

for about 20 days This splint was removed on the 10th December, and union found to be quite firm. I now put the arm up for two or three weeks in a plaster of Paris splint, which was made so as to embrace the shoulder. The patient was discharged, cured, on the 12th of January.

CASE II.—W. B., A teamster, aged 36, married, was admitted into the hospital on the 7th of October, 1886, suffering from an un-united fracture of the right femur.

History obtained from Patient.

On the 12th day of October, 1885, as the patient was driving a fish waggon, the horse took fright and ran away, throwing the patient forcibly on his right side on the hard sidewalk. On attempting to get up, he found he could not move his right leg. He was at once taken into the Wellington Barracks, where an army surgeon examined his leg and diagnosed "a fracture of right thigh," and put the fracture up temporarily to enable him to be carried home with safety. When he got home a doctor was immediately sent for, who put the leg up on a long side splint with an extension, and seven days after, applied short splints. For the next six or seven weeks the doctor assured him his leg was doing well. The splint was then removed, and to the surprise of the surgeon the bones were found un-united and the limb fully three inches shorter than its fellow. The leg was now put up for seven or eight weeks on a double inclined plane, which on being removed, the fracture was again found un-united, and the knee considerably swollen and very tender to the touch. During the following two or three weeks the limb was put up on a large side splint, for which a plaster of Paris spica bandage was subsequently substituted. This splint was left on for four or five weeks; it was then removed and no union found to have occurred. For the next eight or nine weeks the patient was allowed to go about on crutches. An operation was now performed, which consisted in subcutaneously irritating the ends of the fragments, and the leg was put up for twenty-five or thirty days in a plaster of Paris spica bandage; on removing this splint the bones were still found un-united. After this he was allowed to go about on crutches, and nothing was done for him until he came into the hospital. I saw the patient for the first time, seven or

eight weeks after the accident, in company with Dr. F., the attending surgeon. Liston's large side splint and the extension were taken off in my presence; I measured the limb and found it fully three inches shorter than the other, and there was no attempt at union of the fragments.

¶ On examination, the right femur was found fractured about two inches below the trochanter minor, and the limb fully $3\frac{1}{2}$ inches shorter than the other. The knee was ankylosed in the straight position, and tender to the touch. On letting his weight on the leg the bones glided easily over each other, and a distinct angular bend was produced in the thigh at the seat of fracture. The hip-joint was semi-ankylosed. There was no callus formed about the ends of the fragments. His general health was good.

On the 9th of October, a consultation of the medical staff was held, at which it was decided to re-set the bones.

On the 11th, I operated in the following way:—The patient being put under the influence of ether, and an Esmarch bandage applied, I washed the parts thoroughly in a carbolic solution (1 to 20) and made a vertical incision down to the bone, six or seven inches in length, on the outer aspect of the thigh, beginning about $\frac{1}{2}$ an inch below the upper border of the trochanter major; and made a second incision two inches in length, extending backward from the centre of the former and in right angles to it. On exposing the bones I found them overlapping fully three inches and bound tightly together by strong fibrous material. The lower end of the upper fragment was drawn upwards and forwards by the conjoined tendon of the psoas and iliacus, and the upper end of the lower fragment drawn up behind the other, pressing hard against it, and producing atrophy of it. The ends of the bones were very much atrophied and pointed, especially the end of the upper fragment. The periosteum being now laid open and the ends of the bones denuded, I applied extension and counter-extension to the limb by pulleys, and removed by a finger saw—the soft parts being first held well apart and protected by spatulæ—about an inch and a half from the end of each bone, and drilled a hole through each of them from its periosteal surface. I then brought the bones in position and held them there by stout platinum wire. The wound was washed thoroughly with a carbolic