Wathen Jonathan

A

DESRCIPTION

OF

Two New MACHINES

For the Conveyance and Cure of

FRACTURED LEGS.

[Price One Shilling.]

THE CONDUCTOR,

AND

CONTAINING SPLINTS:

OR A DESCRIPTION OF

Two New Invented INSTRUMENTS,

For the more ſafe CONVEYANCE

AS WELL AS

The more EASY and PERFECT CURE

OF

FRACTURES OF THE LEG,

Whether SIMPLE or COMPOUND.

TO WHICH ARE ADDED,

Three Copper-Plates, ſhewing the Conſtruction and Application of the CONDUCTOR.

By JONATHAN WATHEN, Surgeon.

Author of a Tranſlation of Boerhaave's Lectures on the Lues Venerea. Practical Obſervations on the Cure of the Venereal Diſeaſe by Mercurials. And an Anſwer to the Letter of J. Keyſer, Surgeon at Paris.

THE SECOND EDITION.

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PREFACE.

THE Reception this little Eſſay has met with from the World, is the more agreeable, as it affords me an Opportunity in this Edition, of acknowledging the Obligations I am under to the Body of Surgeons in general; who ſo far from depreciating, have, on the contrary, ingenuouſly approved and adopted both the CONDUCTOR and the SPLINTS into their private and Hoſpital Practice: In ſo many Places, and with ſo many liberal Teſtimonies of their Expediency and Utility, that were I to mention them, it would ſavour of an Oſtentation and Vanity I am not capable of indulging.

The real Excellency and Uſefulneſs of a new Invention, is not always ſufficient to recommend it to even a Trial in Surgery: It is natural to be prejudiced in Favour of what has been long made uſe of, eſpecially if attended with ſome Degree of Succeſs; beſides, the Reputation of the Individual is ſomewhat hazarded by new Applications: Such was the Attachment to the old Apparatus for fractured Legs, and which could never be expected ſo ſpeedily to have given Place to a

new; tho' ever ſo ſuperior a Method of Treatment. I was ſo ſenſible of this Difficulty, that I ſhould not have had a Reſolution to encounter common Prepoſſeſſions and Opinions: I too well know that Succeſs itſelf is invidious, and the want of it irretrievably diſgraceful, and ſhould in all Probability have confined this Invention to my own Practice, and deprived the Public of its Benefits, had I not been ſheltered by the Approbation and Sanction of Gentlemen of the higheſt Rank in their Profeſſion, whoſe Names are a ſufficient Paſſport to every uſeful Invention; and who not content with ſerving the Public themſelves, have the Generoſity and Candor to patronize every thing calculated for the Benefit of Mankind.

Some Gentlemen of the Faculty have made Objections to the Weakneſs and Pliability of the SPLINTS; others, to their too great Stiffneſs and Rigidity: But a Proof of their real Excellency is, whether they are of one Kind or the other, they have univerſally ſucceeded. For my own Part, I prefer thoſe that are ſomewhat limber and compliable, and covered with ſoft Leather, ſo contrived as to lace above and below.

I have taken Care however, that they may be furniſhed by Mr. *Mellor*, with ſuch as are very ſtiff and rigid, of a middling, or of a ſoft and more yielding Temperament; to theſe laſt the Lacing is applied.

I have

I have obſerved that they all anſwer, becauſe they are moulded in general to the Shape of the Leg; but the Circumſtance for which I prefer the laſt mentioned is, their Compliableneſs to the Make of every particular Leg, having Strength enough at the ſame Time to retain the broken Parts accurately and immoveably; they are all of them however more ſimple, and give leſs Trouble to the Surgeon than any before made Uſe of, and perform their Office with the greateſt Eaſe to the Patient, eſpecially if the following Notices be obſerved with Reſpect to the Poſition of the Limb. The Knee ſhould be a little bent when the SPLINTS are firſt applied, and thus continued, tho' not without ſome Variations as to more or leſs, till the Leg be cured. This Poſture is neceſſary on many Accounts; the Muſcles are hereby relaxed, the Bones eaſily come, and are preſerved ſtrait with little or no Force; the Veſſels are more at Liberty, and better perform their Office, ſo that the Swelling, *&c.* ſoon ſubſides; the Patient is alſo more at Eaſe than when the Thigh and Leg are in a ſtrait Line: A rigid Adherence to that Poſture in the old Method, was doubtleſs the Cauſe of many painful and dangerous Symptoms, from which the Patient is hereby exempted, as may readily be accounted for, when we reflect that this is the natural Poſition of the Leg in a State of Reſt. The Knee ſhould alſo be a little

little inflected, when the Conductor is applied, and whilſt it is kept on, for the ſame Reaſons. The Author of the 42d Article in the *Monthly Review* of *July* laſt, aſks whether two wooden extemporaneous SPLINTS ſecured by Bandages, might not anſwer the ſame Purpoſe, where a CONDUCTOR is not at hand? Alſo, Will not the Conductor be ſufficient to keep the Limb duly fixed in Bed? When it might be dreſſed and embrocated at Pleaſure without being encumbered with Splints.

In anſwer to the firſt, I obſerve, there never was a Time but ſomething was uſed, of the Kind he recommends, or the common Junks; but of late, what is much ſuperior to either, the long Splints of Mr. *Gooch*. The Neceſſity of keeping a fractured Leg as ſtrait and ſteady as poſſible, during its Conveyance, was always a Circumſtance too important and obvious for total Neglect. It was the Inſufficiency of theſe, and indeed of all other Means yet known, which rendered ſuch an Inſtrument as the Conductor abſolutely neceſſary.

By the ſecond Queſtion, I ſhould ſuppoſe, the Author had not the Opportunity of ſeeing either the Splints or Conductor applied in Practice, without which a mere Deſcription of their Structure and Uſes cannot be rightly underſtood; for Inſtance, the Conductor evidently appears to be a Machine that has Power to extend the fractured Limb to any

Degree,

Degree, and capable of Retention in any Point, by which the Bones however overlopped, are brought in Appoſition and preſerved immoveably in that State. The Sliders and Grooves, as he obſerves, allow ſufficient Space for Embrocations, Bandages, and even Cataplaſms, without the Incumbrance of Splints: But Experience, and that only, will inform us, that the Force by which this is done, terminating at the Knee and Ancle Bands, will, after a few Days Preſſure, become too painful for a long Continuance. In ſome few compound and oblique Fractures, indeed, there is a Kind of Neceſſity for a perpetual Extenſion, (*See Not. Pag.* 5.) where the above-mentioned Inconveniencies are in ſome Meaſure obviated.

The principal Deſign of the Conductor is for conveying a fractured Leg with Security.

And the Splints for ſetting and retaining it till cured.

Both which Offices they do moſt effectually and completely anſwer, and fill up two capital *Deſiderata* in the Practice of Surgery.

Devonſhire-ſquare,
Aug. 20, 1767.

PART

PART I.

THE

CONDUCTOR.

FRACTURES of the larger Bones in the human Body, are frequently attended with ſevere, and ſometimes fatal Conſequences.

But as the Leg of all other Members is moſt commonly expoſed to, and ſuffers the greateſt Injuries from Accidents of this Kind; ſo many and various are the Machines and Contrivances which at different Times have been invented and applied in ſuch Caſes, with conſiderable Succeſs.

Thoſe of the ingenious Mr. *Petit*, and of our Countryman Mr. *Gooch* of *Norwich*, are, I believe, the beſt and moſt uſeful of any yet known: They are however greatly deficient in ſome neceſſary and capital Points of Utility.

My preſent Intention is to ſupply the Deficiencies of theſe, and indeed of all others hitherto recommended, or received into Practice.

This Deſign may be reduced into two Heads. The eaſy and ſafe Conveyance of the Patient from the Place wherever the Accident may happen, to his being placed in Bed for the neceſſary Time of his Cure.

And next the Preſervation of the fractured Bones in their natural Poſition, until that Cure be perfectly accompliſhed.

In both which I would be underſtood to mean, not only all ſimple, but alſo compound Fractures to a certain Degree.

The firſt Intention may be accompliſhed by the CONDUCTOR, ſo called from its Uſe and ſafe Purpoſe of Conveyance; the ſecond by SPLINTS or SIDE PIECES: In which the fractured Limb may be compleatly received, and lodged till the Cure is performed.

It ſhould be obſerved, that very few Writers have conſidered the Neceſſity of ſuch an Aſſiſtant Inſtrument as the CONDUCTOR; at leaſt they have not produced any one compleatly qualified for the needful and ſafe Conveyance of the Patient, in that critical Time of Danger.

The Machines which have beſt ſucceeded, are deſtined merely to Setting and Retention, and can be applied only after the Patient is placed in Bed; ſo that, however judiciouſly conſtructed

conſtructed in thoſe Reſpects, they cannot prevent many of the Evils attendant on Fractures of the Leg which were already produced, antecedent to their Application: And farther, the Patient is very often unhappily deprived for a conſiderable Time, of receiving any Service from them †, as will evidently appear by attending to the following Circumſtances.

When a Fracture happens to the Leg, ſo that both Bones are broken, the inferior Part becomes pendulous and liable to Flexions every Way. Nevertheleſs the Patient muſt be removed from the Place where the Accident happened to his own Habitation, generally up one or more Stories; or, if deſtitute and indigent, to the next adjoining Hoſpital. It is therefore impoſſible (from any Means yet known) but that in ſuch a Conveyance the Limb will be frequently and variouſly contorted, and bent; by which the Parts ſurrounding the Bones are bruiſed, pricked, and lacerated by the Extremities of the fractured Pieces; whence Pain, Swelling, Inflammation †, Convulſions, Mortifications, ariſe; and often Death itſelf, if not prevented by a ſpeedy Amputation of the Limb.

Three melancholy Inſtances of this Kind (which were lately under my Care) ſtrongly induced me to wiſh that ſomething could

† † See Note, Page 4.

be invented, which might effectually prevent the Injuries ſuſtained by ſuch a Patient in his Removal from the Place where the Accident was received, to that where he muſt remain till cured.

The Importance of ſuch a Contrivance will appear moſt evidently, if we reflect on the State of the Patient when the Hurt is firſt received; perhaps the Fracture was then merely ſimple, if ſo, the Injury is (comparatively ſpeaking) but inconſiderable. Nevertheleſs, by the uſual Methods of conveying him Home, however prudently conducted, Contuſion and Swelling * may be produced, if not a compound Fracture.

This laſt Misfortune frequently ſucceeds what was at firſt a ſimple Fracture only, when, ſhould the Leg be preſerved, the Cure will, notwithſtanding the greateſt Care and Aſſiduity, be uncertain, imperfect, unſatisfactory to the Patient, and often diſhonourable to the blameleſs Surgeon.

Though theſe Effects do not always attend every broken Leg, it is owing more to Chance than Deſign.

If the Fracture be oblique, complicated, or the Bones forced through the Skin, *&c.* the aforeſaid Injuries are proportionably aug-

* When theſe Symptoms proceed to any conſiderable Degree, every Surgeon defers the Application of ſtrait Bandage, Splints, &c. or what is called ſetting of the Limb, till they are removed.

mented

mented, and almoſt inevitably determine the immediate Loſs of the Limb to prevent that of Life *.

Such are the Conſequences of Motion to a Patient with a broken Leg. Influenced by theſe Conſiderations, which aroſe from repeated Proofs of what is above advanced, I have contrived a very ſimple Machine, which may be moſt eaſily and expeditiouſly applied as ſoon as poſſible after, or on the Spot where the Accident is received, by which the Limb may be immediately ſtraitened, and the Bones reduced and retained in their proper Place, ſo ſtrongly and firmly, as to reſiſt any Probability of being diſplaced by any Conveyance whatever.

Nor has this Aſſertion of its Utility a Foundation in Theory and Speculation only, but it is ſupported by the repeated Practice and Experience of ſeveral Surgeons of reputation, and greatly approved of by others

* If the Fracture be very oblique, and the ſubſequent Splints † found incapable of ſufficiently counteracting the contractile Force of the Muſcles, and preventing the overlopping of the Bones, the Conductor may ſtill be kept on the Limb, by which its due Length will be preſerved, with very little Inconvenience to the Patient, if the following Cautions be obſerved. Cut the Stocking off above the Malleoli, leaving the Remainder on the Foot, over which muſt be wore an eaſy high quartered Shoe buckled; which will be found ſufficient to ſecure the Heel from that Heat or Soreneſs, which would otherwiſe ariſe from a long continued Preſſure of the inferior Part of the Conductor.

† See Part II.

of

of the firſt Eminence; amongſt whom I have the Honour and Permiſſion to mention Meſſrs. *Hawkins* and *Gataker*, Surgeons to St. *George*'s Hoſpital; Mr. *Baker*, Senior Surgeon to St. *Thomas*'s, and Mr. *Warner*, Surgeon to *Guy*'s, *&c.* By the Order of the firſt of theſe Gentlemen, this Inſtrument has been uſed in St. *George*'s for many Months, with entire Satisfaction. To theſe Teſtimonials I have the Pleaſure to add that of Dr. *Hunter*, who frequently viſits the Hoſpital firſt mentioned, and who aſſures me he is thoroughly convinced of its great Importance.

Mr. *Gervais*, Houſe Surgeon to St. *George*'s, greatly eſteemed for his Induſtry and Abilities in his Profeſſion, was the Perſon appointed to make Trial of this Inſtrument; who ſays, the Patients felt ſo much Eaſe the Moment it was put on, that they uſually expreſſed it by deſiring to walk, declaring they were perfectly free from Pain; in which State, notwithſtanding all ſubſequent Motions, they continued till the Inſtrument was taken off, which was after the Patient was placed in his Bed, Bleeding, Gliſter, &c. adminiſtered, and the proper Apparatus got ready for treating the Fracture agreeable to its various Circumſtances; when another important Advantage of this Inſtrument diſcovered itſelf, for as it reſtored the

Bones

Bones to their proper and natural Poſition at its firſt Application, ſo all further Extenſion was thereby rendered unneceſſary. We muſt therefore take it off from the fractured Limb with the greateſt Caution, ſo as not to diſturb or miſplace the Pieces, which are to be retained as exactly as poſſible in the ſame State till the Cure is accompliſhed by other Applications; concerning which I ſhall juſt obſerve, that the Apparatus hitherto made Uſe of for the Treatment of either ſimple or compound Fractures of the Leg, is not ſo complete as could be wiſhed: So that in Fact, a perfect and ſtrightly Cure is rather to be imputed to the Skill and Care of the Surgeon, and the favourable Circumſtances of the Fracture, than to any Perfection in the Machinery †. I ſhall only add one Obſervation more in Proof of the Utility of the Inſtrument here mentioned, derived from the ill Succeſs of Amputation after Fractures of the Leg, *viz.* That we ſhall find upon fair Enquiry, that not above one Patient in three ſurvive that Operation. I have now ſhewn, that the Cauſe by which Amputation is rendered ſo frequently neceſſary, is the Want of an Inſtrument capable of preventing the Accidents before-mentioned, and what great

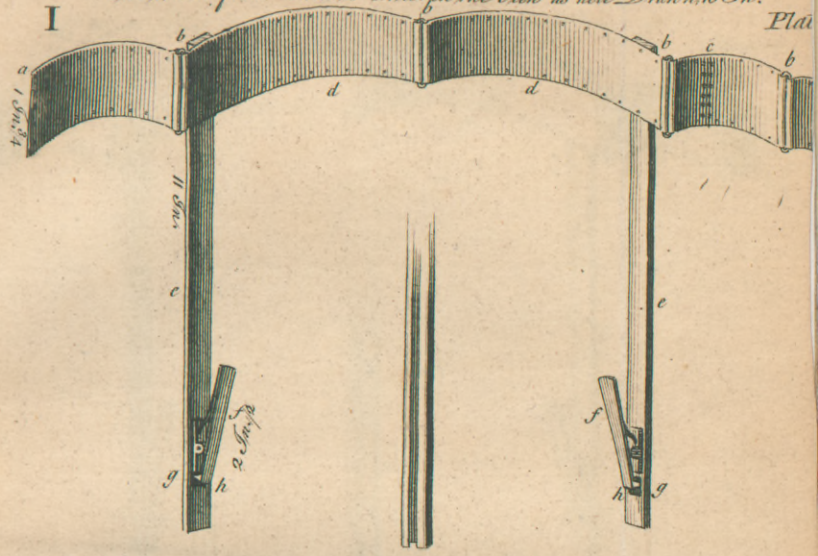
† See Part II.

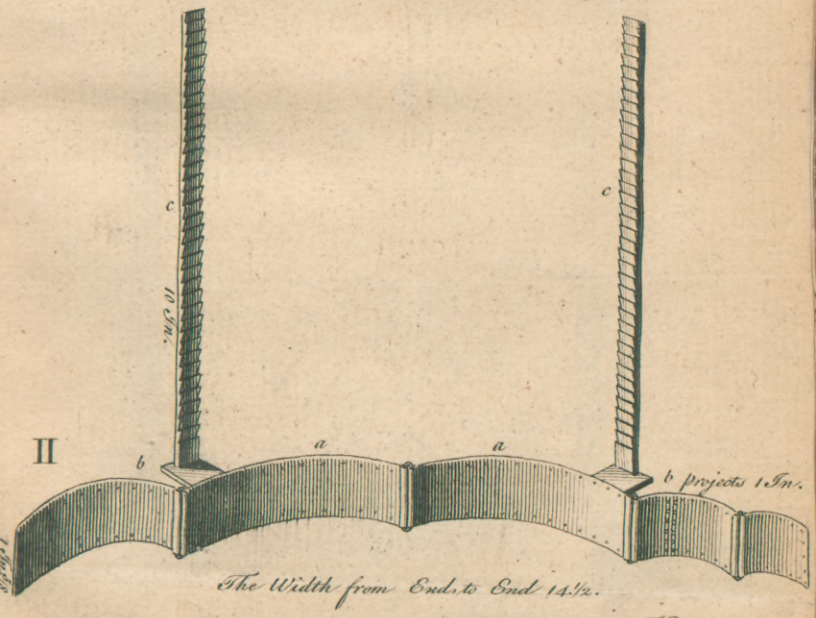
Advan-

Advantages may be derived from this which I now offer to the Public, *viz.* The Preſervation of the Limb, frequently of Life, and an Exemption from a Variety of other Evils to the Patient.

The Width from Ends to Ends in the View as here Drawn, 18 In.

I





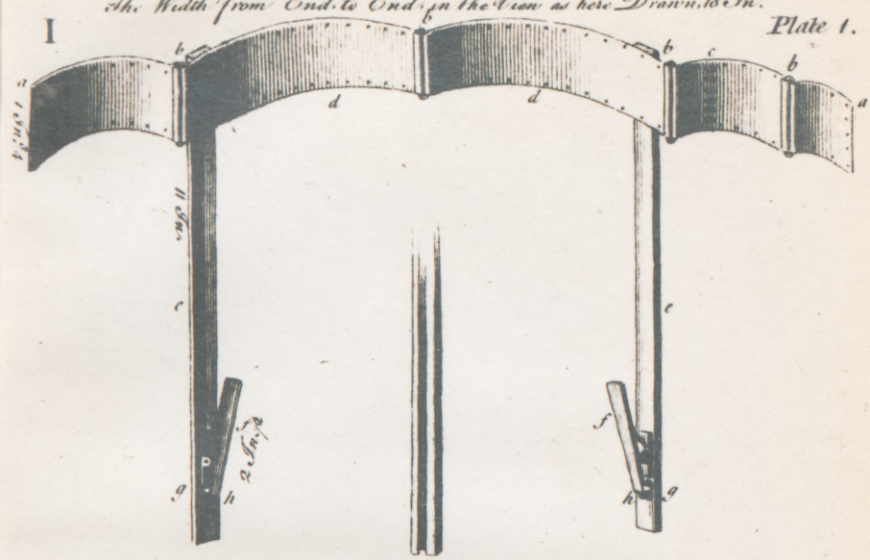
The Width from Ends to End 14½.

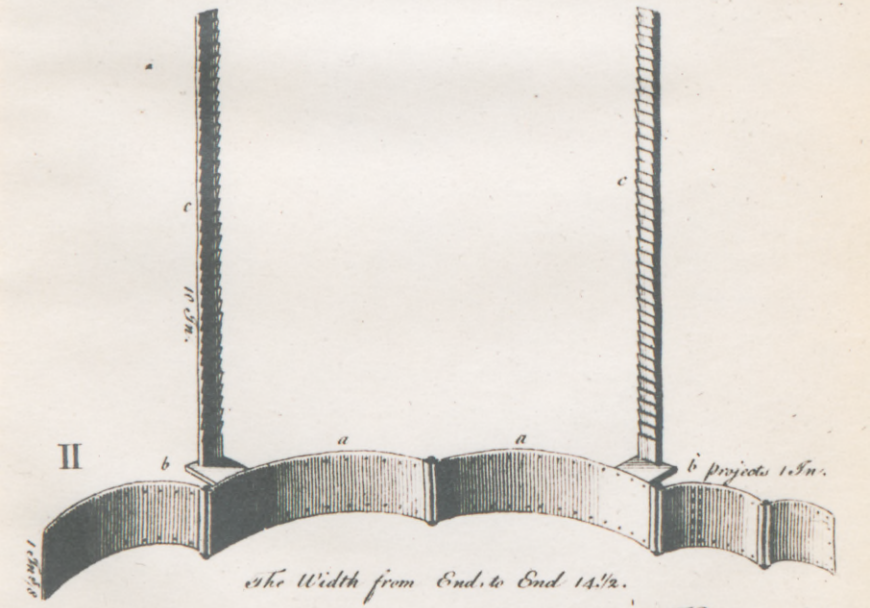
T. Bonner del. et sculp.

The Width from End to End in the View as here Drawn, 18 In.

I

Plate 1.

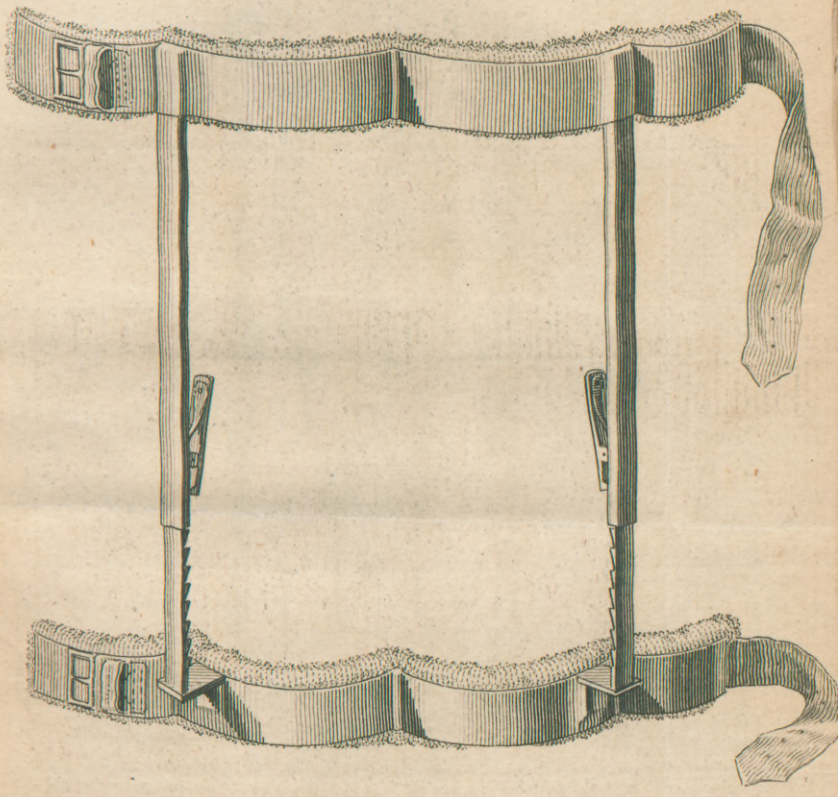




II

The Width from End to End 14 1/2.

W. Bonnor del. et sculp.



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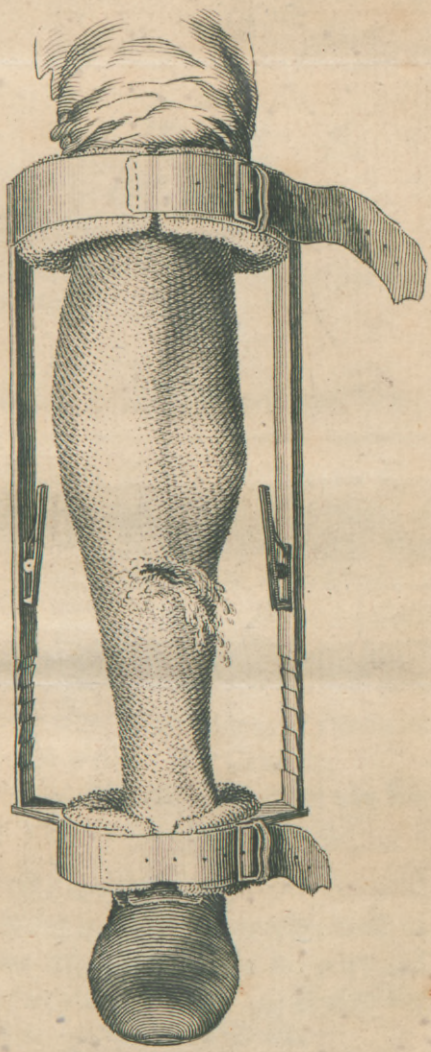

T. Bonnor del. et sculp.

EXPLANATION

OF THE

PLATES.

PLATE I.

Shewing the Skeleton of the Conductor ſeparated into two Portions.

FIGURE I.

The Knee Band *a* made of Tin a little bent, divided by four Joints *b*, that it may fit any Limb great or ſmall. Holes *c* for fixing the Buckle and Strap. Others *d* round each Margin for ſewing on the Padding. Two Tin Canulas *e* grooved on the Outſide, and furniſhed on the Inſide with Braſs Springs *f* and Catches *g*; ſmall Holes *h*, through which the Catches paſs to meet the Serræ of the upright Portions when they are within the Canulæ.

The Figure in the Middle repreſents the Inſide of the Tube with the Groove.

FIGURE II.

The Ancle Band *a* leſs, but conſtructed as the former; Shoulders *b*, to ſupport and render the ſerrated Portions parallel to the grooved Canulas, both of Braſs.

By compreſſing the Springs, the Catches are raiſed, and admit the whole Length of the upright ſerrated Portions within the Ca-

nulæ, reducing the Inſtrument to near half its Length; from whence by the Diſpoſition of the Catches and Serræ, they are retracted without any Difficulty; but cannot be returned the ſame Way, unleſs the Catches are elevated by compreſſing the Springs; ſo that when the Conductor is applied to the Leg, whatever Extenſion be given, is by that Means ſecured to it with the greateſt Certainty, though alterable with the greateſt Eaſe.

PLATE II.

The ſame Inſtrument covered with Leather, that it may ſit eaſy on the Limb.

PLATE III.

The Conductor applied to a compound fractured Leg, by which the Limb is fitted for Conveyance.

This Inſtrument is well conſtructed at a reaſonable Price, by Mr. *Maſemore, jun.* Tinman, in *Old Bethlem.*

PART II.

THE

CONTAINING SPLINTS.

Of a New CONSTRUCTION.

PART II.

THE

CONTAINING SPLINTS.

HAVING taken the Liberty of mentioning ſome Defects in the preſent Apparatus for Fractures of the Leg, I would now point out, and endeavour to remedy thoſe Deficiencies, by a new and different Kind of Machinery, which I have not only ſucceeded happily with myſelf, but ſeveral very eminent Surgeons, who have adopted them into their Practice, confirm my Opinion by their own Experience, and enable me with the ſtricteſt Truth to affirm, that they are ſuperior in Efficacy to all others yet known, for curing Fractures of the Leg.

The SPLINTS generally uſed for this Purpoſe, are made either of Paſteboard, Banbox Wood, ſplit Deal lined with Leather, or perforated Tin covered on both Sides in the ſame Manner.

The two firſt of theſe are rendered uſeleſs by any kind of Humidity, they are for that Reaſon, in ſimple, but ſtill more in compound Fractures, almoſt wholly diſcarded.

Thoſe

Thoſe of Deal (which are moſt in Eſteem) keep their Stiffneſs in Length, and are formed to embrace very completely ſuch Parts as are not only long, but at the ſame Time perfectly round; but ſince the Shape of the Bones and Muſcles of the Leg, render that Limb of a very different Form; ſo theſe cannot perfectly ſupport and retain the fractured Pieces with ſufficient Stability, unleſs the unequal Parts be moſt accurately filled up with Bolſters, *&c.* and thereby brought to a cylindrical Figure; much Art is therefore neceſſary to their due Application; and as theſe Appendages are very apt to change and ſlip from their proper Situation, a frequent Renewal of them is required; and not only ſo, but the Side Edges of the SPLINTS, preſs more on the Limb than any Part of them, cauſing a Hollowneſs through their whole Length; whence a partial, unequal, and often hurtful Compreſſion. On which Account I have for ſome Years preferred thoſe of Tin, as preſſing more adequately, though they have the ſame Inconveniencies and Diſadvantages as the former, with Reſpect to the true Shape of the Limb.

This will, I doubt not, be admitted as a true Repreſentation of the preſent Machinery for Fractures of the Leg, ſo far as it relates to the Structure and Uſe of SPLINTS; whoſe Deficiencies are too apparent to eſcape Obſervation, and too eaſily account for protuberant

tuberant Calluſes, and miſhaped Legs, which ſometimes take place even after Fractures not of the worſt Kind.

I ſhall now, agreeable to my Promiſe, attempt to mend the Faults I have obſerved by a new Species of SPLINTS, made of ſtrong thick Leather, formed in ſuch a Manner as to fit the true Shape of the Leg, receiving it on each Side as in a Mould.

That for the Outſide is longer and broader than the other, with an End Piece to ſuſtain the Foot; longer, becauſe it is needful that the whole Length of the Limb ſhould be furniſhed with ſuch a Stay and Support as may defend it from thoſe accidental or other Motion of the Muſcles, Ancle, *&c.* which might otherwiſe happen, and more or leſs diſturb and affect the Fracture; a Circumſtance unprovided for in the former Apparatus; nor does the moſt accurate Bandage afford ſufficient Security againſt this Evil. It is broader, as the muſcular Outline is larger than on the Inſide of the Leg, and made concave, ſo as to receive and adapt itſelf to the Shape of thoſe Muſcles from their Origin, almoſt to their Inſertion.

That for the Inſide is ſhorter and narrower; its anterior Portion plain, adapting itſelf to the Tibia; its poſterior concave, to receive the Bellies of the Muſcles behind that Bone; diminiſhing in Breadth as it deſcends, it ſhapes itſelf to the Inſide of the

Small

Small of the Leg, and at laſt ends in a Concavity to receive the Malleolus Internus, with a Margin to preſs againſt the Inſide of the Foot; the former or outſide Splint is furniſhed with Straps perforated at their Extremities, one below the Knee, the other above the Ancle; a third to the Margin of the Foot-piece. The Space between the two former is filled with Loops, to paſs in Straps (furniſhed with Buckles) higher or lower at Pleaſure.

The ſmaller or inſide Splint has two Pins, at correſpondent Places and Diſtances, ſo as to anſwer the two firſt mentioned fixed Straps of the greater or outer; and to which they, (*viz.*) the Straps are faſtened, when the ſhaped Pieces or Splints are applied, excepting only that the Foot-ſtrap or Stirrup is buttoned to the lowermoſt of the Pins already ſpecified: The whole Space betwixt the Pins is filled with Loops as the former, and for the ſame Reaſon: It ought to be obſerved, that the Straps, whether fixed or moveable, be made of oiled or Bridle Leather, as no other will endure Wet or Moiſture of any Kind, without ſpoiling.

Theſe Splints are (as before-mentioned) conſtructed of thick and ſtrong Leather, worked into the Shape above deſcribed, by hammering and jacking it upon Blocks, ſo moulded, as to give them that proper and neceſſary Form.

Three or four Sizes are required to fit different Legs. The Blocks may be had at the

the Carvers, and the Splints may be eaſily made by any Saddler, Jack Boot-maker, *&c.* But as they are already executed with the greateſt Perfection and Elegance, and at a very reaſonable Expence, by Mr. *Mellor*, Sadler in *Devonſhire-ſtreet*, it is needleſs to ſet others on the ſame Experiment.

By the Operation of Jacking; they are as Caps, Boots, *&c.* rendered impenetrable to almoſt any kind of Humidity, eſpecially if their Inſides be japanned or painted; a Quality of the greateſt Conſequence in compound Fractures of the Leg: On which they may be applied ſooner, and in a more early State than any others, even ſo as to preſerve in a great Meaſure, the true Shape of the Limb, when ſlackly put on over emmollient or other Topics, where needful.

I would here note another uſeful and important Advantage, afforded by theſe Splints in ſuch Caſes; where if only one be taken off at a Time in dreſſing the Wound, and the other carefully held on; the latter will be found an effectual Support to the Limb, and preſerve the fractured Pieces ſteady during the neceſſary Movements: Nay, in many Caſes where the Wound (as frequently happens) is on the anterior Part of the Leg, they need only be ſlipped a little on one Side for that Purpoſe.

I have lately ſeen ſome Splints made, as I imagine, of Glue and brown Paper, covered

with Canvas, of the ſame Shape with the above deſcribed; they are perfectly ſtiff and rigid when cold; ſoften a little by the Warmth of the Limb, but grow flabby and uſeleſs, where the Perſpiration is conſiderable, or when moiſtened by any common Embrocation; it is therefore apparent enough they cannot be depended on in ſimple, but ſtill leſs in compound Fractures of the Leg. Others are made of thin Plate Iron painted, with a Foot-piece to move and fix at Pleaſure: Thoſe I ſaw were very indifferently ſhaped; but were they executed on the very ſame Plan as thoſe I now recommend, Leather muſt certainly be not only more elegant, but more uſeful in this Caſe, than it is poſſible Iron ſhould be, for Reaſons too obvious to mention.

Theſe Splints are found capable of preſerving the Limb in its true natural Shape, with as much Eaſe to the Patient, and as little Trouble to the Surgeon, as can reaſonably be expected; for though they have ſufficient Strength and Stiffneſs, they are not ſo rigid as to impreſs the tender Parts painfully: There is a Kind of Elaſticity in Leather thus prepared, capable of yielding, accommodating itſelf a little to the Parts, and reſtoring itſelf again when the Reſiſtance is removed.

They give ſuch a Firmneſs to the broken Parts, that the Limb may be removed, and ſuffered

fered to lie inflected on either Side, or in ſuch a Manner as is moſt convenient an eaſy to the Patient; who is thereby exempted from the great Misfortune of being always confined to one particular Poſture; a moſt deſirable and happy Releaſe, which the old Apparatus would not admit of with any Degree of Safety.

The Patient may alſo be removed with great Security, much ſooner from one Bed or Houſe to another, than formerly.

It may perhaps be imagined, that theſe Splints might alſo ſerve the ſame Purpoſes as the Conductor; be applied as eaſily, and with as good Effect, as that Inſtrument, to convey the Patient from the Place of the Accident, as from one Houſe to another afterwards. To obviate ſuch a Suppoſition, it need only be conſidered, that a Patient's Cloaths, eſpecially Shoes and Stockings, are then on the fractured Member, and muſt of Neceſſity be taken off, before the Splints can be well applied; after which, not only a Surgeon, but proper Aſſiſtance is required, rightly to reduce the Fracture, and hold it in that State till theſe new-conſtructed Side Pieces are accurately fixed upon the Limb. It is plain, here are too many Things to be done, too many proper Attendants neceſſary to do them, and too much Time required for their due Application, to an Accident, perhaps in the Street, amidſt a Concourſe of People; or in the

the Country, where little or no Aſſiſtance is to be had; whereas the Conductor is eaſily and inſtantly applied, without taking off the Cloaths, Shoes, Stockings, &c. by almoſt any one that ever ſaw it, pulling the Limb ſtrait, and fixing it at the ſame Time ſo ſteady, as to fit it for Conveyance in the ſhorteſt Time imaginable to his Abode, where it ſhould be taken off, with the Caution already obſerved, and the Splints applied with the greateſt Care and Accuracy.

The Offices then of theſe two Apparatuſes are very properly diſtinct; yet at the ſame Time are both of the utmoſt Importance in Fractures of the Leg.

Although I have confined myſelf to a fractured Leg in this ſmall Tract, I cannot omit the preſent Occaſion of recommending Splints of the ſame Kind and Structure, in Fractures of ſome other Parts, eſpecially where the Patient is muſcular, as in the Arm and Fore-arm, &c. for the ſame Reaſon as in the Leg. But no Bone requires them more than the Clavicle, whoſe crooked Shape renders the Cure of it, when fractured, generally very imperfect and inelegant for Want of ſuch a Contrivance.

FINIS.