

(No Model.)

2 Sheets—Sheet 1.

W. HOLDEN.  
STOOL AND SEAT.

No. 335,927.

Patented Feb. 9, 1886.

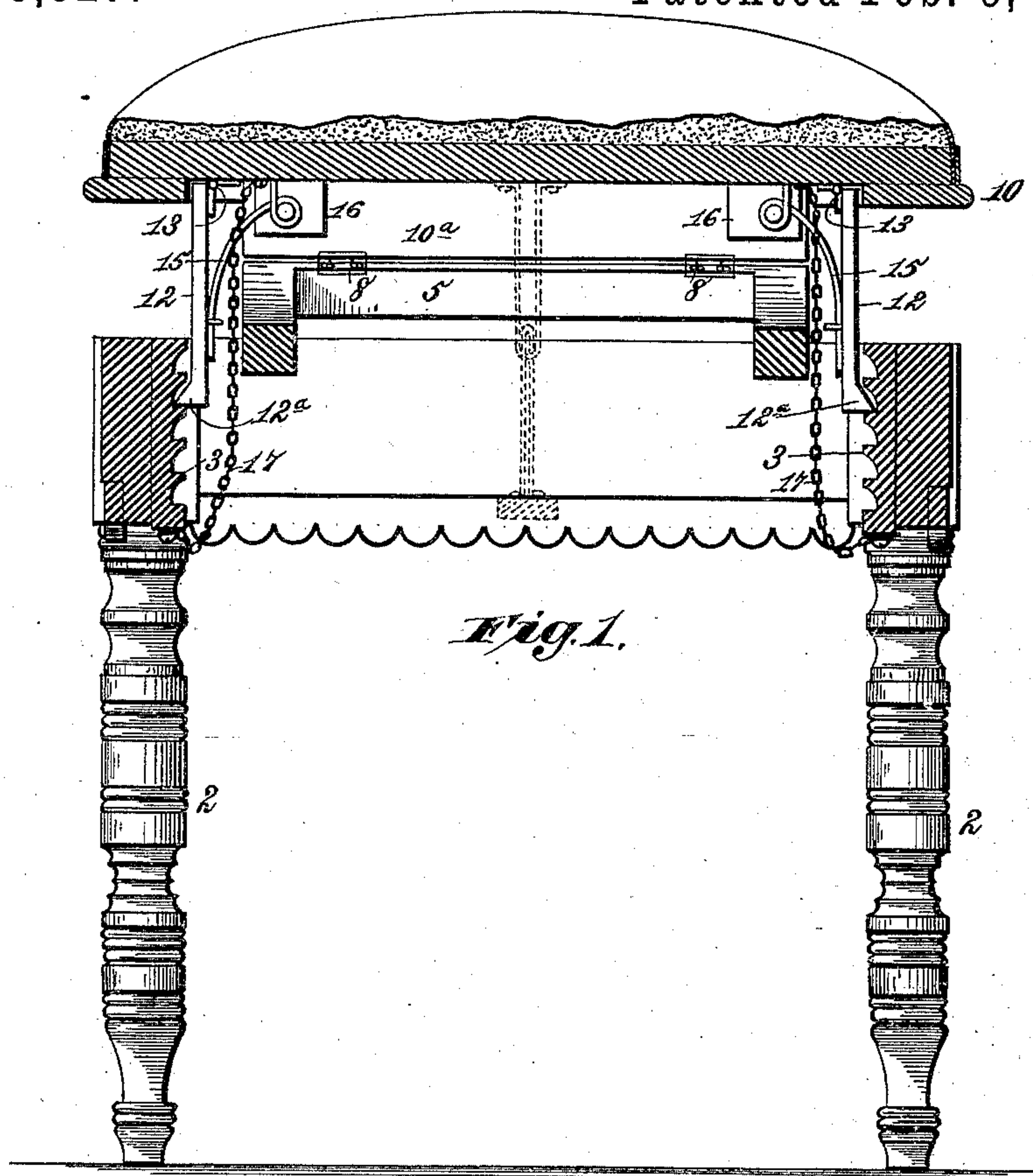
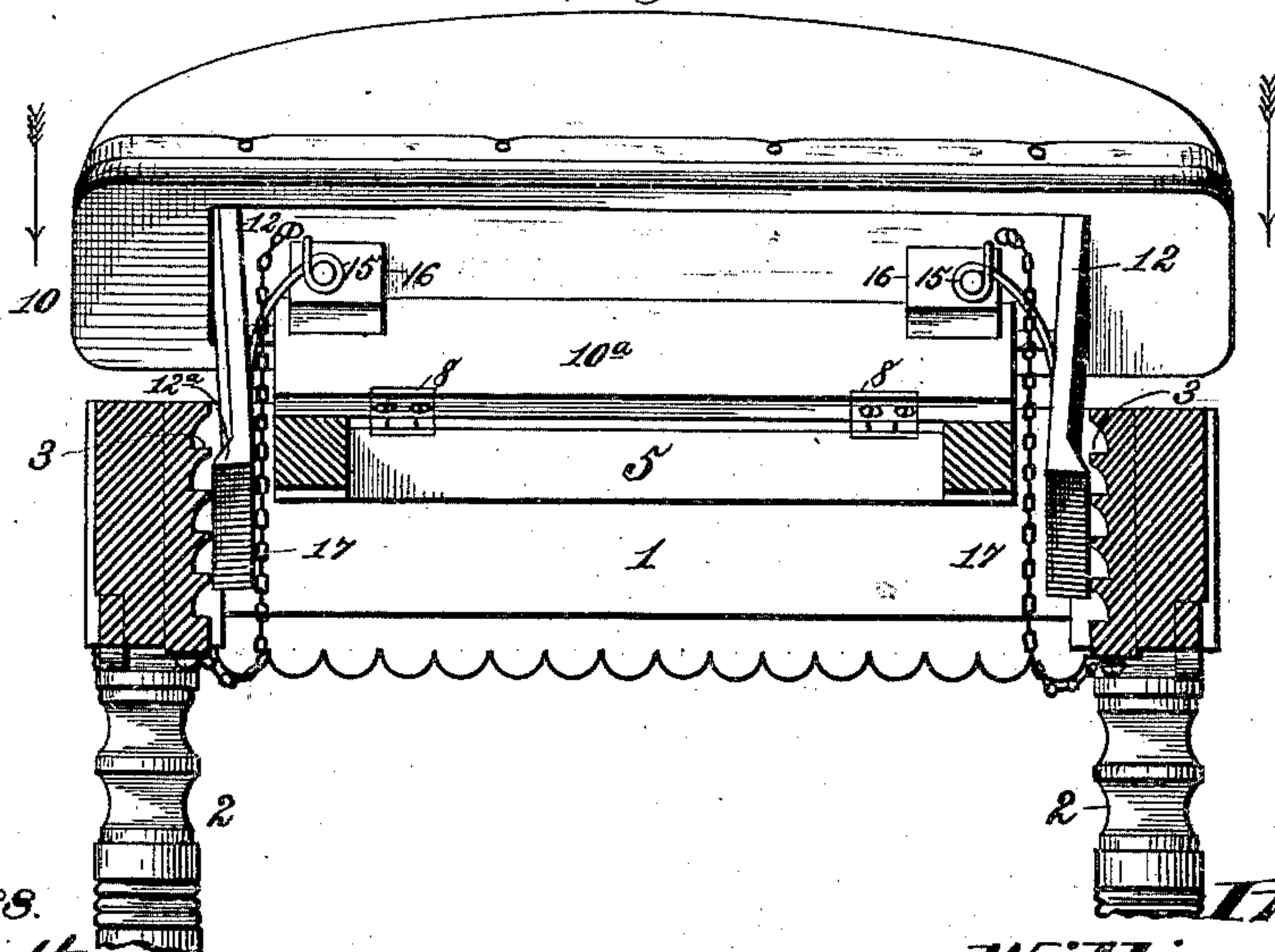


Fig. 1.



Witnesses.

Robert Smith,

Geo. W. Rea.

Inventor.

William Holden.

By James L. Norris.

Atty.

(No Model.)

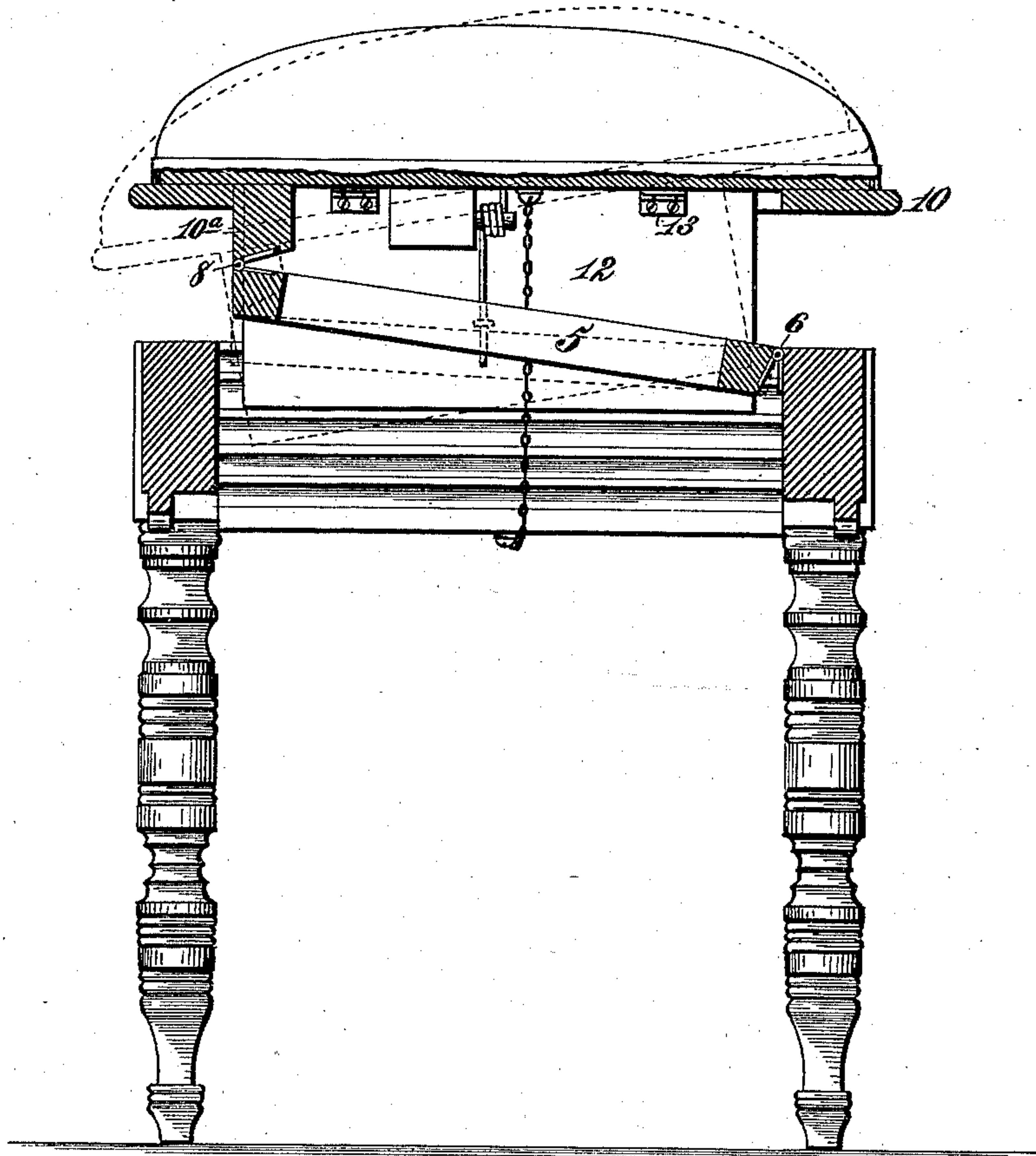
2 Sheets—Sheet 2.

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*Fig. 3.*



*Witnesses,*  
*Robert Everett,*  
*Geo. W. Rea.*

*Inventor,*  
*William Holden,*  
*By* *James L. Norrie,*  
*Atty.*



# UNITED STATES PATENT OFFICE.

WILLIAM HOLDEN, OF BALDWINVILLE, MASSACHUSETTS.

## STOOL AND SEAT.

SPECIFICATION forming part of Letters Patent No. 335,927, dated February 9, 1886.

Application filed November 27, 1885. Serial No. 184,041. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HOLDEN, a citizen of the United States, residing at Baldwinville, in the county of Worcester and State of Massachusetts, have invented new and useful Improvements in Stools and Chairs, of which the following is a specification.

The object of the present invention is to provide a stool, chair, or analogous article of household furniture in which the seat portion is capable of being raised and lowered relative to the base or body portion, such adjustment of the seat being effected with ease and celerity, and the various parts being locked and unlocked in position in an automatic manner by a simple manipulation of the seat portion, and without the necessity of operating the fastening devices by the hands of the operator.

The invention consists, essentially, in the combination, with a base or body frame, of a supplementary frame hinged at one side of the base-frame, and having the seat-frame proper hinged to its other side. Rack-surfaces formed on or applied to the end pieces of the base-frame engage with pivoted pawl plates or props depending from the ends of the seat-frame proper, and forced against the rack-surfaces by the action of springs. The seat is raised by maintaining it in a level position and drawing it upward, the pawl-plates engaging automatically with the rack-surfaces on the base-frame to prevent the seat from dropping. In order to lower the seat, it is tilted relatively to the supplementary frame to which it is hinged, which will cause the pawl-plates to be automatically released from the rack-surfaces on the base-frame and allow the supplementary frame to oscillate in a downward direction and the seat-frame proper to descend vertically.

The invention briefly outlined in the above statement will be hereinafter more fully described, and then set forth in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of a stool or chair constructed according to my invention, the seat-frame proper being in a raised position and locked to the base-frame. Fig. 2 is a vertical longitudinal sectional view showing the seat in a tilted position to

allow it to be lowered. Fig. 3 is a vertical transverse sectional view showing the seat and supplementary hinged frame in a raised position.

I have in the present instance shown my invention applied to that class of piano stools known as "ottoman" stools; but I desire it to be understood that it is capable of being applied to various types of stools, chairs, and settees. Furthermore, the invention is applicable to drawing and other tables having tops that require to be raised and lowered.

The reference-numeral 1 designates the base-frame, which is mounted upon the tops of four legs, 2, two of which are shown in the drawings. This frame or base portion may be of any desired form and material. In the present instance it is made rectangular, or has two end and two side panels or boards. On the inner surfaces of these end boards or panels I form rack-surfaces or a series of step-shaped projections or ribs, 3. These rack-surfaces run horizontally and occupy the entire height of the end boards, as is clearly shown in Fig. 3.

Instead of forming the rack-surfaces on the end boards of the base-frame I may attach separate rack-plates to the boards of the same or other material than the boards. A supplementary frame, 5, of the same shape as the base frame 1, is, by means of hinges 6, connected with one of the sides of said base-frame, and this supplementary frame is located entirely within the base-frame, the hinges being applied to the inner surface of the side panel of the base-frame. At the side of the supplementary frame opposite to its point of connection with the base-frame I locate other hinges, 8, which serve to connect a seat-frame proper (marked 10) with said supplementary frame, the seat-frame having a block, 10<sup>a</sup>, for making the connection with the supplementary frame in such a way that one side of said frame is carried below a horizontal line and the lateral motion of the seat is lessened in raising and lowering.

The seat-frame is of any desired pattern, and is upholstered or covered in any suitable manner.

To the under side of the seat-frame I apply depending boards or plates 12, serving as props



or seat-supports. These plates or boards are connected with said seat-frame by hinges 13, so that they are free to swing or vibrate between the ends of the base-frame and the end bars of the supplementary frame. These plates 12 are a little shorter than the end panels of the base-frame, and have a continuous rib or toe, 12<sup>a</sup>, formed on their lower edges, which ribs or toes engage with the rack-surfaces on the base-frame, and serve to hold the seat-frame in the various positions in which it may be placed. The plates 12 are held in firm engagement with the rack-surfaces by means of springs 15, applied to the under side of the seat-frame and bearing against the plates 12. As shown in the drawings, these springs are of a coiled form, having their upper ends secured to blocks 16 on the seat-frame, and their vertical arms or free ends entered into keepers on the plates 12. Other suitable forms of springs may, however, be employed, and in place of the chains 17, connected with the seat and base frames, for limiting the upward movement of the seat-frame, I may resort to any other appropriate stop devices. The functions of the chains or other stop devices are to prevent the raising of the seat too high and allow it to be tipped from either side to let it off while on the top notch of the rack-surface. The spring-pressed props or pawl-plates are generally sufficient to hold the seat in the proper positions; but it is also proposed to employ a locking device for locking the seat at any desired height.

The operation of the parts is as follows: To raise the seat, it is held level and drawn up to the required height, the props or pawl-plates slipping automatically over the rack-surfaces and holding the seat wherever it is left. To lower the seat, one side thereof is tipped, as shown in Figs. 2 and 3, thereby causing the beveled surfaces of the ribs 12<sup>a</sup> to ride over and become disengaged from the corresponding curved surfaces of the racks. The plates 12 are thus forced inward against the pressure of the springs, and the ribs 12<sup>a</sup> are made to occupy a position diagonally across the rack-surfaces 3 and disengaged therefrom. The seat can now be lowered to any position desired, or it will fall of its own weight to its lowest position, resting directly upon the base-frame, the ribs 12<sup>a</sup> riding diagonally over the rack-surfaces so long as the seat is held in a tipped or diagonal position. While the seat is in a horizontal

position, however, it is not liable to fall under downward pressure thereon, the ribs 12<sup>a</sup> and rack-surfaces 3 being then engaged in such a manner as to afford an adequate support.

It is obvious that a stool or chair constructed and operating as described can be cheaply and strongly made, and is direct and automatic in its action, it not being necessary to directly manipulate or set the locking devices by hand in order to allow the required adjustments to be made.

In lieu of the chains 17 for limiting the upward movement of the seat-frame, I may employ the device shown in dotted lines in Fig. 1, which consists of two looped wires engaging with each other, the ends of one of said loops being secured to the under side of the seat-frame and the ends of the other to a strip of wood secured to the under side of the rails of the lower frame.

What I claim is—

1. The combination of the base-frame having rack-surfaces on its end walls and the supplementary frame pivoted to one side of said base-frame, with the seat-frame hinged to the free end of the supplementary frame and having pivoted pawl-plates or props engaging with the rack-surfaces on the end walls of the base-frame, substantially as described.

2. The combination of the base-frame having rack-surfaces on the inner sides of its end walls, the supplementary frame hinged to one side of said base-frame, and the seat-frame hinged to the opposite side of the supplementary frame and having hinged to each end a depending spring-pressed pawl-plate, substantially as described.

3. The combination of a base-frame provided at its ends with rack-surfaces, a supplementary frame hinged to one side of said base-frame, a seat-frame hinged to the opposite side of the supplementary frame, depending pawl-plates hinged to the ends of the seat-frame, springs attached to the under side of the seat-frame and pressing against the under sides of the pawl-plates, and means for limiting the upward movement of the seat-frame, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM HOLDEN.

Witnesses:

FRANKLIN I. BLAKE,  
JOHN KNOTT.