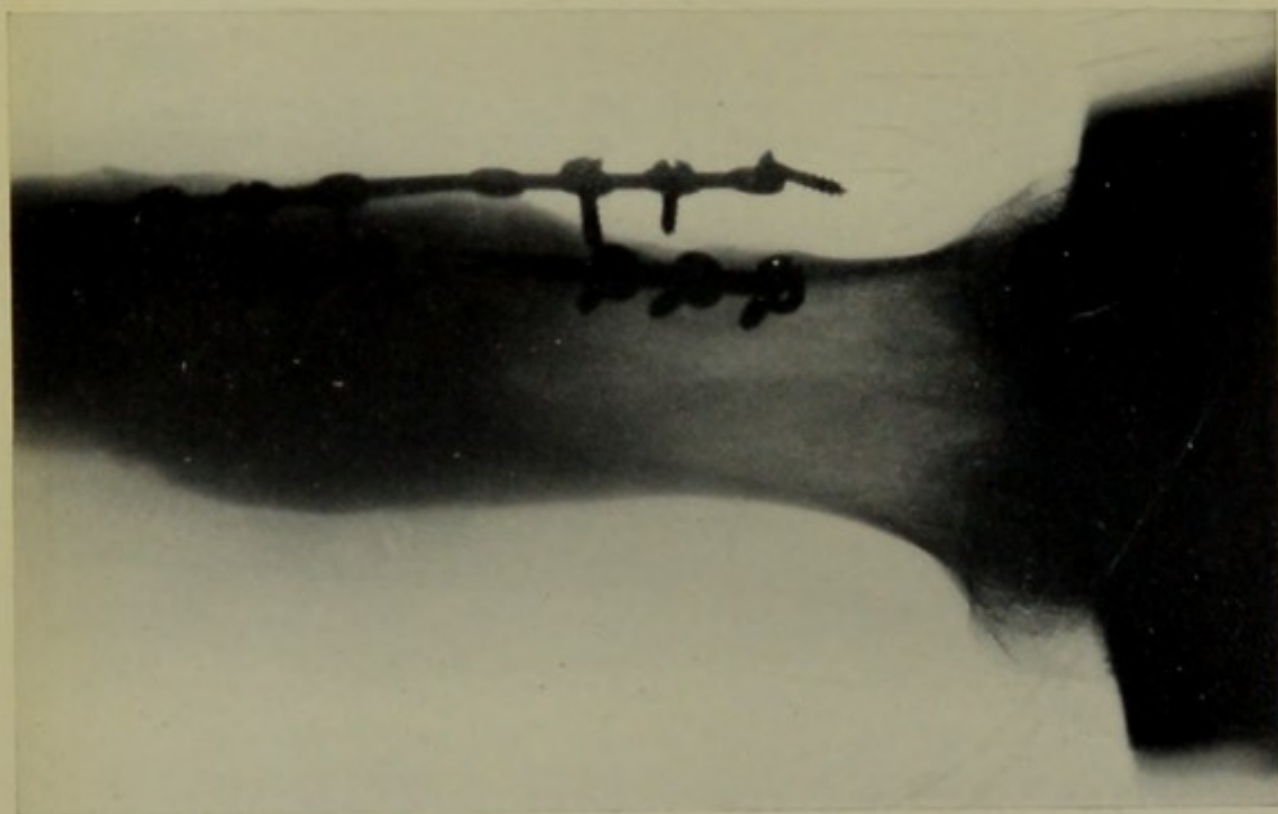


FIG. 4.—Right femur, 49 days after plating for fracture.





FIG. 5.—Right femur, April 10, 1914, five and one-half months after injury.

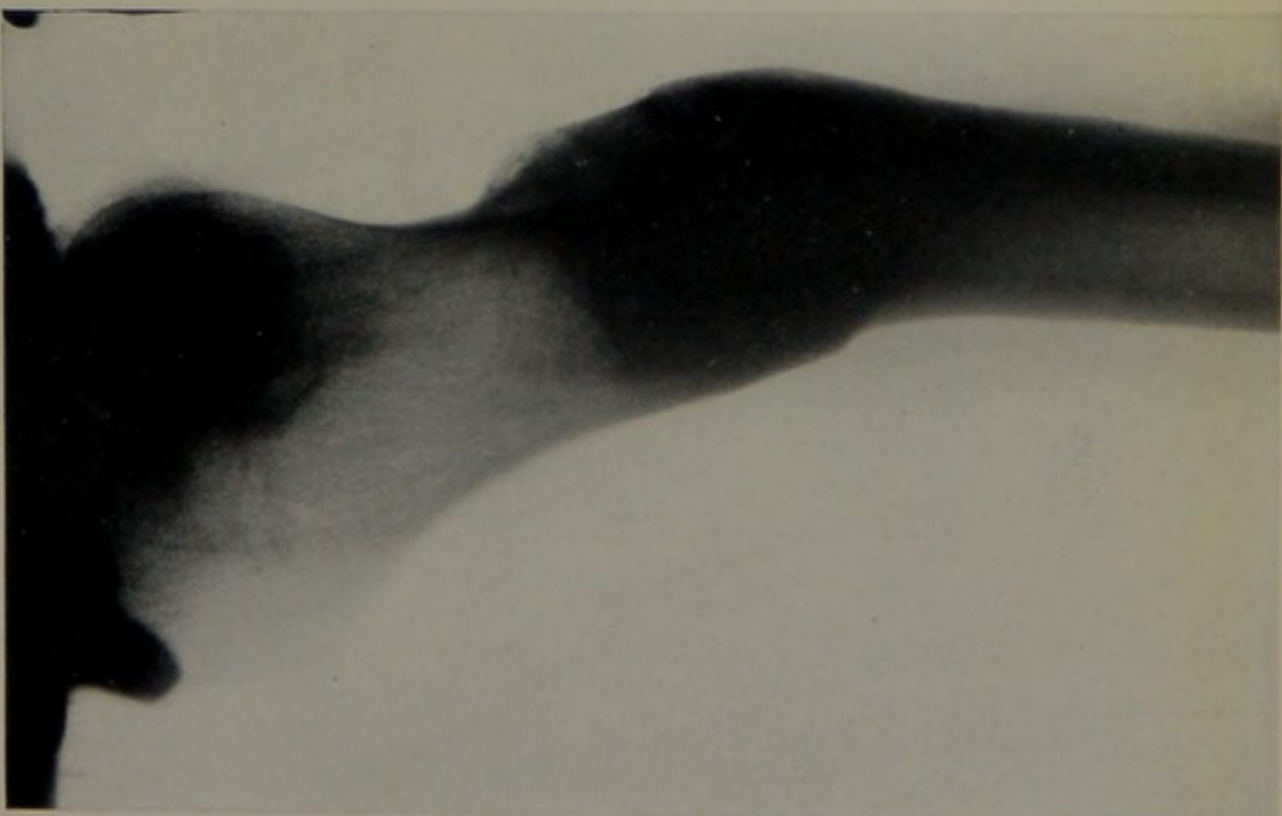


FIG. 6.—Left femur, April 10, 1914, five and one-half months after injury. Firm union with one-quarter inch shortening.

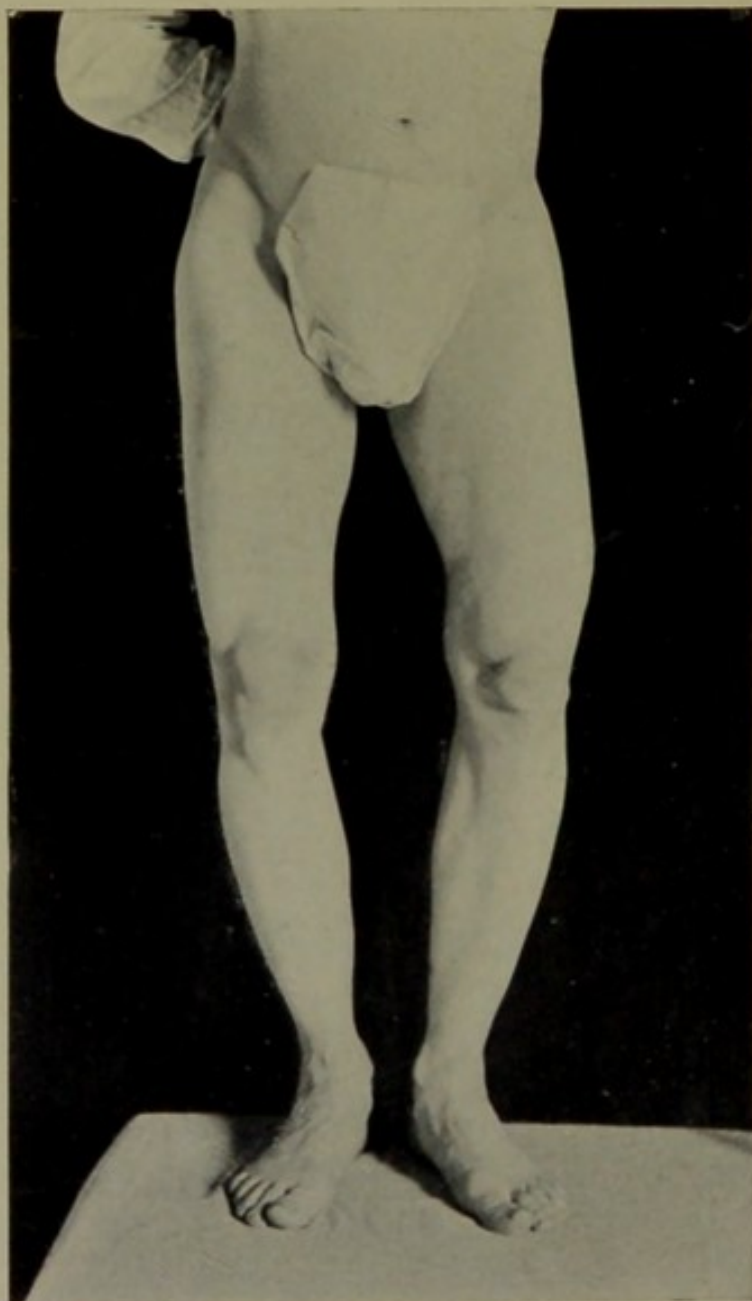


FIG. 7.—Anterior view, showing bend in left femur.

