(No Model.)

G. J. WALDVOGEL.

ADJUSTABLE SEAT FOR STOOLS AND CHAIRS.

No. 459,161. Patented Sept. 8, 1891

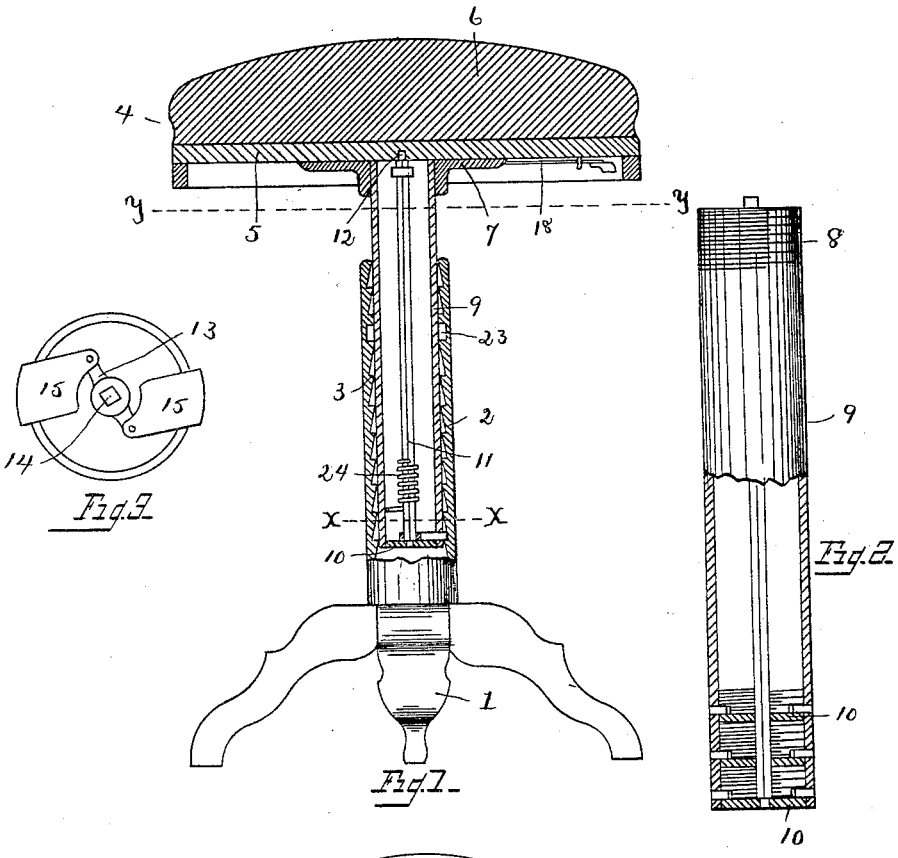

Fig. 3

Fig. 1

Fig. 2

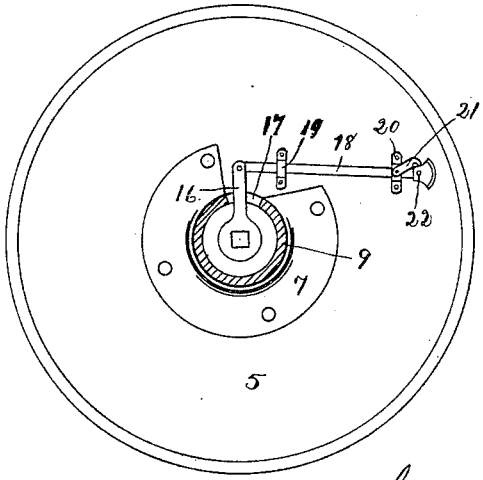

Fig. 4

WITNESSES.

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ADJUSTABLE SEAT FOR STOOLS AND CHAIRS.

SPECIFICATION forming part of Letters Patent No. 459,161, dated September 8, 1891.

Application filed March 16, 1891. Serial No. 385,244. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. WALDVOGEL, of Toledo, county of Lucas, and State of Ohio, have invented certain new and useful Improvements in Adjustable Seats for Stools and Chairs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to adjustable seats for stools and chairs, and has for its object to provide a stool or chair in which the vertical adjustment of the seat is convenient, positive, and durable.

A further object is to provide a plurality of toggle-jointed spring-actuated locking-dogs adapted to be mechanically projected to rest upon the horizontal faces of upwardly-inclined annular projections, whereby the locking-dogs may automatically retract when in the act of raising the seat.

A further object is to provide a vertically-adjustable stool or chair in which the seat may he revolved in a horizontal plane and in which the seat-section may be raised at will or locked from vertical movement, and in which the entire mechanism employed shall be concealed from view.

The invention consists in the parts and combination of parts hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a longitudinal vertical section of the adjustable portions of a stool constructed in accordance with my invention, the legs and supporting-base being shown in full lines. Fig. 2 is an elevation of the inner cylindrical telescopic section drawn on an enlarged scale, part of the same being broken away to disclose the position of the locking-dogs. Fig. 3 is a transverse section on lines *x x*, Fig. 1, showing the locking-dogs and lever in plan view. Fig. 4 is a bottom plan view on lines *y y*, Fig. 1, showing the lever and handle-bar for actuating the central rod.

1 designates the leg-supports, upon which is secured a tubular standard 2, extending to nearly the height of the seat when in its lowest position.

Upon the interior of standard 2 are formed a series of annular ledges 3, from which the annulus inclines upwardly to form the next succeeding ledge, thereby forming a conical recess extending from the greatest diameter of one ledge to the lesser diameter of the succeeding ledge.

4 designates the seat, comprising a base 5, preferably constructed of wood to insure lightness, and upon which is secured the upholstered cushion 6.

Upon the under side of base 5 is an annular plate 7, having the central opening screw-threaded to receive the screw-threaded end 8 of a telescoping tubular section 9, whereby the section and seat are rigidly secured together.

Section 9 is internally screw-threaded upon the lower end to receive a screw-threaded plate 10, perforated centrally to receive the reduced end of a rod 11, which extends from the lower plate slightly above the upper end of section 9, whereby the upper end 12 of rod 11 is journaled in the top plate 5.

Upon the lower end of rod 11 and resting upon plate 10 is arranged the supporting mechanism for sustaining the telescoping section at any desired vertical adjustment, and comprises a central two-armed lever 13, having a rectangular perforation 14, into which the rectangular rod 11 is passed. Upon each end of lever 13 is pivotally secured a dog or pawl 15, adapted to be projected into the annular recess of standard 2 and rest upon the coincident ledge whenever the rod 11 is turned in the proper direction.

Rod 11 is turned by means of a lever 16, secured upon the upper end of the rod and passing through an opening 17, formed in section 9, said lever lying close to the under side of base 5 and being connected with a handle-bar 18, guided in keepers 19 and 20, respectively, secured upon the under side of base 5, there being a hook 21 secured upon the keeper 20, adapted to be engaged with a pin 22 upon handle-bar 18, whereby the handle-bar and lever 16 may be locked from movement when desired, to prevent the dogs from riding up the inclines when moving the stool. There may

be also one or more annular recesses 23 arranged within section 2 to allow the dogs to pass therein to effect the same result. Rod 11 is caused to turn to normally project the dogs into the recess of standard 2 by means of a spiral spring 24, secured at one end to the rod and at the opposite end to section 9.

In Fig. 3 I have illustrated a plurality of plates 10 and dogs 15 with the lever connections 13, as it will be apparent that in the construction of stools for heavy persons I may employ as many series of dogs as desired.

From the above description the operation will be readily understood. The height of the seat is determined by the particular ledge upon which the dogs rest. In order to raise the seat it is only necessary to lift upon plate 5, when the dogs will ride up the inclines of the recesses and seat upon the desired ledge. When it is desired to lower the seat, the handle-bar 18 is pulled thereby moving lever 16 and revolving rod 11 sufficiently to withdraw dogs 15 from contacting with the ledges until the desired adjustment, when upon releasing the hand-lever spring 24, having been contracted by the movement of the rod, quickly revolves the same to project the dogs upon the proper ledges. It will be seen that the seat may be revolved without effecting its vertical adjustment and that all the working parts are concealed from view, thereby giving a finished appearance to the stool.

What I claim is—

1. The combination, with a tubular standard rigidly connected with the base of the stool, said standard having a series of inclined annular projections produced therein, of the telescopic supporting-standard sliding in said tubular standard, a rock-shaft or rod arranged within the supporting-standard and provided with laterally-projecting arms, the locking-pawls pivotally attached to the outer ends of said arms, working through slots in the supporting-standard and engaging the annular projections of the tubular standard, the spring for holding the rock-shaft or rod and pawls in place, and the handle-bar for operating said rod to withdraw the said pawls, substantially as shown and described.

2. The combination, with a tubular standard having a series of inclined annular projections produced therein, of the telescopic standard sliding in said tubular standard, said standard having slots near its lower end, and the spring-actuated laterally-movable horizontal pawls working through said slots, whereby the supporting-standard can be moved upward and locked in position without the operation of intermediate devices, substantially as shown and described.

3. The combination, with a tubular standard having a series of internal inclined annular projections, of the supporting-standard having slots near its lower end, a seat attached to the upper end, a rock-shaft arranged in the said supporting-standard, pawls pivotally connected thereto and working through the slots in the standard to engage the annular projections, the spring arranged upon the rock-shaft, the handle-bar connected also with the rock-shaft, and a locking device attached to the seat and adapted to engage the handle-bar to hold the same in place and consequently the rock-shaft and pawls, whereby the stool may be lifted by grasping the seat, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE J. WALDVOGEL.

Witnesses:
WILLIAM WEBSTER,
CARROLL J. WEBSTER.