(No Model.)

J. S. SAMMONS.

STORE STOOL OR CHAIR.

No. 401,379. Patented Apr. 16, 1889.

Fig. 1.

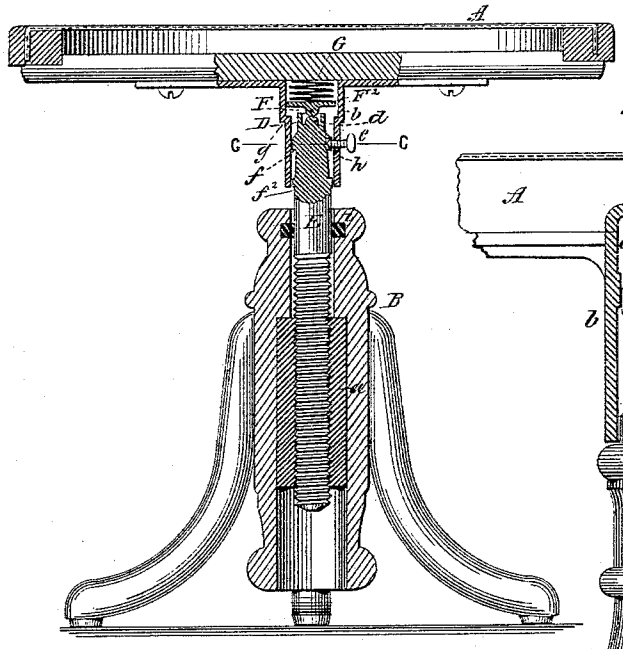


Fig. 2.

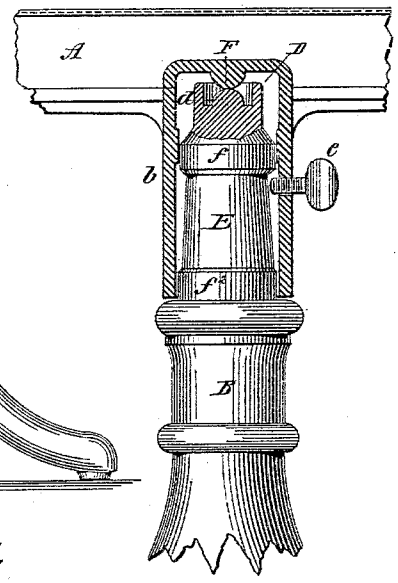


Fig. 5.

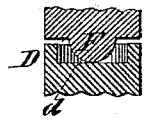


Fig. 6.



Fig. 7.

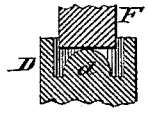


Fig. 8.

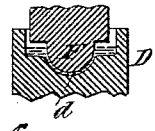


Fig. 4.

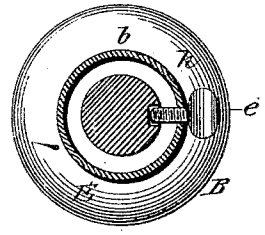
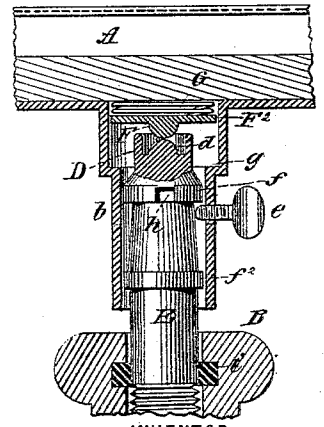


Fig. 3.



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UNITED STATES PATENT OFFICE.

JACOB SIDNEY SAMMONS, OF NEW YORK, N. Y.

STORE STOOL OR CHAIR.

SPECIFICATION forming part of Letters Patent No. 401,379, dated April 16, 1889.

Application filed June 23, 1888. Serial No. 277,995. (No model.)

To all whom it may concern:

Be it known that I, JACOB SIDNEY SAMMONS, a resident of the city, county, and State of New York, have invented an Improved Store Stool or Chair, of which the following is a specification.

One object of my invention is to provide means to permit the seat of a stool or chair to rotate without turning its supporting-screw when the seat is occupied, but to permit the turning of the screw when the weight is removed from the seat.

The invention consists in the details of improvement and the combinations of parts, that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional side elevation of a stool containing my improvements. Fig. 2 is a detail sectional view, enlarged, showing the oil-cup at the upper end of the pedestal. Fig. 3 is an enlarged detail sectional view of upper part of the stool shown in Fig. 1, the seat being in the position when occupied by a person. Fig. 4 is a horizontal section, enlarged, on the line *c c*, Fig. 1; and Figs. 5, 6, 7, and 8 are sectional detail views of different forms of bearings provided with my oil-cup.

In the accompanying drawings, the letter A represents the seat of a stool, and B is a column or pedestal for supporting the same.

D is an oil-cup carried by a rod, E. The rod E may be rigidly secured to the upper end of the pedestal B, as in Fig. 2, or may be a screw-rod, as in Figs. 1 and 3. When in the form of a screw, said rod E will pass freely through a vertical opening in the pedestal and into a nut or screw-sleeve, *a*, in said opening, as in Fig. 1, whereby said rod may be raised and lowered.

The seat A carries a sleeve or tubular socket, *b*, that is adapted to receive the upper end of the rod E. The socket *b* contains a projection or bearing, F, that is adapted to pass into the oil-cup D. This bearing F may be flat at its end, as in Fig. 7, or rounding, as in the other figures. At the bottom of the cup D is a bearing, *d*, to receive the bearing F. The bearing *d* does not extend up as high as the top of the cup D, and therefore said bearing may be kept lubricated by oil in the cup.

In Fig. 5 the bearing *d* is shown flat as the bottom of the cup D. In Fig. 6, as also in Figs. 1, 2, and 3, both the bearings F and *d* are rounded or hemispherical, which construction I prefer as producing less friction. In Fig. 7 the bearing *d* is shown rounding, while the bearing F, that contacts it, is flat, and in Fig. 8 the bearing *d* is a hollow or recess in the bottom of the cup D, while the bearing F is rounding and projects into said hollow bearing *d*. With all these constructions the lower bearing, *d*, by being wholly within the cup D, may always be kept lubricated.

The sleeve *b* steadies the seat on the rod E, and a screw or pin, *e*, is or may be carried by said sleeve to limit the upward movement of the seat by being placed below a collar, *f*, on the rod E. The collar *f* and a collar, f^2, below the same on E, may be used to act as a bearing-surface for the inner wall of the socket *b*.

In order that the seat of the stool may be turned without turning the screw-rod E, Figs. 1 and 3, I provide the following arrangement: The bearing F, I secure to a movable plate or follower, F^2, or, in other words, I make the bearing F separate from the socket *b*, (see Figs. 1 and 3,) so that said bearing may have movement independent of said socket. Between the movable bearing F and the bottom of the seat A and within the socket *b*, I interpose a spring, G. This spring I prefer to secure to the follower F^2, that carries the movable bearing F. These parts are so arranged that the spring G will keep the bearing F in contact with the bearing *d*. In order that the bearing F may not drop out of the socket *b* when the seat A is removed from the pedestal B, I provide an internal shoulder, *g*, in said socket that prevents said bearing passing through the lower end of the socket. The collar or annular shoulder *f* on the rod E is provided with a vertical notch or recess, *h*, into which the end of the screw or pin *e* is adapted to pass. (See Fig. 1.)

As long as the stool is unoccupied, the parts will be in the position shown in Fig. 1—that is to say, the spring G will expand and raise the seat A, so as to pass the inner end of the screw

e into the notch *h* in the collar *f*. When in this position, (the stool unoccupied,) the seat when revolved will revolve the screw-rod E in the desired direction, the screw *e*, by being in the vertical notch *h* in the collar *f*, acting to turn the rod E with the seat. If a person now sits down upon the seat A, his weight will lower the seat and compress the spring G, thereby moving the screw *e* out of the notch *h* and carrying it below the collar *f*. The seat A is now free to turn on its bearings F *d;* but it will not turn the screw-rod E on account of the disconnection of *e* and *h*, or, in other words, because there is now no rigid connection between the seat and the screw-rod E. In order to avoid the friction of the parts turning the rod E with the seat when it is depressed, I provide a packing or friction-collar, *i*, around the screw-rod E, which packing I place in the pedestal B. (See Fig. 3.) This packing will not prevent the screw *e* from turning the rod E when the seat is raised by the spring G.

The movable bearing F and the spring G may be used whether the bearing *d* is in the oil-cup D or not; but by using the oil-cup containing the bearings said bearings may be kept well lubricated continually.

Although I have shown my improvements as applied to a store-stool, they may be used with office-chairs, piano-stools, and the like.

The advantage of my invention is that a person occupying a swiveled chair will not screw the same up and down in turning, and will therefore not wear out the screw-threads on the screw-post and in the nut. Nevertheless, the chair can be adjusted to the desired height as soon as the seat is no longer occupied.

Having now described my invention, what I claim is—

1. The screw-rod E, having bearing *d* at its upper end and the notch *h* on its side, combined with the socket *b*, having pin *e*, and with the movable bearing F, spring G, and swivel-seat A, secured to socket *b*, substantially as described.

2. The screw-rod E, having oil-cup D, bearing *d* in said oil-cup, and notch *h*, combined with the socket *b*, pin *e*, movable bearing F, and spring G, within the socket *b*, all arranged substantially as described.

3. The pedestal B, having nut *a* and packing *i*, screw-rod E, bearing *d*, and notch *h* on said rod E, in combination with the seat A, socket *b*, pin *e*, movable bearing F, and spring G, all arranged for operation, substantially as herein shown and described.

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