(No Model.)

W. S. LISCOMB.

BACK FOR PIANO STOOLS.

No. 256,711. Patented Apr. 18, 1882.

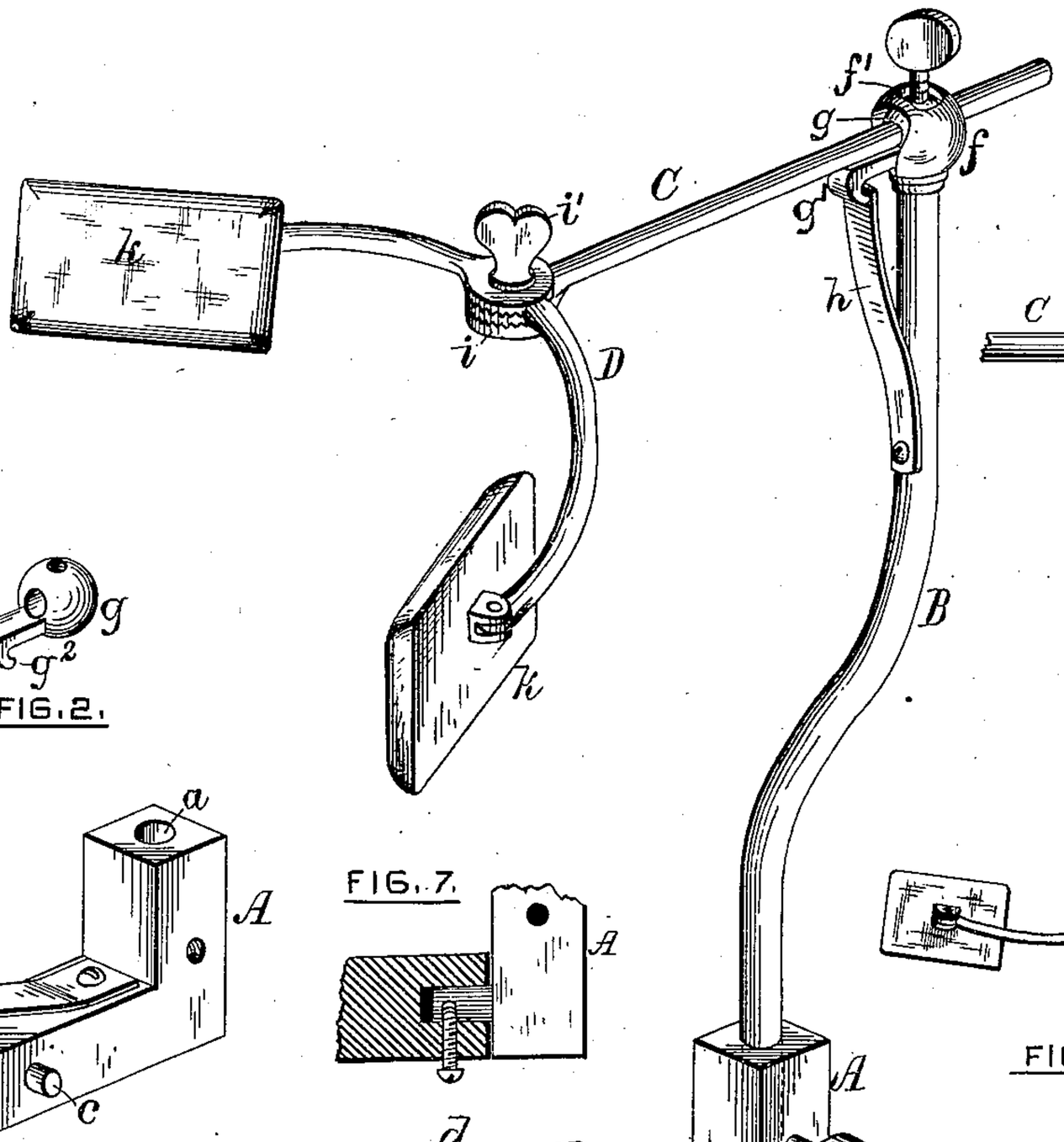

FIG. 6.

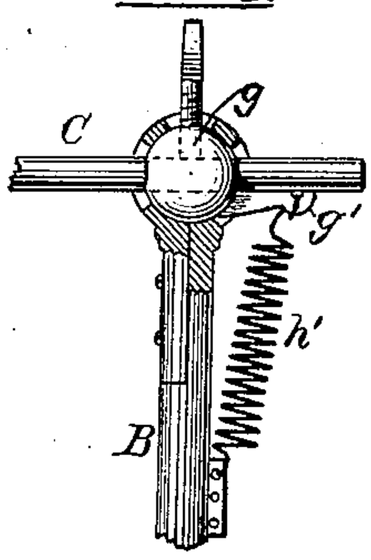

FIG. 2.

FIG. 3.

FIG. 7.

FIG. 4.

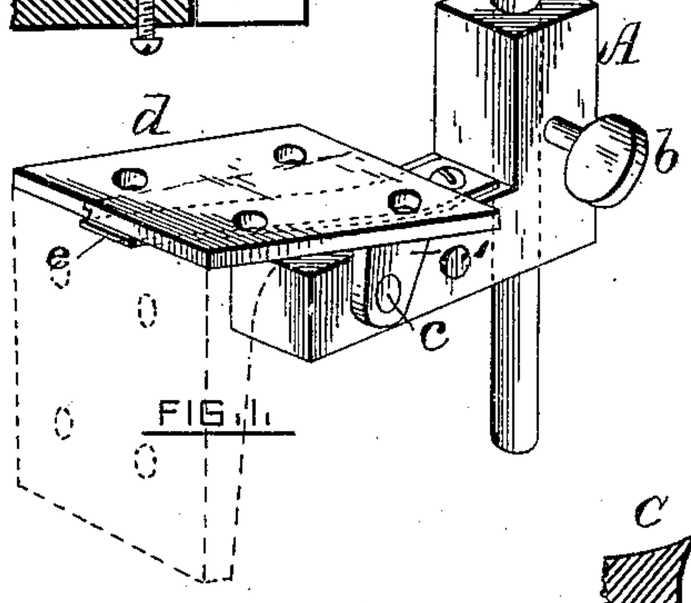

FIG. 1.

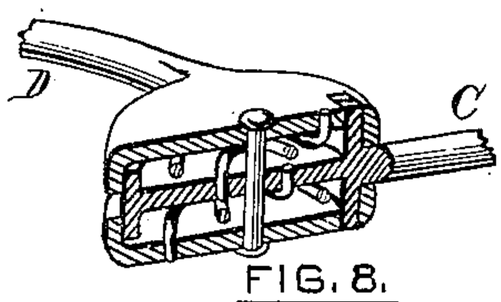

FIG. 8.

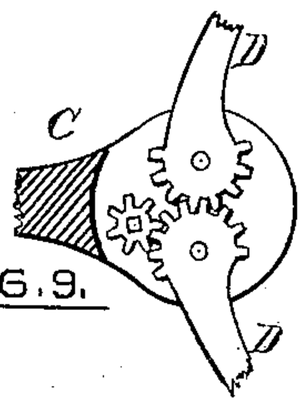

FIG. 9.

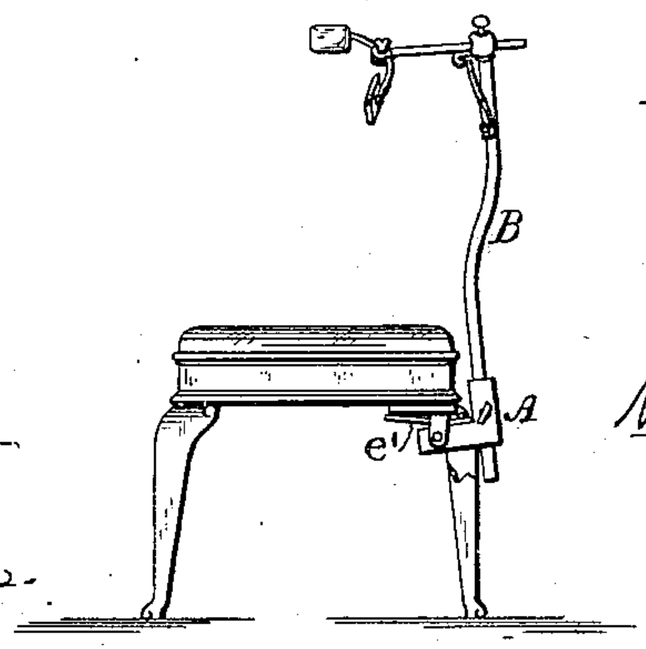

FIG. 5.

WITNESSES.

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BACK FOR PIANO-STOOLS.

SPECIFICATION forming part of Letters Patent No. 256,711, dated April 18, 1882.

Application filed July 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. LISCOMB, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Backs for Piano-Stools, &c.; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and complete description of the several features of my invention.

The desirability of back-rests for piano-stools has long been recognized, and various contrivances have heretofore been devised and patented intended to more or less completely serve the purpose.

My invention embraces certain novel devices and combinations of devices, and after a full description thereof these will be designated respectively in the several claims hereunto annexed.

Referring to the drawings, Figure 1 is a view of a detached stool-rest embodying all of the features of my invention. Fig. 2 is a view of a detached portion of a flexible joint. Fig. 3 is a view of a detached base-block. Fig. 4 is a view of a detached portion of the rest to which the back-pads are attached. Fig. 5 is a side view of one form of piano-stool with my back-rest applied thereto.

Figs. 6, 7, 8, and 9 illustrate variations in construction of certain parts hereinafter more specifically described.

An important feature of my invention is the base-block A. It is preferably of the form shown, although it may be largely varied in that respect without departure from my invention. Said block has the following characteristics in construction: a vertical mortise, as at *a*, at one end, for receiving the lower end of a standard, B, and means, as at *b*, for securing said standard in position. I prefer the cylindrical mortise and a set-screw, although a closed or partially-open mortise other than cylindrical may be employed with a spring-catch, for instance, if the standard be correspondingly constructed and provided with notches or scores.

Trunnions or pivots *c* are provided at each side, near the opposite end of the block, for engaging pivotally with the pendent ears *c'* on the securing-plate *d*, which is in this instance composed of two parts, flat, rectangular, and provided with suitable holes for the passage of screws used for securing the plate to the under side of the stool. As shown, it is arranged for application to the under side of the top of a round or a square stool; but this plate should be variably constructed, according to circumstances, for convenient and secure attachment, and it may, if in the form of a bracket, as indicated in dotted lines in Fig. 1, be secured to the barrel or body of the usual standard, in which the screw of a stool is housed.

As here shown, the base-block is L-shaped, with its short arm vertical, and upon the upper surface of the long or horizontal arm a strong inclined spring, *e*, is secured, so that its free end extends upwardly and beyond the adjacent end of the base-block, and so that when mounted its free end has a good bearing against the under surface of the securing-plate *d*. I prefer this form of spring and the arrangement thereof substantially as shown; but other springs may be employed—as, for instance, a spiral spring may be relied upon if the inner end of the base-block be so far extended as to provide for desirable leverage and an ample seat for the spring.

I do not limit myself to any particular form of spring. When the base-block is tilted fully rearward its upper edge at the inner end finds an abutment against the adjacent surface of the spring, as at *e'*, Fig. 5, compressing the latter against the under surface of the supporting-plate.

If desired, a specially-provided abutment may be employed; but if constructed as shown the block, when tilted fully backward, affords an unyielding rigid support for a person when leaning backward, as will be hereinafter indicated. As a rule, I prefer that the base-block afford only a tilting capacity, as described; but in some rare cases it is deemed desirable that the socketed portion of the base-block be swiveled on a horizontal pivot to the long arm of the base-block, as illustrated in Fig. 7.

The rest-standard B may be variably constructed. It must be so formed, however, at its lower end as to admit of its movement vertically for adjustment within the mortise of the base-block, and be firmly seated therein. At its upper end the standard is provided with a globular head, *f*, containing a spheroidal socket which is open at the top, as indicated at *f'*.

Within this socket is a ball, *g*, provided with a forwardly-projecting stem, *g'*, having near its end, on its under side, a vertical shoulder, as at g^2. A strong vertical bent flat spring, *h*, is secured at its foot to the standard, and at its free end bears forcibly outward against the shoulder on the stem whenever the outer end of the pad-bar C is depressed. The particular arrangement of this spring as indicated I find to be desirable; but I am well aware that the construction of these parts and their arrangement with relation to each other may be largely varied without substantial departure from this portion of my invention. This spring, by its outward pressure, maintains the pad-bar in the desired normal position. It may, if desired, serve also as a yielding bracket upon which the bar may actually rest. As used by me, this spring is bent inward when the pad-bar is depressed.

In Fig. 6 I illustrate substantially the same ball, *g*, with its arm *g'*; but as here shown the latter projects rearwardly instead of to the front, and, instead of the flat spring previously described, a retractile spiral spring, *h'*, is employed, thus holding the outer or pad end of the arm C up and admitting of the desired elastic flexibility at the connection of said arm with the standard B.

The ball is centrally mortised horizontally to receive the pad-bar C, and is provided with a vertical set-screw for securing said bar therein. This ball-and-socket joint is thus devised for the purpose of permitting a free upward tilting of the bar within certain limits, and a certain lateral movement also limited, and it also permits a certain axial movement of the pad-bar. The stem *g'* affords a longer horizontal bearing for the bar than could be obtained within the ball-mortise alone, and also a seat for the free end of the spring. While I prefer this construction, I do not limit myself thereto, because other well-known joints embodying what is known as the "universal" principle may be obviously so modified in construction as to fill the several requirements deemed of value by me.

One end of the pad-bar C is provided with a circular corrugated upper face, *i*, centrally pierced vertically by a tapped hole for the reception of a clamp-screw, *i'*.

The pad-bow D is composed of two bent arms, each having a disk at its inner end, corrugated at their coincident faces, and one of them also corrugated for engagement with the coincident upper face of the pad-bar C. The clamping-screw *i'* passes through the disks, so that the arms may be readily adjusted with relation to each other and firmly secured. The pad-bar having a capacity for axial movement enables the pads to be oppositely moved vertically when in use.

At the ends of the pad-bow the back-pads *k* are secured by means of lugs and rivets at the rear of the pads, forming a hinge-joint, in such a manner as will admit of a horizontal swiveled movement of each pad on its vertical axis. I prefer two pads, as shown, because they are readily adjustable to persons of different sizes, afford desired freedom of movement, and exercise their supporting function directly in contact with those muscles of the back most exposed to fatigue. I do not, however, limit myself to the two pads, because a curved back-piece may be substituted and employed with certain other features of my invention with desirable results. The hinge-joints are so constructed that the pads can swing freely inwardly toward the bow until nearly in contact therewith, and also freely swing outwardly sufficiently far to permit them to occupy any position desired while in use; but said joints prevent the pads from unduly swinging outwardly. In some cases I insert a pair of oppositely-acting, strong, flatly-coiled springs into a chamber provided therefor at the junction of the pad-bow with the bar, (and omit the serrated faces,) which provides for a laterally-flexible spring-joint, which is sometimes deemed desirable. This arrangement is illustrated in Fig. 8, in central vertical section, in the line of the pivot by which the pad-bows and pad-arm are united. For securing a uniform relative arrangement of the arms of the pad-bow and convenience in adjustment, I sometimes provide each with a separate pivot, and with gear-teeth which mesh with each other, and one of them meshing with a pinion provided with an axial clamping-screw. This arrangement is illustrated in Fig. 9, the pinion shown being the medium by which the pad-bows are locked in any desired position, its axis being a clamping-screw, by which it is clamped against rotation, except during the adjustment of the bows D.

When constructed and applied as shown it will be seen that a certain free backward and forward movement of the body is provided for, coupled with provision for such swaying movements as are incident to piano practice, and that during these movements spring-pressure causes the pads to maintain their supporting contact with the body. The spring base-block, when fully tilted rearwardly, finds a firm abutment, which affords to the user the same sense of security which is incident to the use of a seat with a rigid back.

While I prefer to embody in one structure all of the several features of my invention, substantially as shown, it is obvious that some of them may be separately employed in connection with other devices for attaining the same ends, but varying more or less in their construction and arrangement.

Although the prime object of my invention is to provide a rest for stools specially intended for use with pianos, my improvements possess equal value when applied to stools in general, regardless of the specific uses for which they are intended.

Having thus described my invention, I claim as new—

1. The combination of a securing-plate, a pivoted mortised block for receiving a vertical back-rest standard, and a spring for controlling the block, substantially as described.

2. The combination, with the pivoted mortised block provided with a spring, of the vertical standard, adjustable in said block, back-pads, and a flexible joint or joints between said pads and said standard, substantially as described.

3. The combination of the standard, the pad-bar, the ball-and-socket joint, and the spring, substantially as described.

4. The combination, with a flexibly-supported standard, of a pair of back-pads flexibly mounted on arms which are adjustable with relation to each other, substantially as described.

5. The combination, with a stool, a standard, and a pad-bow, of a pair of back-pads separately hinged on vertical axes to said pad-bow, substantially as described.

6. The combination, with the swiveled back-pads, the bow, and the pad-bar, adjustably jointed and provided with a clamping-screw, of the standard and a spring-controlled joint at or near the connection of the bar with the standard, substantially as described.

7. The combination, with a stool-back standard, of a pivoted base-block, in which said standard is mounted, and a spring for forcing said standard forward, and an abutment for the block which limits the rearward movement of the standard, substantially as described.

8. The combination, with a stool, of the spring base-block flexibly jointed with relation to the stool, the vertically-adjustable standard, the pad-bar flexibly jointed to the standard, and the pad-bow and pads, substantially as described.

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