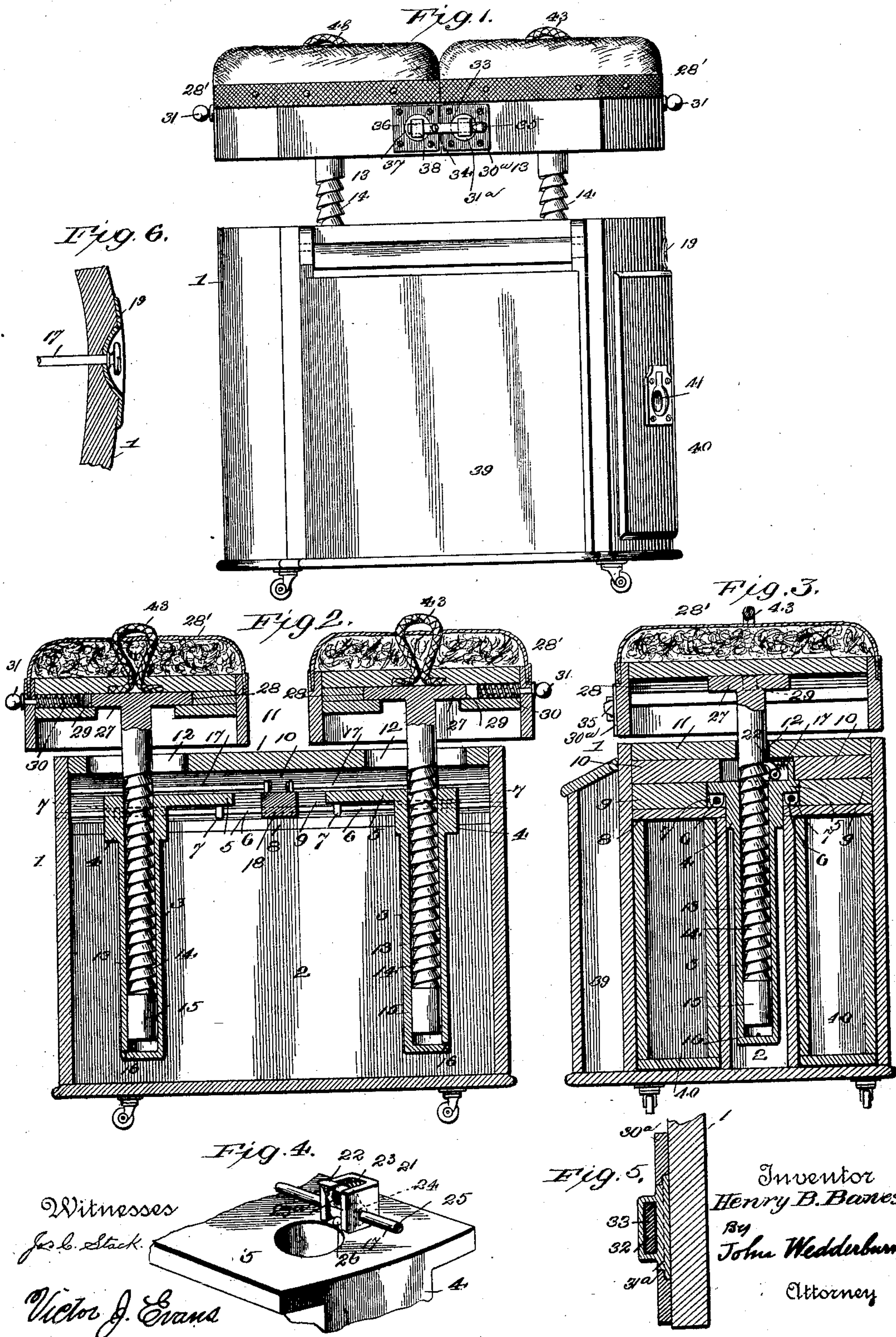


(No Model.)

H. B. BANES.
PIANO STOOL.

No. 603,617.

Patented May 10, 1898.



UNITED STATES PATENT OFFICE.

HENRY B. BANES, OF BRISTOL, PENNSYLVANIA.

PIANO-STOOL.

SPECIFICATION forming part of Letters Patent No. 603,617, dated May 10, 1898.

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To all whom it may concern:

Be it known that I, HENRY B. BANES, of Bristol, in the county of Bucks and State of Pennsylvania, have invented certain new and useful Improvements in Piano-Stools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved adjustable piano-stool; and among the objects of the same are to provide a stool having two seat-sections, each capable of independent vertical and horizontal adjustment, with improved means of quick and convenient adjustment and also certain novel and useful features of construction. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my device, showing the seat-sections locked in engagement with each other and partially raised from the base. Fig. 2 is a longitudinal vertical section of said device. Fig. 3 is a transverse vertical section of same. Fig. 4 is a perspective view of the upper end of the socket with pawl mounted thereon. Fig. 5 is a section of the bolt for securing the seat-sections together. Fig. 6 is a horizontal section of a portion of end of casing, showing the end of the shaft for manually operating the pawl.

Referring to the said drawings, 1 indicates the casing constituting the base or support for the seat supporting or elevating rods. The said casing is provided with drawer-compartments formed therein, said compartments forming between them a longitudinally-extending way 2, in which the sliding sockets 3 are adapted to move. Each of said sockets is closed at its lower end and provided at its upper end with the flanged head 4, the flanges being elongated to form plate 5, as illustrated in Fig. 2. Rods 6 extend longitudinally from end to end of the casing just above the drawer-compartments. Upon these rods ride the lugs 7, which are attached to the under side of the flanged heads 4, so that the sockets are movable upon said rods.

Positioned upon the top walls 8 of the drawer-compartments are the strips 9, which

terminate short of the inner sides of the said compartments to form a space for the purpose of receiving the rods 6 and the lugs and flanges of the heads 4, and located upon the upper faces of said strips 9 are the spacing-boards 10, which project beyond the inner end of said strips 9 to prevent the withdrawal of the sockets when the said rods are elevated.

11 indicates the top board of the casing, which is provided with the longitudinally-extending slots 12 adjacent its ends for the movement therein of the elevating-rods 13 of the seat-sections. The elevating-rods 13 are provided with spiral ratchet-threads, terminating short of their lower ends, so as to leave the smooth portions 15, which fit snugly within the sockets. An air-cushion is formed therebeneath when the rods are lowered, thus permitting the pawls for holding the elevating-rods at the desired elevation to be disengaged therefrom and the seat-sections lowered without noise or jar. Small apertures 16 may be made in the lower parts of said sockets to permit of the gradual admission or expulsion of air into or from the sockets as the elevating-rods are raised or lowered, respectively.

The shafts 17 are rotatably supported at their inner ends upon the strip 18, which is attached to the upper ends of the drawer-compartments and extends transversely the central way 2. The outer ends of these shafts extend through the end walls of the casing and the plates 19, secured thereto, and are provided at said outer ends with knobs for the purpose of manually rotating same for operating the pawls, as hereinafter described. The said plates 19 have their central portions sunken within the end portions of the casing to receive the said knobs. The strip 18 also serves as a stop against which the elongated flanges 5 abut to limit the movement thereof. Upon the top of each head 4 is a housing or casing 21, through which the shaft 17 loosely extends, and slidably mounted upon said shaft within the casing is a pawl 22, having a portion of its inner edge cut out to receive the strip of resilient material 23^a, so that as the seat-section is drawn upward the operation will be noiseless, as the resilient strip sliding on the ratchet will deaden the sound of the ratchet. Each pawl is provided with

a feather 24, which engages a way 25, formed in the shaft 17, and is normally held in engagement with the ratchet-thread of the elevating-rod by a spring 23, so that when it is desired to lower the seat-section rapidly shaft 17 is given a partial rotation, which disengages the pawl from the ratchet-rod and permits the seat-section to lower. A lug 26 is formed on the pawl, so that it will be necessary to give the shaft but a slight rotation in order to raise the pawl to permit the insertion of rod 13.

Upon the upper end of each elevating-rod 13 is a head 27, which engages in the transversely-extending guides 28, formed on the under side of each seat-section 28', said head being formed with a slot 29, which is engaged by the spring-actuated bolt 30, the stem of which extends through the side wall of the seat-section, where it is provided with a knob 31 for manual operation. By disengaging this bolt from the head of the elevating-rod the seat-section may be moved transversely of the casing, or by giving the rod a partial rotation said seat-sections may be moved upon the elevating-rods in a direction longitudinally of the casing, so that the seat-sections may be further separated when the limit of movement of the sockets within the casing is reached.

I will now describe the bolt for uniting the seat-sections, which is formed with the securing-plate 30^a, in which the disk or plate 31^a is rotatably secured, said plate being provided with a guide-loop 32, in which the bolt 33 is movable laterally, said bolt being provided with the stop 34 to prevent its being withdrawn therefrom and with the handle portion 35. The keeper for this bolt consists of the plate 36, which is secured to the adjacent seat-section, and having the circular plate 37 rotatably secured therein, similar to the plate 31, said plate carrying the loop or keeper 38 to receive the bolt. When this bolt is engaging the keeper, it will be understood that the seats cannot be rotated, so that they are not separated by the operator in sitting thereon or rising therefrom; but when one of the seat-sections is drawn upward or moved longitudinally the bolt automatically disengages its keeper by reason of said bolt and keeper being swiveled to the respective seat-sections.

A music-rack 39 is formed on one side of the casing, and the drawers 30 are provided with the drawer-compartments, said drawers having the rings 41 for withdrawing the same from the casing.

It will be noticed that the seat-sections may be drawn upward by the loops 43, the pawls permitting said movement, and as soon as the upward movement of the sections is discontinued the pawls will reengage in the ratchets of the elevating-rods to retain the same in the elevated position. When it is desired to lower either seat-section quickly and without rotating same, the shaft 17, carrying the pawl, is manually rotated, causing the disengagement of the pawl from the ratchet-threads, when

the seat-section will gradually lower without jar, owing to the air-cushion formed between the lower end of the elevating-rod and the bottom of the socket. When the seat-section has been lowered to the desired position, it may be retained in said position by releasing the shaft 17, whereupon the spring-actuated pawl engages with the ratchet. The seat-sections may also be raised or lowered by rotating the same to cause the travel of the spiral ratchet upon the engaging pawl. It will thus be seen that I have so constructed the device that the seat-sections are capable of independent vertical and horizontal, longitudinal and transverse adjustment and may be raised or lowered either by revolving the same or by the rectilinear movement thereof, so that the vertical adjustment may be accomplished slowly or rapidly, as desired.

I do not desire to limit myself to the specific details of construction, but reserve to myself the right to change, modify, or vary such details that properly come within the scope of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a spiral ratchet-rod, a pawl adapted to engage therewith, laterally-movable means of supporting and guiding the ratchet-rod and supporting the pawl, a seat supported by said ratchet-rod and laterally movable thereon and means adapted normally to restrain and to be manually operated to permit the said lateral movement of the seat upon the ratchet-rod.

2. The combination of a spiral ratchet-rod, a pawl adapted to engage therewith, means of manually operating the pawl to disengage it from the ratchet-rod, the pawl adapted normally to restrain the downward rectilinear movement and to permit the upward rectilinear movement of the rod and to permit the upward-and-downward rotating movement of said rod.

3. The combination with a supporting-base of a spiral ratchet-rod, a pawl adapted to engage therewith, means, laterally movable with respect to the supporting-base, of supporting and guiding the ratchet-rod and supporting the pawl, a rotatably-mounted shaft adapted to actuate the pawl by its rotation but to permit the lateral movement of the pawl upon it, substantially as described.

4. The combination with a support of independently vertically adjustable seat portions movable laterally thereon and an automatic self-releasing bolt for preventing the independent rotation of the seat portions when the same are together but adapted to release the same when they are moved apart either vertically or laterally, substantially as described.

5. The combination with a support, of independently vertically adjustable seat portions, movable laterally thereon, and an automatic self-releasing bolt for preventing the independent rotation of the seat portions, but

adapted to release same when they are moved vertically or laterally, substantially as described.

6. The combination of the casing, drawer-
5 compartments formed therein and forming a way therebetween, a flanged socket movable in said way, with the flanges thereof engaging, and moving upon the upper walls of the drawer-compartments, an elevating-rod adjustable vertically in said socket and a seat
10 portion carried by said elevating-rod, substantially as described.

7. The combination with a support, of a socket movable therein, an elevating-rod movable in said socket and provided with a

ratchet, a shaft rotatably mounted upon the support, a pawl carried by the socket, and adapted to engage the ratchet, said pawl being slidable upon the shaft but locked from rotation thereon, whereby when the said shaft
20 is operated, the pawl is disengaged from the ratchet, and a seat portion carried by the elevating-rod, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribers
25 ing witnesses.

HENRY B. BANES.

Witnesses:

EDWD. B. FOX,

JAMES W. BEVANS.