

Fracture of the thigh / by Lawson Tait.

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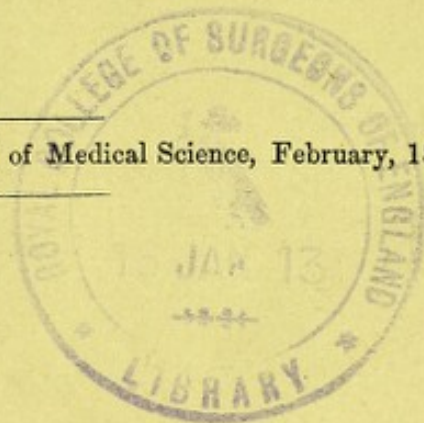


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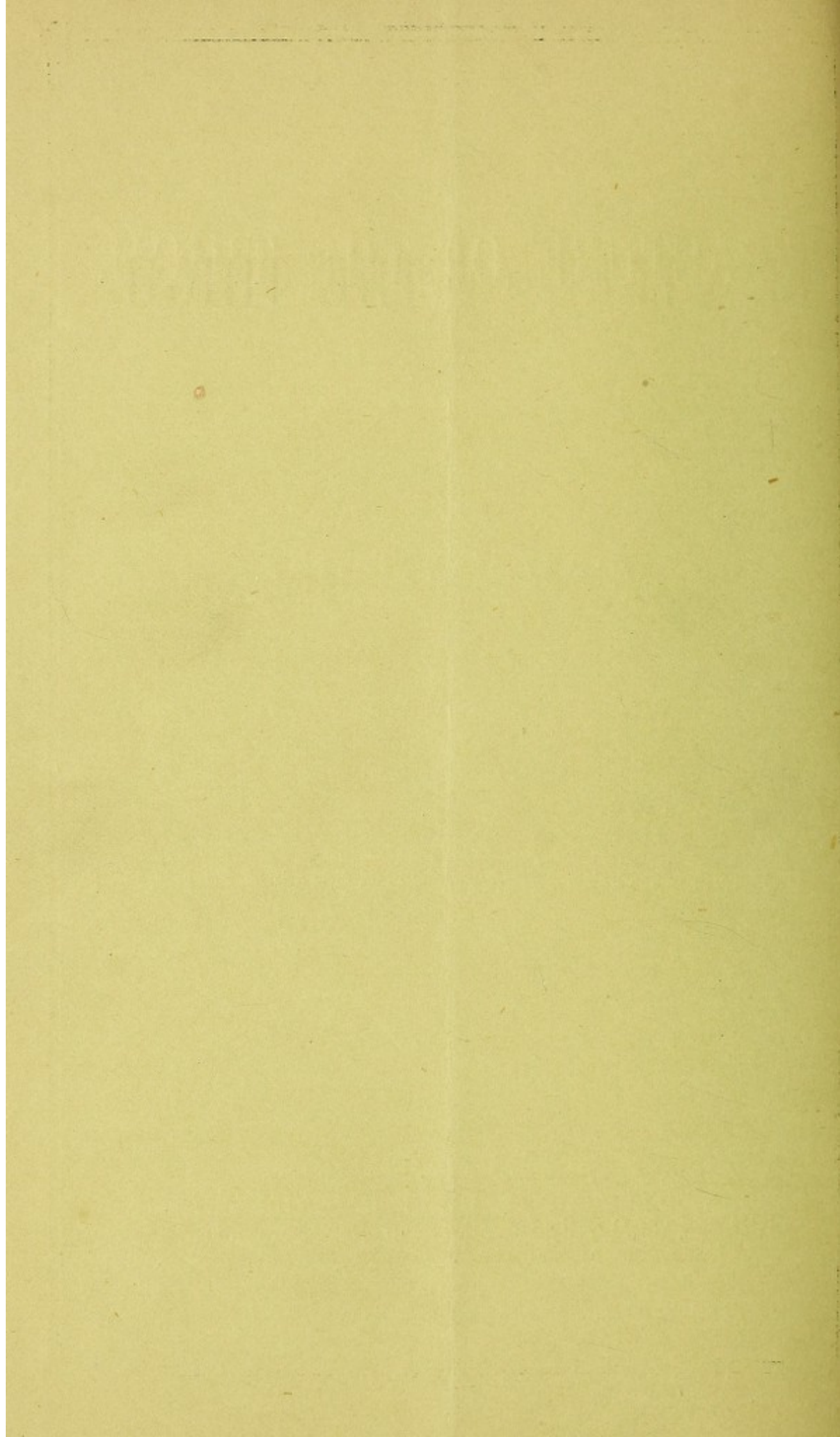
BY
LAWSON TAIT,
MEMBER OF THE SURGICAL SOCIETY OF IRELAND, ETC.

[Reprinted from the Dublin Quarterly Journal of Medical Science, February, 1868.]



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JOHN FALCONER, 53, UPPER SACKVILLE-STREET,
PRINTER TO HER MAJESTY'S STATIONERY OFFICE.

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1868



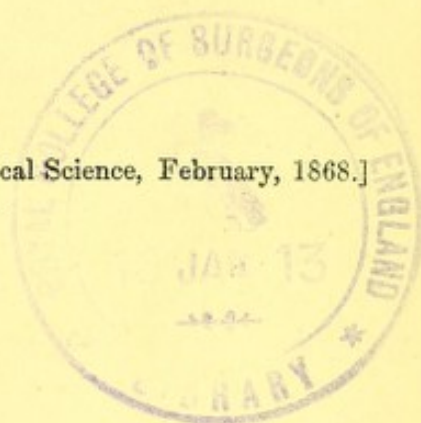
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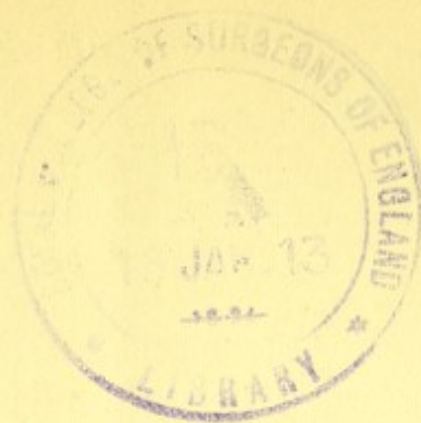
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FRACTURE OF THE THIGH.

THE treatment of fracture of the femur in all its varieties has run with so many variations from one extreme to the other—from no treatment at all, to treatment most dangerously meddlesome, that it would serve no good purpose, were it even possible, to narrate a tithe of the wondrous mechanisms by which such an accident was intended to be remedied. Suffice it to say, that the two methods now generally in use are Desault's long splint, and the principle of the inclined plane, used either in the original plan of Sir Charles Bell, or by means of Liston's or M'Intyre's splints. The treatment by position brought forward by Pott is now, as far as I am aware, not in use; although it had, in suitable cases, several good points to recommend it. The double inclined plane seems also to have lost its hold on public estimation very much; except, perhaps, in cases of fracture immediately above the condyles. It is liable to the objections of causing œdema of the leg and foot, that the position in which the limb is maintained is extremely irksome, and that it permits of but very slight change in position of the patient. In the use of the iron splints I have heard the patients complain bitterly of the cold. In children and old people it is scarcely possible to use this method.

Desault's long splint, although as perfect as such a simple apparatus could be, is far from being free from objections to its use. In the first place, children and old people are extremely intolerant of its use. It necessitates that the patient shall be continually on his back. When the fracture is near the middle of the thigh the proper arch of the femur is not retained; but, as Amesbury says,

"Instead of forming a segment of a large circle it becomes two segments of two smaller circles," from the want of posterior support. There is very great difficulty in regulating the amount of extension by means of the perineal band. The theory is that there should exist no constant pressure on the perineum, but that the band should act as a check ligament. Practically, however, this is not the case, because to prevent shortening there must be constant action of the perineal band until union is fairly begun; and as few patients can stand pressure long it is not difficult to account for the fact that some surgeons declare that fracture of the thigh never gets well without some amount of shortening of the limb.

Under such circumstances it may be of some interest to bring briefly under notice the particulars of some cases in which I used a new plan of treatment of this fracture with most gratifying results.

The method referred to is that usually known as Buck's, and is described in Hamilton's elaborate treatise. Two years ago I had the good fortune to make the acquaintance of Dr. George K. Smith, of Brooklyn, U.S., who had been attached to one of the rear hospitals of the Federal army during the late war. Dr. Smith is the author of a most exhaustive paper on fractures of the neck of the femur, and on this account was allowed to select, as an especial study, cases of gunshot fracture of the thigh. His treatment consisted entirely in the use of Buck's method, and the success obtained by it has been extremely satisfactory. In the elaborate reports and catalogues issued by the Army Medical Department his cases are noticed; but I had the opportunity of examining photographs of many of his patients, and must express my opinion that the success obtained during that unfortunate war in the treatment of gunshot fractures of the thigh was such as immeasurably exceeded that of any other known campaign.

The principle on which the plan is based—that of continuous extension by a weight and pulley—is not new, but the credit of adapting it successfully to the treatment of fractures of the thigh is certainly due to the American surgeons. The following will be found a convenient method of applying Buck's treatment:—Having placed the patient on a convenient bed, fasten two strips of ordinary diachylon plaster (that spread on unglazed calico is the best) reaching from about three inches above the knee to the malleolus, and from two to three inches wide, one on either side of the injured limb, and leave as much as will tie round a piece of wood adapted

to the sole of the foot. This foot-piece must have a hole bored in it about three inches from the heel, through which a cord is run from above downwards and secured by a knot; it must also have a flat notch on either side in which the plaster straps are laid. The cord ought to be in front of the straps. The limb is now to be carefully bandaged from the toes to the upper ends of the plaster straps, and the bandage to be saturated with dextrin or paraffin. The foot of the bed is to be raised about four inches to obtain counter-extension by the weight of the body. The cord is to be reeved over a pulley, and have a weight attached to it. The fragments having been adjusted, four gouch splints are to be applied of suitable length on the four surfaces of the limb, and those are best retained in position by small straps buckled. A slight addition, which I have found of great importance in preserving the heel from injury, consists in having a small cradle placed over the foot, to which the foot is slung by a small cord running through a hole in the toe of the foot-piece; this also prevents the tendency to eversion which the natural form and axis of the limb create. The more robust the patient the greater the extending weight required, and more weight is necessary during the first week than afterwards. In children I have had good results with so slight a weight as four pounds; and in the case of a full-grown man I have had to use sixteen pounds. I have treated fractures of the thigh in all the various sites of fractures, and the result has been uniformly satisfactory. Of course, in cases of fracture close to or above the trochanter the splints on the thigh are unnecessary—the extension alone must be trusted to. It is not necessary that the splints should command the knee-joint. Indeed, except in cases when the fracture is very close to the condyles, I think it better that they should not do so. There is no object to be gained in restricting all motion of the hip-joint; indeed, all the cases have been allowed, if they wished it, to sit up in bed after the first week.

The true indication for treatment in all fractures is to reduce the patient, as far as his injured part is concerned, to the condition of a crustacean, to supply him with a temporary dermoid skeleton until his vertebrate is repaired. The best illustration of the successful fulfilment of this indication is to be seen in the treatment of Colles' fracture by means of Professor Gordon's splint; and when we have equally efficacious means of treating every injury to the osseous system this department of surgery will be perfect.

The cases in which I have used this treatment are eleven in number—two compound and nine simple:—

COMPOUND			
Fracture	Sex	Age	Duration of treatment and result
Middle, - - - -	M	17	Closed wound with collodion ; healed by first intention ; up in seventh week ; no shortening.
Middle, comminuted; removed a large loose fragment,	M	7	Closed wound with collodion ; healed by first intention ; up in ninth week ; nearly a quarter of an inch shortening.
SIMPLE			
Upper third, - - - -	F	7	Up in fifth week ; no shortening.
Middle, - - - -	M	8	Up in sixth week ; injured limb distinctly longer than the other. He tumbled and repeated the fracture, and was again put up for five weeks ; injured limb still longer than the other.
Two inches above the condyles, - - - -	M	70	Up in ninth week ; no shortening.
Upper third, - - - -	M	33	Up in seventh week ; no shortening.
Neck, - - - -	M	59	Up in tenth week ; barely half an inch shortening.
Comminuted fracture of trochanters from direct violence, - - - -	M	61	Up in sixth week ; no shortening.
Middle, - - - -	M	13	Firm union third week under treatment.
Three inches above the condyles, - - - -	M	27	Under treatment.
Lower third, - - - -	F	24	Up in seventh week ; no shortening.

Besides the actually better results obtained from this method of treatment the patients are much more comfortable during its continuance than under any other that I have seen. In cases where bedsores threaten they can be more easily obviated in this method than in any other.

