DESCRIPTION OF A
SPLINT FOR USE AFTER EXCISION OF
THE KNEE.

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I BEG to submit to the notice of the profession a splint I have had constructed for application to the leg after the operation of excision of the knee-joint. It fulfils the following conditions:—1st. It allows perfect adjustment of the cut ends of the bones. 2nd. It ensures perfect immobility after adjustment. 3rd. It permits free access to the joint for the purpose of dressing the wound.

From the woodcut it will be seen that the splint consists of three parts—viz., a thigh, a leg, and a popliteal portion.

The thigh portion consists of a wooden back splint, which extends from immediately below the buttock to within three inches of the centre of the knee-joint. On its anterior surface is fixed a layer of "Hide's felt," which is so cut as to envelope the thigh. The edges of the felt are supplied in front with hooks, so that it may be laced up.

The leg portion likewise consists of a wooden back splint, which extends from three inches below the centre of the

knee-joint to the foot. About three inches from the heel the foot-piece is attached to the leg-splint by a hinge, after the plan adopted by Mr. Callender. To the anterior surface of the leg-splint is attached Hide's felt in exactly the same manner as to the thigh-splint. At the distal extremity of the thigh portion, and at the proximal extremity of the leg portion, the posterior surfaces of the wooden splints are grasped by strong cross pieces of wood, which project on either side about two inches. At each extremity of these cross pieces is attached a metal upright, eight inches in height, seven inches of which project on the anterior surface of the splint and one inch on the posterior. These uprights are connected by four horizontal bars fixed by a screw and nut at the thigh end, but supplied at the leg end with a running slot and thumb-screws. This arrangement enables the two splints to be connected and adjusted at any angle, and, by simply tightening the screws, to be retained in that position.

The popliteal portion is simply a wooden back splint, four inches long, to which two straps and buckles are attached. After the dressings are applied to the wound, this splint is applied and buckled across the two top horizontal bars, and thus affords additional support to the popliteal space. This portion of the splint is removed at each dressing.

The mode in which the splint is applied is as follows:—When the operation is completed and all hæmorrhage is arrested, the femoral portion of the splint, with the felt well soaked in varnish, is applied to the thigh and laced up the front. The leg portion is then put on and fixed in a similar manner, and, the surgeon fixing the cut ends of the femur and tibia in the position required, an assistant tightens up the thumb-screws, and the whole limb is thus fixed and the joint rendered perfectly immovable.

As will be seen from the woodcut, there is ample room for any form of dressing. The apparatus is adapted for united fractures and other injuries requiring complete immobility and perfect adjustment of the ends of bones.

The splint is manufactured by Messrs. Wood, of King-street, Manchester.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

CASE OF FRACTURE OF BOTH CLAVICLES, AND OF THE THREE UPPER RIBS ON THE RIGHT SIDE; WITH PERMANENT ARREST OF THE CIRCULATION THROUGH THE RIGHT SUBCLAVIAN ARTERY; SUBSEQUENT DEVELOPMENT OF BONE, RESEMBLING EXOSTOSIS.

(Under the care of Mr. JAMES LANE.)

For the following interesting notes we are indebted to Mr. Sworder, house-surgeon.

A boy, aged fifteen, was admitted Dec. 18th, 1875, in an alarmingly collapsed condition. In attempting to get out of a train in motion he had slipped, and had been crushed between the carriage and the platform, having been dragged onwards for several yards. He was put to bed at once; stimulants were given, and a hot bottle was applied to his feet. In an hour or two he had recovered somewhat from the collapse, but his breathing was much embarrassed. Examination revealed fracture of both clavicles, the right being broken a little internal to its centre, with the outer end driven downwards and inwards upon the first rib. The three upper ribs on this side were also broken at about their centre, fracture of the second and third being made out at once by examination of the axilla, that of the first becoming evident subsequently during the progress of the case. The left clavicle was broken just outside the attachment of the coraco-clavicular ligaments, the short outer portion being so displaced that the acromial end was directed obliquely downwards and forwards, as is usual with a fracture in this situation. The skin over both scapulæ was extensively lacerated. The compressing force seemed to have operated upon the shoulders from behind, and to have forced them forwards and inwards, causing both clavicles to give way, and then on the right side expending itself on the upper ribs.

The patient was placed on his back, with his head and shoulders slightly raised, but his inability to bear any pressure on the chest, together with the laceration of the skin over the scapula, rendered it impossible to apply bandages to keep the fractures in position. The arms were simply brought to the side with the forearms folded over the abdomen and fixed there by a bandage very lightly applied. The wounds on the back were treated with simple dressing.

On the next day there was extreme distress and difficulty of breathing, with much fever. His pulse was 160, respiration 60, and temperature 103°. He was therefore ordered to be bled from the arm, and though only three ounces of blood could be obtained this was attended with marked relief, for in the evening the pulse had fallen to 130, the respiration to 40, and the temperature to 99.4°.

Dec. 21st.—The breathing was less embarrassed. Temperature 100°; pulse 130; respiration 34. Bowels were freely acted upon. It was now found that there was no pulse to be felt at the right wrist or in any of the arteries of that limb, and the boy complained also of numbness in the right little finger. The subclavian artery was doubtless compressed by the broken clavicle against the first rib, and the lowest nerve of the brachial plexus was interfered with to a slighter extent by the same means.

On the 24th he was going on well. Pulse 108; respiration 32; temperature 99°. He was quite unable to move himself, and complained of great difficulty in breathing when raised to have the wounds over the scapula dressed. Any attempt to improve the position of the clavicles was attended with so much pain and distress that it was at once abandoned. The application of bandages or axillary pads for this purpose was obviously out of the question. The pulse at the right wrist could not be restored by any

VACCINATION GRANT.—The Local Government Board have awarded T. Pemberton Simpson, M.D., the sum of £87 for efficacious vaccination in the Southsea district. This is the second award Dr. Simpson has received during the last year and a half.