

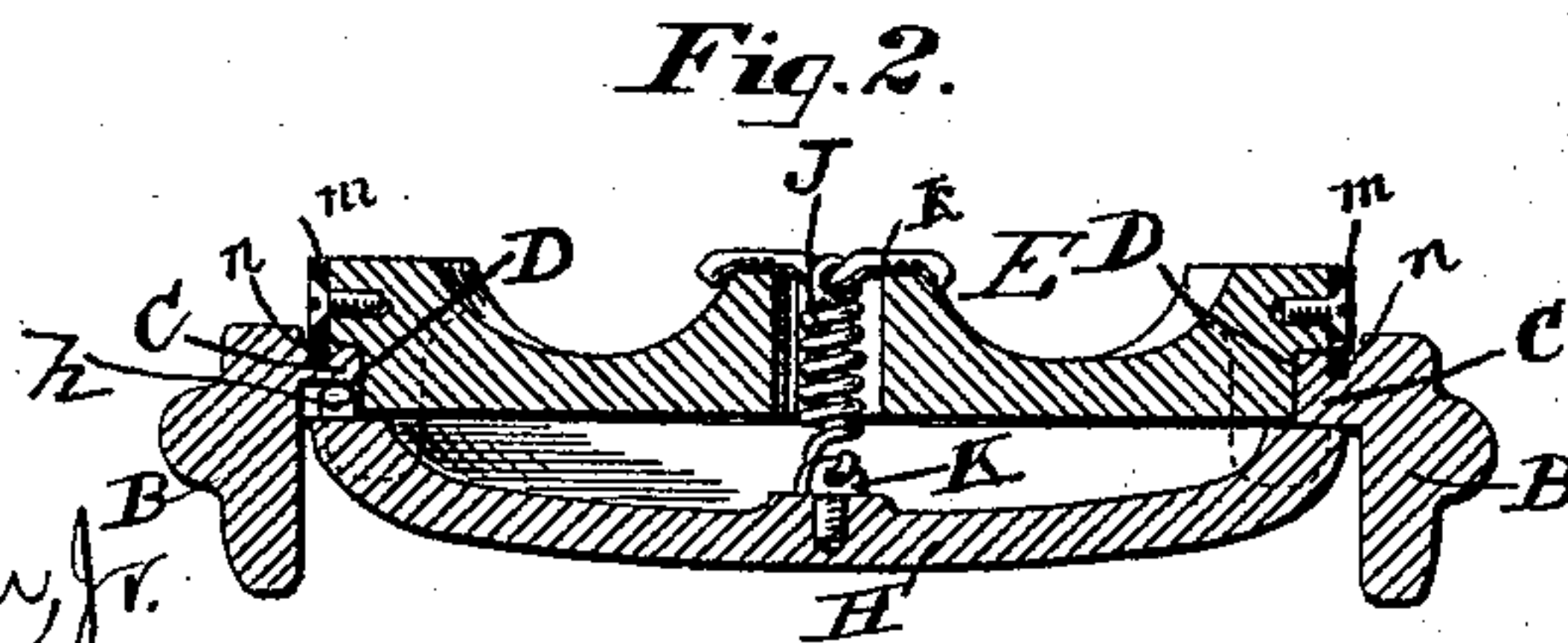
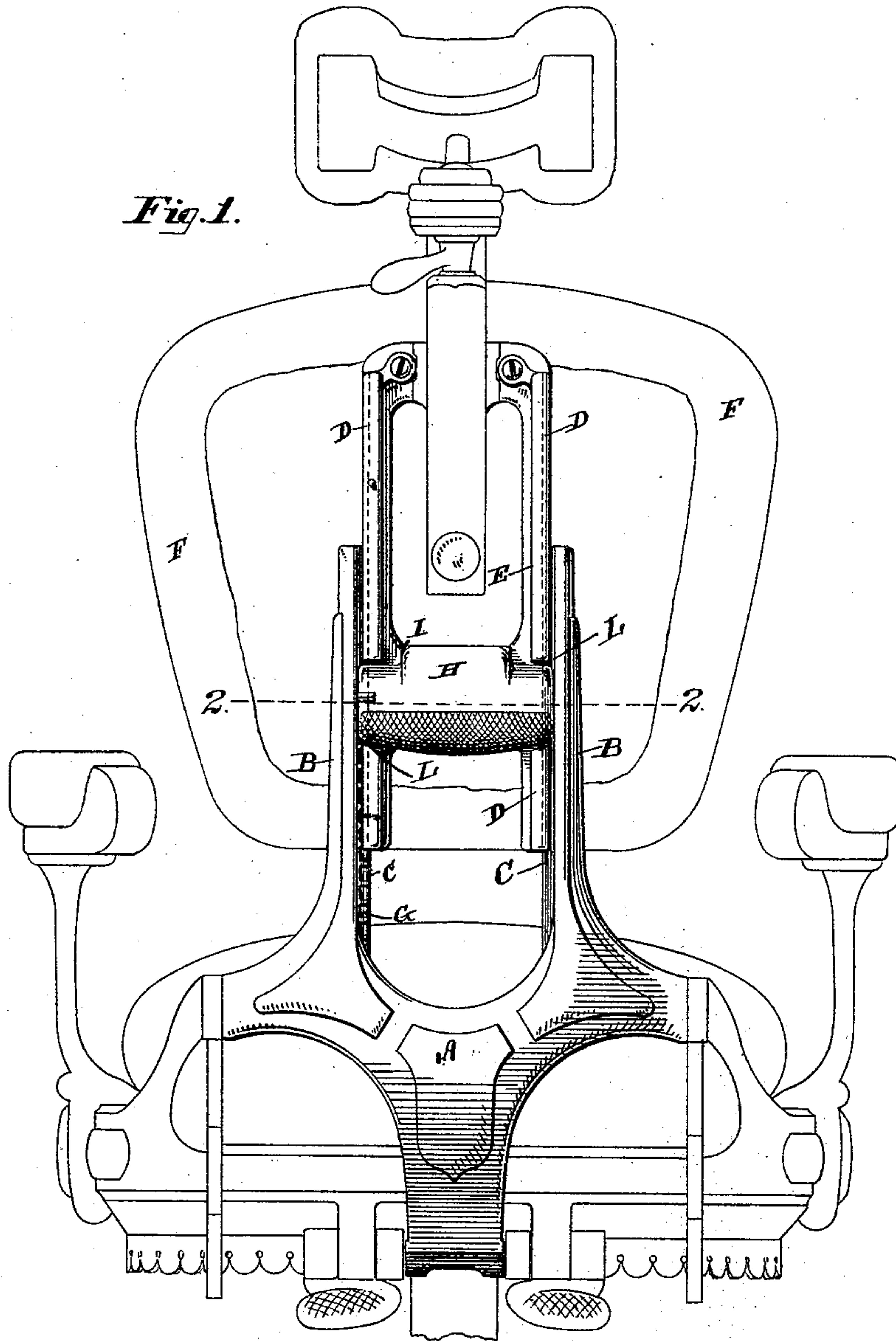
(No Model.)

2 Sheets—Sheet 1.

W. H. GILBERT.
DENTAL CHAIR.

No. 478,589.

Patented July 12, 1892.



Witnesses:
Edw. F. Simpson, Jr.
Wm. H. Gilbert

Inventor

W. H. Gilbert
By *[Signature]*
J. P. Peyton.

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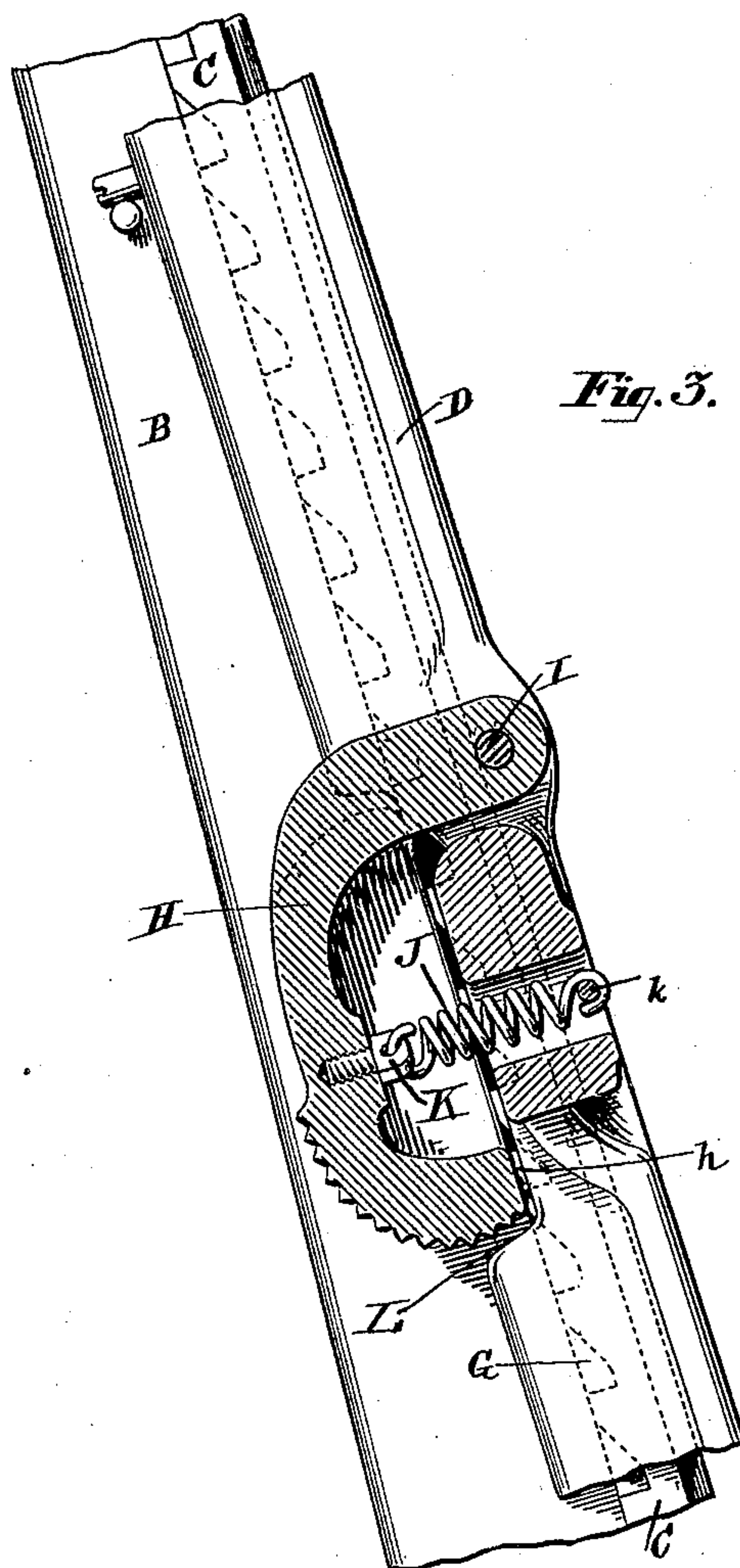
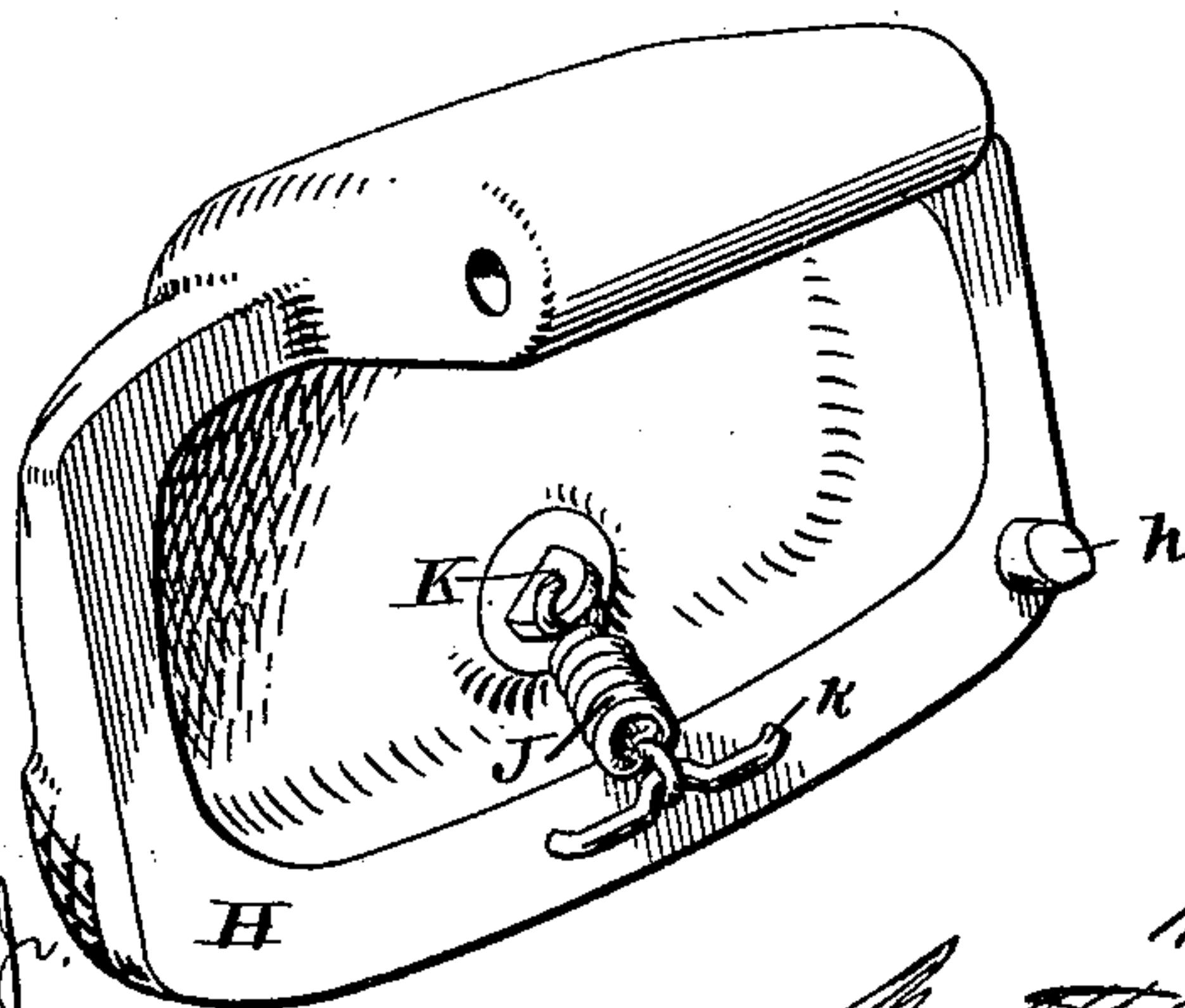


Fig. 4.



WITNESSES:

Edw. F. Simpson, Jr.
Wm. W. Northrop

INVENTOR

W. H. Gilbert
By Atty. J. H. Taylor

UNITED STATES PATENT OFFICE.

WILLIAM H. GILBERT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
S. S. WHITE DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

DENTAL CHAIR.

SPECIFICATION forming part of Letters Patent No. 478,589, dated July 12, 1892.

Application filed March 24, 1890. Serial No. 345,094. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GILBERT, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Dental Chairs, of which the following is a specification.

My invention relates to improvements, as hereinafter claimed, in chairs of the class which are provided with back-pads vertically adjustable independently of the seats thereof; and my object is to provide means by which a chair-back pad may quickly be raised or lowered without altering the position of the seat and firmly held in its adjusted position, while securing a strong, simple, and durable construction of parts.

In the accompanying drawings, Figure 1 is a view in rear elevation showing all parts of a dental chair which it is necessary to illustrate in order to exhibit a suitable embodiment of my invention. Fig. 2 is a horizontal section, on an enlarged scale, on the line 2 of Fig. 1. Fig. 3 is a side elevation, with parts in section, on a considerably enlarged scale, showing details of construction; and Fig. 4 shows in perspective the pawl-carrier and lifting-handle of the back-pad carrier detached.

The back-frame A of the chair has upwardly-extending sides B B, having inwardly-projecting guide-ribs C C for engagement with grooves D D at opposite sides of a vertically-adjustable back-pad carrier E. The frame F of the back-pad is secured in usual way to this carrier. Recesses of ratchet-tooth shape, to constitute a detent-rack G, are formed in the rear surface of one of the guide-ribs C of the back-frame; or, if preferred, each of the ribs may be provided with a detent-rack G. A pawl-carrier H, which also serves as a handle for raising and lowering the back-pad carrier, is provided with a pawl h for engagement with the detent-racks. Two such pawls would be provided were there two detent-racks. This pawl-carrier and lifting-handle H is jointed to the back-pad carrier by a pivot I, so as to be capable of a vertical rocking or swinging movement. A spring J, connecting the pawl-carrier and the back-pad carrier, acts with a tendency to maintain the pawl-carrier in its normal position—that is, with the pawl engaging the de-

tent-rack and locking the back-pad carrier against movement. The spring, as shown, is fastened at one end to an eyebolt K, screwed into the pawl-carrier, and is engaged at its opposite end with the back-pad carrier, after being passed through an opening in a cross-piece thereof, by means of a cross-head *l*, formed by a bent rod, to the center of which the spring is secured. To enable the pawl to be moved into operative position, the sides of the back-pad carrier are cut away or recessed, as at L, from their rear surfaces to their guide-grooves, thus permitting the pawl-carrier to come in contact with the guide-ribs of the back-frame, while the pawl engages a recess of the detent-rack.

From the above description it will be seen that in raising and lowering the back-pad the hand may be inserted between the opposite sides of the back-pad carrier below the spring-engaged cross-bar thereof and beneath the pawl-carrier to grasp and swing it upon its pivot to throw the pawl out of engagement with the detent-rack, after which the pawl-carrier serves as a handle for controlling the vertical movement of the back-pad carrier. Upon releasing the pawl-carrier the pawl becomes engaged with its detent-rack to secure the back-pad in its position of adjustment. As will readily be understood, the back-pad carrier may be grasped and lifted without catching hold of the pawl-carrier, the pawl sliding over the detent-rack when the back-pad carrier is being so lifted.

To brace and prevent the spreading apart of the sides B B of the back-frame, I provide the back-pad carrier with ribs or flanges *m m* at its opposite sides. These ribs extend vertically or lengthwise of the carrier and project slightly rearward from the front walls of the grooves D D therein, so as to engage grooves *n n*, formed in the front surfaces of the ribs C C of the back-frame at right angles with the grooves in the back-pad carrier, in which the ribs C C engage. In this way, as will readily be understood, the back-frame is in an economical way securely braced against the spreading apart or opening out of its sides.

The ribs *m m* are shown as secured to the back-pad carrier by screws; but, as is obvious, they may readily be cast with the carrier; and

as my invention may in other respects be modified to some extent—as, for instance, by omitting the pawl-carrying spring and depending upon gravity to engage the pawl with its
5 detent-rack—I do not wish to be understood as limiting myself to the precise construction and arrangement of parts herein described in detail.

I claim as my invention—

10 The combination of the chair-back frame provided with the detent-rack extending lengthwise thereof, the vertically-adjustable

back-pad carrier having guideway connection with the back-frame, and the combined pivoted adjusting-handle and pawl-carrier of the 15 back-pad carrier, the pawl of which engages with the detent-rack, substantially as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM H. GILBERT.

Witnesses:

J. A. B. WILLIAMS,
ELI L. STARR.