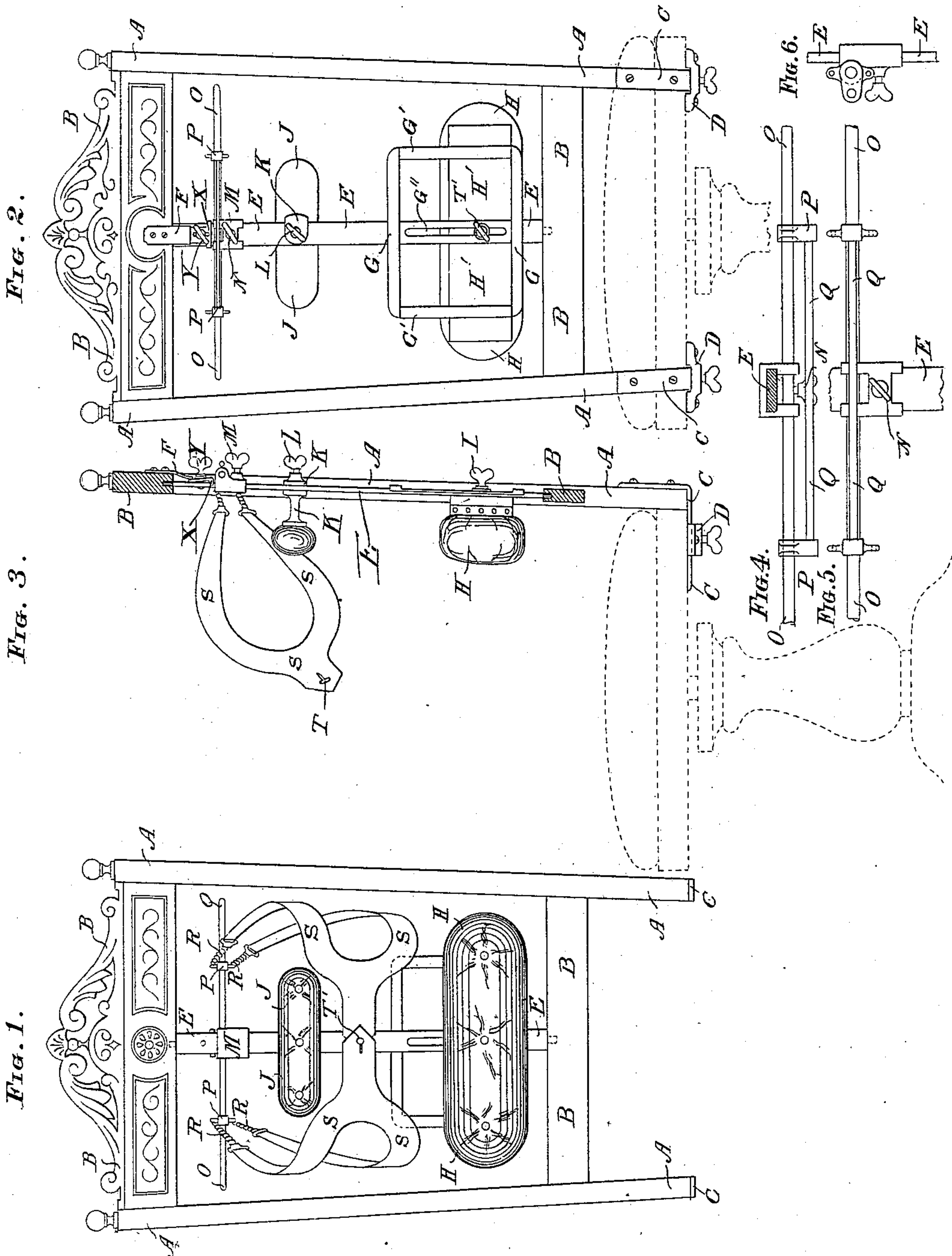


(No Model.)

L. HARVEY & J. AMOS.
SHOULDER AND BACK BRACING CHAIR.

No. 567,096.

Patented Sept. 1, 1896.



WITNESSES:

Frank Van Vels
H. B. Lewis

INVENTORS.

Leopoldina Harvey
BY Jacob Amos
St. John Day.
~~ATTORNEY.~~

UNITED STATES PATENT OFFICE.

LEOPOLDINA HARVEY AND JACOB AMOS, OF LOS ANGELES, CALIFORNIA.

SHOULDER AND BACK BRACING CHAIR.

SPECIFICATION forming part of Letters Patent No. 567,096, dated September 1, 1896.

Application filed August 9, 1894. Serial No. 519,811. (No model.)

To all whom it may concern:

Be it known that we, LEOPOLDINA HARVEY and JACOB AMOS, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Shoulder and Back Bracing Chairs, of which the following is a full, clear, and exact specification.

Our invention relates to certain improvements in chairs provided with shoulder-bracing appliances, secured to certain movable parts, held in and supported by the back of said chairs, the said movable parts also carrying a vertically adjustable shoulder-cushion, and also another vertically adjustable cushion at the lower part of the movable portions of said back, so as to raise or lower the cushion last referred to to correspond with and support the "small of the back" of the person sitting or to sit in it.

Our improvements are especially applicable to piano-stools, type-writers' chairs, and may also be fitted into carriages or other supporting or carrying apparatus used for treating idiots and insane persons when it is desired to have them sit in an upright position.

Our improvements may also be applied to seats in schools and other places where pupils and other persons are sedentarily employed in order to hold such persons in upright positions.

The accompanying drawings illustrate our invention.

Figure 1 is a front elevation of the back of the chair fitted with our aforesaid improvements. Fig. 2 is an elevation of the same parts of the chair, looking at it from the rear. Fig. 3 is an end elevation, showing the top and bottom rails in section, corresponding with Figs. 1 and 2. Fig. 4 is a horizontal view on a larger scale than Figs. 1, 2, and 3, showing the top sliding bar and connections for carrying the adjustable shoulder-bracing parts of our invention. Fig. 5 is an elevation looking at the rear of the parts represented in Fig. 4 and on the same scale as Fig. 4. Fig. 6 is an end elevation corresponding with Fig. 5.

In Figs. 1, 2, and 3 the parts constituting the sides of the chair-back are marked A,

and the upper and lower rails or cross-bars are marked B.

The two side pieces A and the upper and lower rails B constitute the entire stationary or fixed framework constituting the back of the chair, and this may be fitted to a music-stool, as shown in dotted lines at Figs. 2 and 3, by means of brackets or arms C, the horizontal parts of which slip into the cramps D, fixed to the under part of the music-stool, as shown.

From the example shown as Figs. 2 and 3 of the mode of applying our improved shoulder and back bracing chair-back to a music-stool it will readily be seen how the same is, can, or may be applied to a type-writer's chair or to a carriage or other seat wherein it is desired to give support to the shoulders or back of the person or persons occupying the same. At the central part of this chair-back there is provided the shaft E, its pivots being held in and by the upper and lower rails B and B, respectively. The shaft E is by preference formed flat, as shown in the drawings, and in its normal position the flat front and back thereof correspond with the plane of the chair-back, in which position it is maintained by the pressure of the spring F, Figs. 2 and 3, attached to the back of the chair by screws, as shown. The pressure of the flat spring F against the flat shaft E may be varied as required by sliding the plate X between the spring F and the flat shaft E and fastening the plate X in any required position by means of the thumb-screw Y. When the shaft E has moved upon its axis into an abnormal position, the pressure of the flat spring F against the flat face of the shaft causes the shaft and the parts carried by it to return to their normal positions. At the lower part of the shaft E the rectangular frame G is carried, being firmly fixed thereto.

The two side bars G' of the frame G constitute the slides, over or upon which grooves in the rectangular back H' of the cushion H fit, so as to admit of the cushion H being slid upward or downward upon the frame G and G'.

The bar E is formed at its lower part, where the frame G G' is situated, with a slot G. Through this slot the thumb-screw I passes, and by tightening the thumb-screw into the

back H' of the cushion H the cushion H is fixed in any vertical position required.

The shoulder-cushion is marked J, and it is carried upon a bracket K, (shown more particularly in Fig. 3,) provided with a thumb-screw L, passing through the back part of the bracket K. By loosening the thumb-screw L the cushion J can be removed altogether from the shaft E, or by tightening the thumb-screw L the cushion J is fixed at any required height on the shaft E, corresponding to the figure of the person to be braced and supported in the chair or other seat to which our invention is applied. A sliding bracket M is attached to the upper part of the shaft E, and is provided with a thumb-screw N at the back thereof, whereby it is tightened at any required height upon the shaft E. To this bracket M there is attached a horizontal bar O, and upon this bar O there are a pair of sliding blocks P, connected together by the bar Q. These blocks P, together with the connecting-bar Q, are capable of sliding horizontally to the right or left upon the bar O and are of such a length that the blocks P at either end will not pass over or become disengaged from the bar O. To these sliding blocks P are attached chains, as shown at Figs. 1 and 3, and to these chains R the shoulder-bracing straps S are connected, as seen at Figs. 1 and 3, being provided with a loop T and button T', respectively, at their extremities for the purpose of connecting the straps S at the front of the body of the occupant of the chair.

The straps S have snap-hooks attached to them in the ordinary manner, and by which snap-hooks the straps S are engaged with any one of the links of the chains R, according to the length of the shoulder-straps S from time to time required, which, as herein explained, varies, according to the size of the person occupying or about to occupy the chair. The said snap-hooks are of a size and construction corresponding to snap-hooks frequently used in harness and other constructions of leather and cordage for uniting together and disconnecting the parts from each other from time to time, as required, and, forming no part of the present invention, are not specifically shown in the annexed drawings, the constructions of such snap-hooks being common and so well understood.

It will be seen that by reason of the lower back-bracing cushion H, the shoulder-supporting cushion J, and the shoulder-bracing straps S being all connected to the shaft E they are all movable together relatively with the said shaft E, pivotally, corresponding with the movements to the right or left of the occupant of the chair, and also by virtue of the thumb-screws I, L, and N they are vertically adjustable, respectively. Each one of these supporting-pieces can be adjusted vertically and in a position corresponding to the shape and size of different persons who may require to occupy the same chair or seat.

Having now described the nature of our said invention or improvements and the manner of carrying the same into practical effect, what we consider novel and original, and therefore desire to secure to us by Letters Patent, is as follows:

1. In a shoulder and back bracing chair, the chair-back frame and its rails having pivotal bearings for the central shaft, the flat central shaft supported in said pivotal bearings at the center of the upper and lower rails of the chair-back; the flat spring pressing against one end of, and controlling the flat central shaft; the sliding plate for controlling the flat spring; the set-screw for holding the sliding plate in an adjusted position, all operated so as to cause the return of the said movable, or pivoted flat central shaft to its normal position, when the said shaft is urged from that position by the movement of the person occupying the chair, substantially as set forth.

2. The combination of the chair-back frame, the flat central shaft, the two adjustable cushions upon the flat central shaft, the pivotal bearings for the flat central shaft at the center of the upper and lower rails of the chair-back, the flat spring pressing against one end of and controlling the flat central shaft, the sliding plate for controlling the flat spring, the set-screw for holding the sliding plate in an adjusted position, all operating together so as to cause the return of the said movable or pivotal flat central shaft and the two adjustable cushions to their normal position when the said shaft is urged from that position by the movements of the person occupying the chair, substantially as set forth.

3. The combination with a chair, stool, or equivalent seat, of the apparatus, consisting of the movable chair-back; the flat central shaft pivoted in the upper and lower rail of the chair-back; the adjustable sliding cross-bar, carried horizontally at the upper part of the central shaft; the shoulder-straps and snap-hooks; the chains attached to the sliding cross-bar for engaging the snap-hooks with the shoulder-bracing straps at the upper part of the flat central shaft; the lower adjustable cushion carried at the lower part of the flat central shaft; the flat spring pressing against one end of and controlling the flat shaft; the sliding plate for controlling the flat spring; the set-screw for holding the sliding plate in an adjustable position, all operating together in and for the purposes substantially as set forth.

In testimony whereof we, the said LEOPOLDINA HARVEY and JACOB AMOS, have hereunto set our hands this 26th day of May, 1894.

LEOPOLDINA HARVEY.
JACOB AMOS.

Witnesses:

E. N. BROWN,
ST. JOHN DAY.