

(No Model.)

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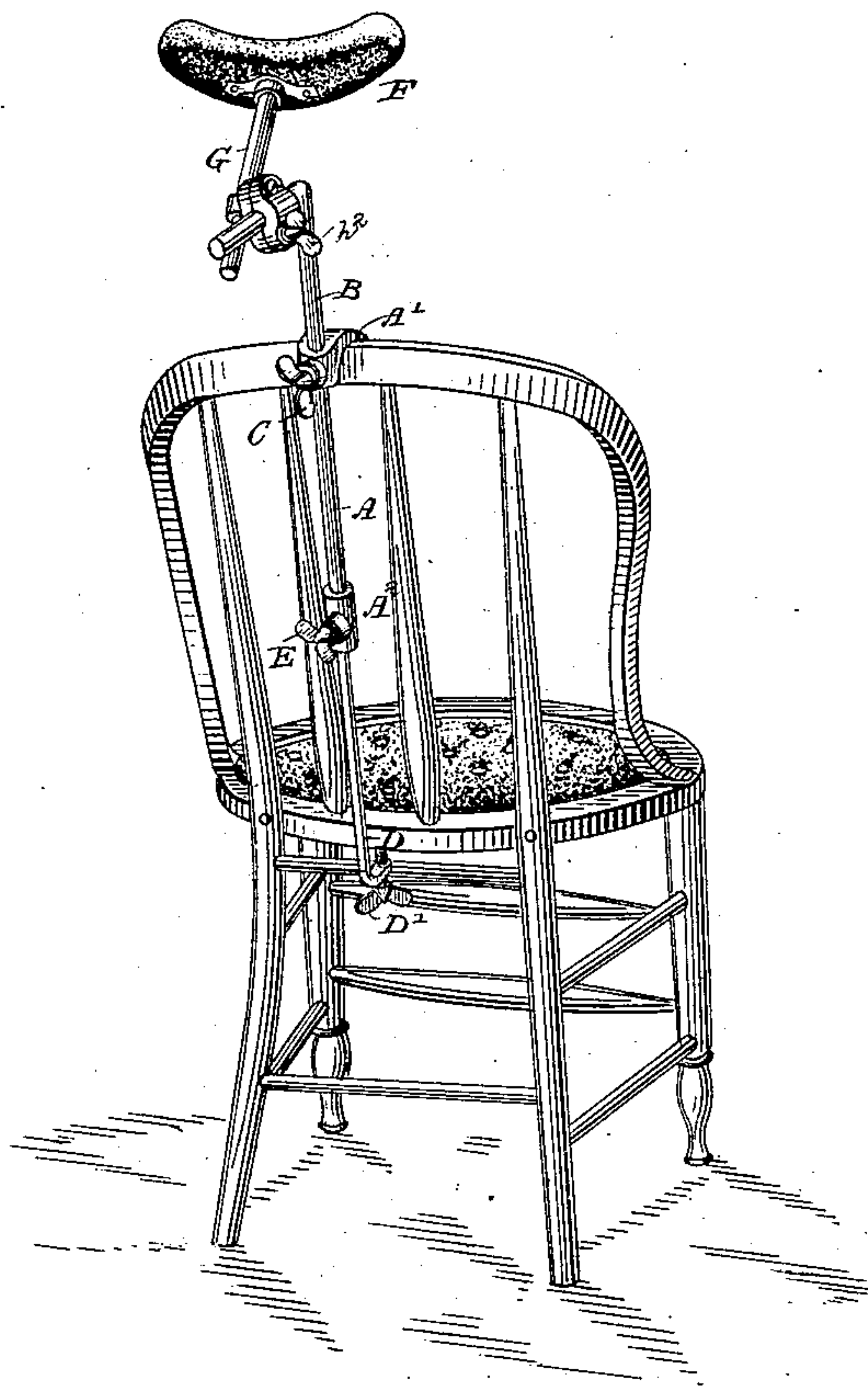
E. T. STARR & L. TEAL.

HEAD REST FOR CHAIRS.

No. 313,781.

Patented Mar. 10, 1885.

Fig. 1.



WITNESSES

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INVENTORS,

Eli T. Starr.
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By their Attorneys

Baldwin, Hopkins & Peyton

(No Model.)

2 Sheets—Sheet 2.

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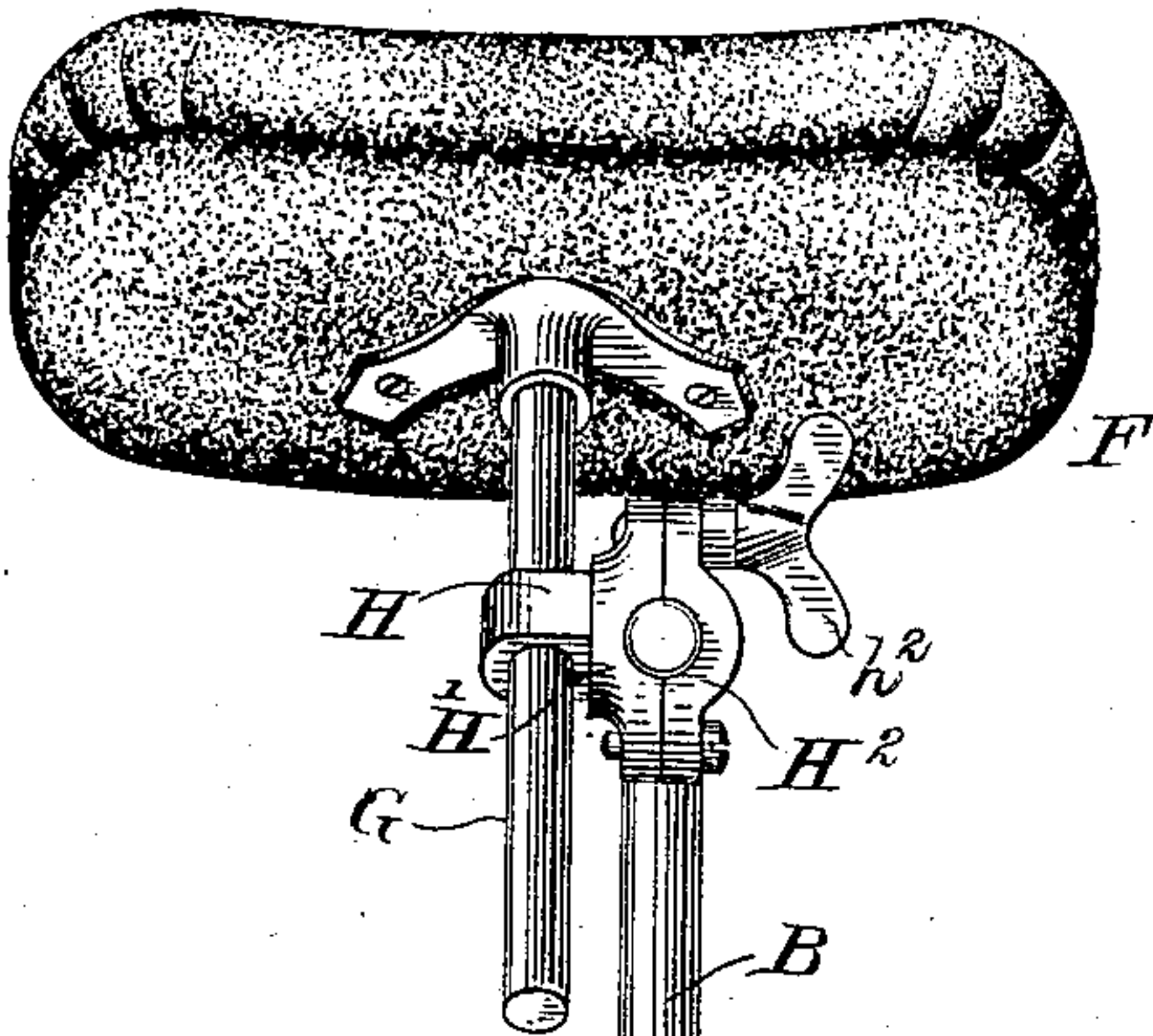


Fig. 2.

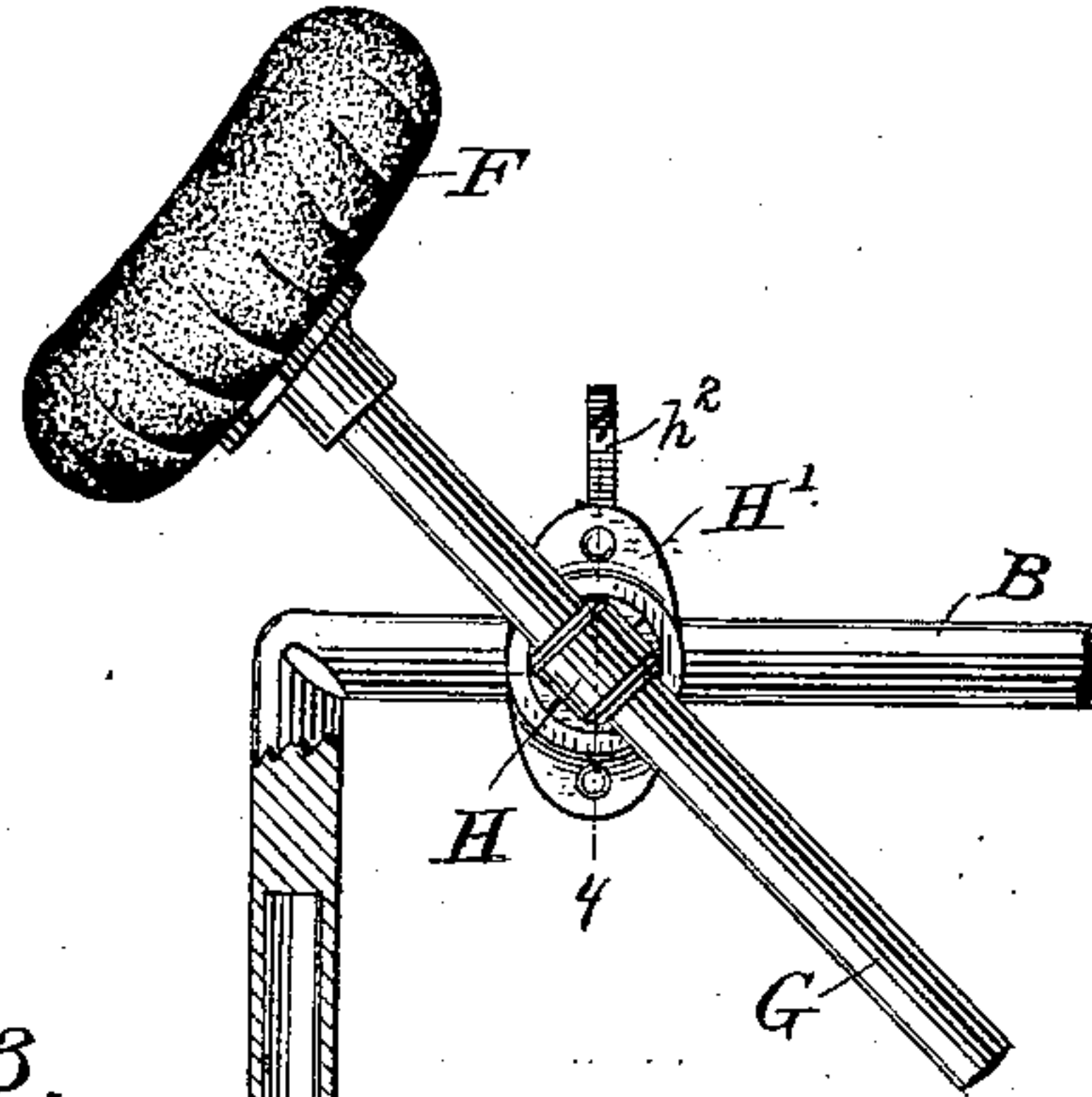


Fig. 3.

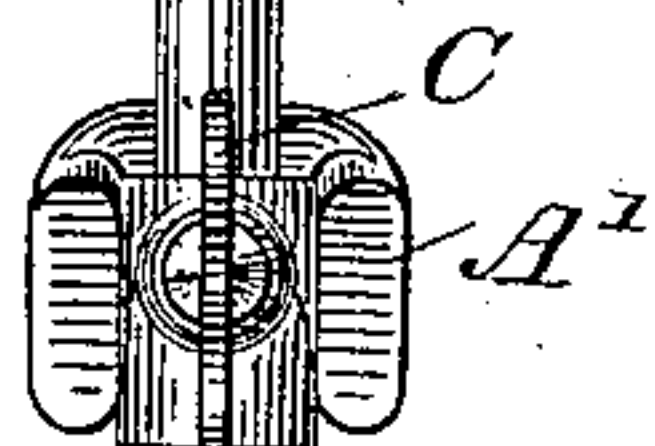
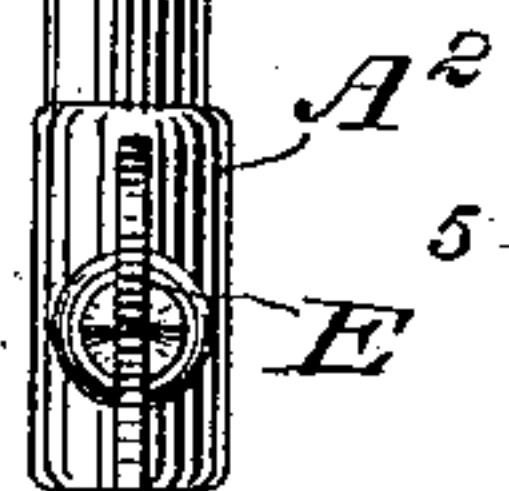


Fig. 4.

A



A^2

E

5

H

h^2

H^1

h

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H

h^2

H^1

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h^2

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UNITED STATES PATENT OFFICE.

ELI T. STARR AND LEVI TEAL, OF PHILADELPHIA, PA., ASSIGNORS TO THE
S. S. WHITE DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

HEAD-REST FOR CHAIRS.

SPECIFICATION forming part of Letters Patent No. 313,781, dated March 10, 1885.

Application filed October 31, 1883. (No model.)

To all whom it may concern:

Be it known that we, ELI T. STARR and LEVI TEAL, both of the city and county of Philadelphia, in the State of Pennsylvania, have jointly invented certain new and useful Improvements in Head-Rests for Chairs, of which the following is a specification.

Our invention relates more especially to portable head-rests for chairs for the use of dentists.

The principal object of our invention is to provide an improved portable head-rest which may be readily attached to an ordinary chair-back, is capable of a wide range of adjustment to fit chairs of different sizes, and when properly attached to the chair is firmly connected thereto without liability to slip or move out of place. All this with a simple and economical construction and with the capability in the head-rest pad of being adjusted to support the head of the patient in the desired position with ease and firmness.

The subject-matter claimed is first fully described in detail, and is then particularly pointed out at the close of the specification.

Some of our improvements may be used without the others.

In the accompanying drawings, which represent our improvements as embodied in the best way now known to us, Figure 1 is a view of the rear of an ordinary chair having our improved portable head-rest applied thereto. Fig. 2 is a rear view of the improved head-rest. Fig. 3 is a partial elevation of and a partial vertical section through said head-rest. Fig. 4 is a section through the universal clamp-connection which couples the rod carrying the head-rest pad with the upper bent end of the sliding head-rest bar constituting part of the head-rest devices; and Fig. 5 is a view of the split clamp of said clamp-connection detached.

A tubular rod, A, is fitted at its upper end with a hook-frame, A', and at its lower end with a clamp-frame, A². The rod A and frames A' A² are preferably connected together by screw-threads for ease in construction and fitting of the parts. A tubular head-rest bar, B, is fitted to slide endwise or vertically in the upper end of the tubular rod A and through the hook-frame A', the latter being provided

with a vertical opening in continuation of the bore of the rod A. Said head-rest bar B may be locked at any point desired in its range of movement in the rod A by means of a clamp-screw, C, fitted to turn in threads in the hook-frame A', and bearing at its inner end against a shoe, c, fitted to bear against the side of said head-rest bar and bind it in the rod A when said clamp-screw C is tightened or screwed inwardly in the clamp-frame. When said clamp-screw is loosened, it will be obvious that the head-rest bar B may be freely adjusted and be again locked upon the tightening of the clamp. A rod, D, is fitted to slide endwise or vertically in the lower end of the tubular rod A and through the clamp-frame A², which is provided with a vertical opening for the purpose. Said rod D, by means of a clamp-screw, E, and shoe e, fitted to the inner end thereof, may be firmly clamped in the clamp-frame A² by simply tightening said clamp-screw E. When said screw is loosened, the rod D may be adjusted freely endwise in the clamp-frame A² and rod A. The lower end of the said adjustable rod D is bent, for instance, at a right angle to the length of the rod, and is for the purpose of fitting under the seat-frame of the chair when the head-rest is applied thereto. Said bent end of the rod D is fitted with a vertically-adjustable set-screw, D', which, when the bent end of the rod is placed under the seat-frame of the chair and the hook of the hooked frame A' is placed over the upper end of the back of the chair, as shown in Fig. 1, is tightened or screwed up so as to firmly clamp the head-rest of the chair. The end of this set-screw D' is of peculiar construction in order to bite into or take such a firm hold of the seat-frame of the chair as to preclude all possible movement, shifting, or derangement of the head-rest when once properly applied to the chair-back and clamped thereon. The end of the screw is provided with a central projecting point to be forced into the wooden seat-frame of the chair, while said projecting point is surrounded by an annular depression or groove which receives the portion of the seat-frame crowded outward by the entrance into it of the projecting point. By this construction the bite or hold of the end of the

screw upon the wooden frame is firm and unyielding as long as the set-screw remains tightened up against the seat-frame.

From the above description it will be seen that the central rod, A, is fitted at its upper and lower ends with adjustable extension rods or bars, the upper one, B, being readily adjustable to vary the elevation of the head-rest pad when the head-rest devices are attached to the chair, while the lower rod, D, is readily adjustable to enable the device to be applied to any chair of ordinary size, and to be adjusted to fit any particular chair which it may be desired to convert into an operating-chair. The range of adjustment of the rod D enables the head-rest devices to be attached to almost any chair which may be at hand and suitable for use as an operating-chair.

By constructing the main rod A and head-rest bar B in tubular form great strength is secured with comparative lightness of the parts, while a compact organization is also obtained. The upper end of the head-rest bar B is bent, for instance, at a right angle, or substantially so, as usual, and carries the head-rest pad F. In order to render said pad adjustable so as to be placed in the desired position to support the head of the patient with ease and firmness to the best advantage, and to facilitate the operations to be performed, we mount said pad as usual upon the end of a cylindrical rod, G, and connect said rod G with the bent end of the head-rest bar B by means of a universal clamp-connection, whereby the pad may be adjusted backward and forward and turned horizontally relatively to the clamp-connection by means of said rod G, while the pad is given other adjustments by means of the rocking capacity in the clamp-connection and of the capacity in said clamp of being adjusted backward and forward and turned around the cylindrical bent end of the head-rest bar, which, as before described, has itself a wide range of vertical adjustment.

Any clamp-connection may be used in place of the one particularly shown and described which will afford the necessary or desired adjustments of the head-rest pad.

We prefer the rocking clamp-connection shown in the drawings for its simplicity and the ease with which it may be operated and for its firmness in action. Said clamp-connection consists of a split clamp-block, H, having a cone end or surface, h , and a socket or eye, h' , for the passage of the cylindrical rod F. Said cone end h of the split clamp-block H fits a corresponding seat in a plate, H' , united loosely at one end to a second plate, H^2 ,

and at the other end to said plate H^2 by a clamp-screw, h^2 , whereby said clamp-block has the capacity of being turned or rocked in the clamp-plate H' and of being firmly clamped upon the rod G by tightening said clamp-screw h^2 , which action causes the plates H' H^2 to be clamped together, and the split clamp-block to be contracted so as to take hold of the rod G of the head-rest pad, the block itself being also rigidly locked between said clamp-plates H' H^2 .

The entire clamp-connection, when the clamp-screw h^2 is tightened, is firmly clamped upon the bent end of the head-rest bar B, which the clamp-connection fits, by having a socket or eye formed between the plates H' H^2 . The tightening of the clamp-screw h^2 clamps the two plates H' H^2 upon the head-rest bar, and at the same time closes the members or jaws of the split clamp-block H tightly upon the rod G, and also locks the clamp-block firmly from turning in said plates H' H^2 , as above described.

The described universal clamp-connection between the head-rest pad and the head-rest bar being the invention of Thomas J. Carrick, of Baltimore, Maryland, and heretofore patented to him, is not claimed by us herein.

What we do claim herein, however, as our invention is—

1. The clamp or set screw of the portable head-rest having a central projecting point and a surrounding depression or groove, whereby a firm bite or hold of the screw is effected, substantially as described.

2. The combination of the tubular rod provided with the hook-frame at one end and the clamp-frame at the other, the tubular head-rest bar fitted to move endwise in the upper end of said tubular rod and be clamped by a clamp-screw carried by said rod, and an adjustable rod fitted to slide in the lower end of said tubular rod and be clamped therein by a clamp-screw at the lower end of said tubular rod, substantially as described, whereby the head-rest may be firmly attached to the chair-back and the head-rest pad be elevated or lowered, and this with a simple, compact, and strong arrangement of parts affording a wide range of adjustment.

In testimony whereof we have hereunto subscribed our names this 30th day of October, A. D. 1883.

ELI T. STARR.
LEVI TEAL.

Witnesses:

JOHN URIAN,
P. GEO. VINSON, Jr.