much inflamed with a yellow discharge exuding from the passage, great tenderness all over the scalp, but more particularly over the mastoid process, where fluctuation could be felt but indistinctly. Induced by the relief afforded by the operation in the preceding case, I recommended her to have the integuments over the mastoid process freely divided, but she determinedly refused, and I was obliged to content myself with pursuing a strictly antiphlogistic course of treatment, by leeching and cupping the part, and by the internal exhibition of mercury combined with colchicum, as the next most likely plan to afford her relief. An opiate was given at bed-time, to secure a night's rest, and the passage of the ear cleansed, and injected with an astringent lotion. On examining the meatus soon afterwards, with the view to ascertain the condition of the tympanic membrane it was found to be swollen and inflamed, and at its under part an aperture or ulceration was detected, about the size of a pin's head. My patient presented all the indications of severe constitutional disturbance; she complained of great pain in the mastoid region, and the discharge from the meatus was sometimes tinged with blood. She was again strongly urged by Mr. Lawrence and myself to submit to the operation of dividing the integuments over the mastoid process, to prevent exfoliation of the bone, but her obstinacy was not to be overcome. The mercury was continued, but quinine was now given in combination, instead of colchicum, as it had become necessary to afford her some support, and strengthen her system to withstand the exhausting influence of her complaint.

In this way matters went on for some months, the patient suffering occasionally from renewed attacks of rheumatism in her joints, and the aural symptoms being aggravated during each paroxysm. Suppuration took place over the mastoid process, and a portion of the bone exfoliated, its separation being, as usual, a work of time and suffering. In the ear itself the disease continued to make progress, the ulceration of the membrane continued until very little of it remained, and all the small auditory bones came away with the discharge. As my unfortunate patient thus through her obstinacy incurred a large amount of suffering which she might have avoided, and also the loss of hearing and considerable structural disease, it was to me a matter of painful interest to watch the progress of this untoward case, until the principal structures of the ear were destroyed, feeling assured all the while that, had I been permitted to practise the incision over the mastoid process, as I desired, a very large portion of the suffering and mischief would have been prevented. The exfoliation of the bone would not have occurred, nor in all probability the destruction of the membrana tympani, and the loss of the ossicula auditus.

2, Soho Square.

CASE OF DISLOCATION OF THE SCAPHOID BONE OF THE FOOT.

BY DR. WALKER, PETERBOROUGH.

(Read at the Branch Meeting of the Association, held at Huntingdon, September 17th, 1850.)

DISLOCATION of the scaphoid or navicular bone of the tarsus is an accident of very rare occurrence; the position and the connexions of this bone render its displacement so improbable, that it is generally regarded as impossible that it should occur, "unless," as Mr. B. Cooper remarks in his "Treatise on the Ligaments," "it be attended with total destruction of the foot." To the extensive observation of Sir A. Cooper no such case had ever presented itself, the following therefore must be regarded as one of peculiar interest:—

On the 10th of June, 1850, a stone-mason, aged 40, and of a spare but sinewy form, in stepping from the top of a wall, eighteen feet high, to another about a foot lower, over an intervening space of about two feet, advanced his right foot, but stepped short, his toes only resting upon the wall, his whole weight being, in the act of stepping, thrown upon the right leg. The foot, as he says, "bent upwards, and something gave way." Falling down between the two walls, he found himself on the ground on his hands and knees, not hurt, as he conceived, by the fall, but quite unable to work, and his foot in great pain. He was carried home, and I saw him next day. He was in bed, and on examination my opinion of the case entirely coincided with that of Mr. Hanbury, our excellent house-surgeon, who had previously visited him. We found a bold projection on the dorsum pedis, in the situation of the os naviculare, and a corresponding depression beneath, where, in the normal condition, the tuberosity of this bone forms a distinct projection. Over the displaced bone the skin was tense and red, and over this point there was a good deal of pain on pressure. He could bend and extend the ankle-joint without difficulty or much increase of pain. I at first tried to reduce the bone by firm pressure with the thumbs, but it felt firmly fixed in its abnormal position, and I could not move it.

I then requested Mr. Hanbury to press the foot downwards, whilst I attempted to return the bone to its position between the astragalus and cuneiform bones, and with an audible snap it returned, and the deformity disappeared.

I then merely directed the foot to be kept quiet and fomented; but two days after, finding that the bone felt loose and easily moveable, with a tendency to slip upwards, occasioning the peculiar appearance of a slight dimple or hollow in place of its natural projection, a plaster and roller were applied.

He was confined to the house for three weeks. He then returned to his work, but continued slightly lame for about a month after. This morning (Sept. 16th)

I find, on examination, no remaining appearance of injury; he has no pain, and the motions of the foot are perfect.

The practical conclusions to be drawn from this case are, that although rare, this dislocation is not impossible; that when it does occur it is not difficult of detection, neither is there any peculiar difficulty in its reduction; also, that in the absence of any complication from more extensive injury to the structure of the tarsus, than in this case, must have existed, we may venture to anticipate complete recovery, notwithstanding the injury to, and probable laceration of, the astragalo-scapoid and calcaneo-scapoid ligaments, as well as of the tendon of the tibialis posticus muscle, which are the necessary conditions of such a complete dislocation of the scaphoid bone as I have here described.

ON A NEW SWINGING APPARATUS

FOR THE

TREATMENT OF FRACTURE OF THE LEG.

By S. JAS. A. SALTER, M.B., LOND., M.R.C.S.,

LATE HOUSE-SURGEON TO KING'S COLLEGE HOSPITAL, &c.

(Read before the King's College Medical Society.)

GENTLEMEN,—The subject of *swinging apparatus*, for the treatment of fracture of the leg, I have this evening brought before you, because I wish to exhibit and to explain a plan which I devised last winter for the treatment of a case in the hospital by this means, during the time that I there held the office of House-Surgeon, and because I believe that the apparatus I then invented had some, and not unimportant, advantages, over those already in use; and because, moreover, I am sure that the plan of swinging broken legs in their treatment is attended with great benefit and immense comfort to the patient. The subject is interesting also in its history, as it exhibits a gradual development of mechanism in the different arrangements adopted, and as it shows, from the very number of those various plans, how much the want of some efficient swinging apparatus was felt by surgeons, in the treatment of fractures of the lower extremity below the knee. It is my intention, in the following remarks, to enumerate the different swings that have been in use at various times; next, to describe my own apparatus in detail; and, lastly, I shall give you a brief account, as far as it relates to the subject before us, of the very interesting case (that of Mr. B., the Guinea merchant, which I dare say you recollect in the hospital,) on which it was first tried, and which appeared so much benefitted by its use.

In the various swings I am about to mention, other attempts have been made besides swinging the leg, and allowing the limb, as well as the body, a certain amount of motion. Various splints and extensive apparatus have formed essential parts of some of these

combinations; and their elaborateness and complication have, in some cases, reached a most marvellous extent.

These are the different apparatus I have been able to discover in the various works I have consulted:—

I. *Prael's apparatus*.*—The only principle attempted in this device is that of swinging. The apparatus is a horizontal beam attached to the ceiling, from which the leg is suspended by cords, which pass through pulleys at the extremities of the beam. There is no particular splint belonging to this arrangement. It was first published in 1801.

II. *Schmidt's apparatus*† is like Prael's, with the addition of a fracture-box, supplying the place of splints. At the extremities of the fracture-box are some straps and screws, by which prolonged extension of the limb can be effected. This was first described by Schmidt in Loder's *Journal für de Chirurgie*, 1805.

III. *Hecker's apparatus*.‡—Hecker's apparatus consists of an arched iron bar extending transversely across the bed over the patient's legs; from the centre of this arch depend four chains, which are attached to a fracture box in which the leg is placed. There are two smaller arches of iron attached to the extremities of the fracture box and arching over the foot and knee, which serve the purpose of an ordinary cradle to keep off the bed-clothes. The bed-clothes cover over the whole of this apparatus, in this respect differing from those previously described. The fracture box is furnished with an extension arrangement similar to Schmidt's. This apparatus was described and figured in Gräfe's *Journal der Chirurgie* in 1823.

IV. *Nusbaumer's apparatus*.§—This is simply a modification of Prael's, in which the inventor endeavoured to accomplish an alternate lateral posture, as well as the swing. It is a very complicated impracticable affair. First described in 1825.

V. *Dornbluth's apparatus*.||—This differs from Prael's no further than this, that the horizontal beam, from which the leg is suspended, is connected to the ceiling by an elastic coil of wire, instead of an inelastic cord, as in Prael's. The coil of wire is stiff and elastic, one end is attached to the ceiling and the other to the centre of the beam, and it is enclosed in a box for protection. Published in 1829.

VI. *Mr. Grantham's apparatus*¶ is a contrivance

* Verbesserung der Löfferschen Fusschweben zur Heilung der Schienbeinbrüche von dem Herrn Leichirurgus Prael. In *Arneman's Magazin*, vol. iii., part 2nd, page 170, illustrated by four plates and twenty-four figures.

† Beschreibung einer Fusschweben mit einem Ausdehnungs Apparat von tirm Freidr. Anton, Gottl. Schmidt. In *Journal für die Chirurgie von Christian Loder*, vol. iv., page 458. Illustrated by two plates.

‡ Die Gräfesche Beinbruchschweben Beschreibung von Dr. Hecker. In *Journal der Chirurgie und Augen-Heilkunde, herausgegeben von C. F. Gräfe und Ph. v. Walther*, vol. iv., part 2nd, page 197. This is a very learned and elaborate paper. It gives the whole literary history of the subject; and several forms of apparatus are mentioned, which I have not been able to examine, as the works containing an account of them are not to be found in any of our London libraries.

§ Nusbaumer. *Annalen für die gesammte Heilkunde*. Karlsruhe, 1825. Vol. ii., part 1st, page 90.

|| Beschreibung und Abbildung eines neuen Lagerungs und Schweben apparatus, &c., von Alb. Ludw. Dornbluth. Berlin und Stettin. 1829. Illustrated with figures.

¶ Apparatus for fractures below the knee, by J. Grantham, in *Medical Gazette*, vol. xii., page 739; also vol. xvi. page 724. Illustrated by two figures.