(No Model.) 2 Sheets—Sheet 1.

G. J. J. LUTHER.

SUPPORT FOR CHAIRS, DESKS, AND OTHER ARTICLES OF FURNITURE.

No. 356,074. Patented Jan. 11, 1887.

Fig. 1.

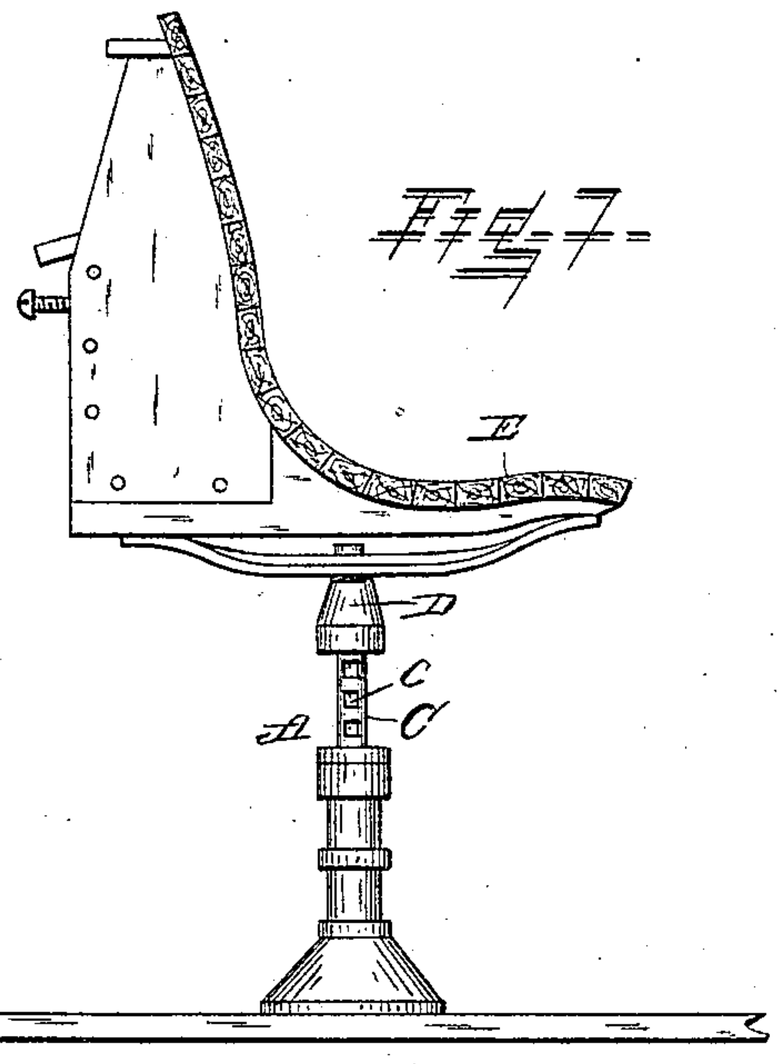
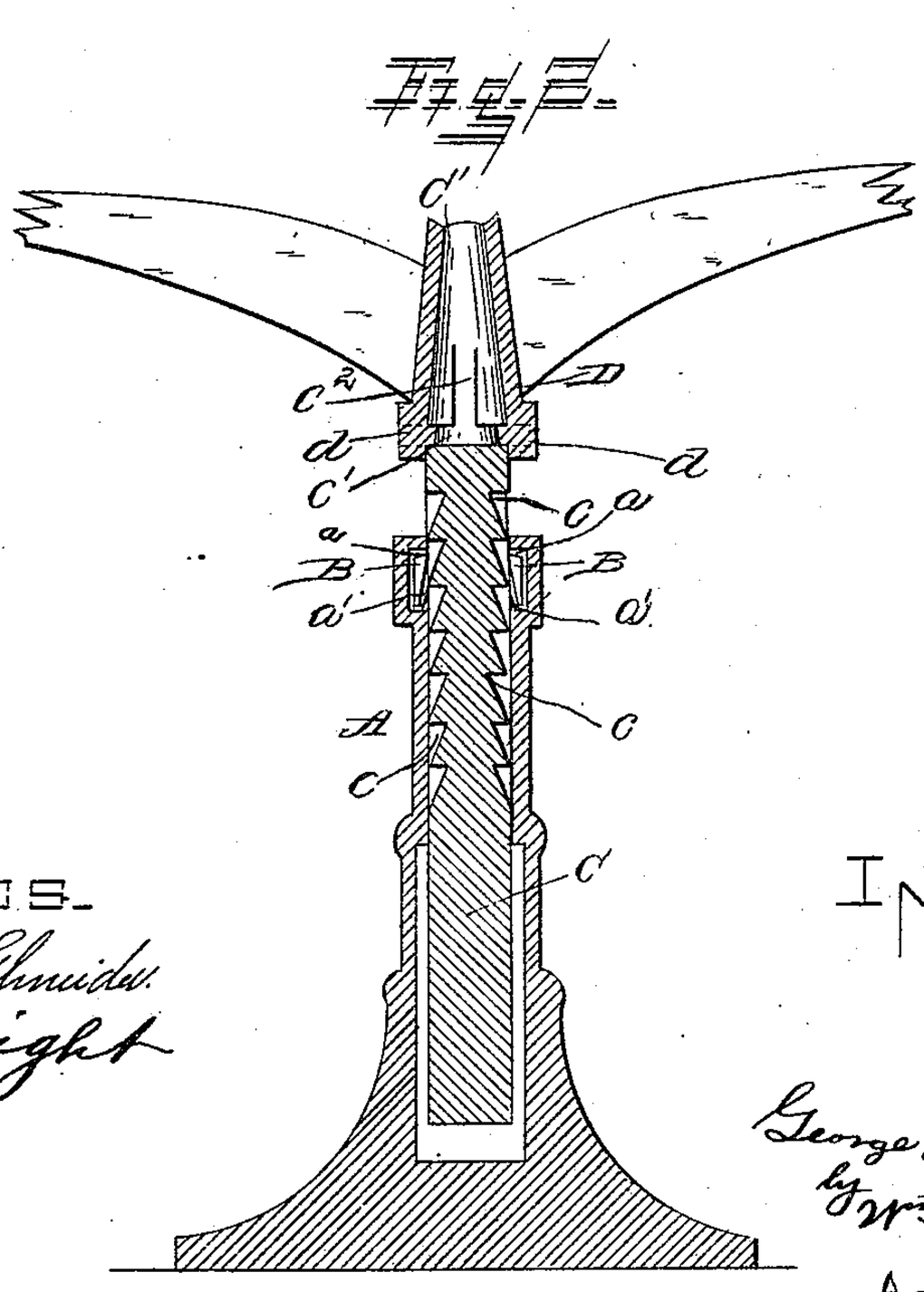


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

G. J. J. LUTHER.

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Fig. 3.

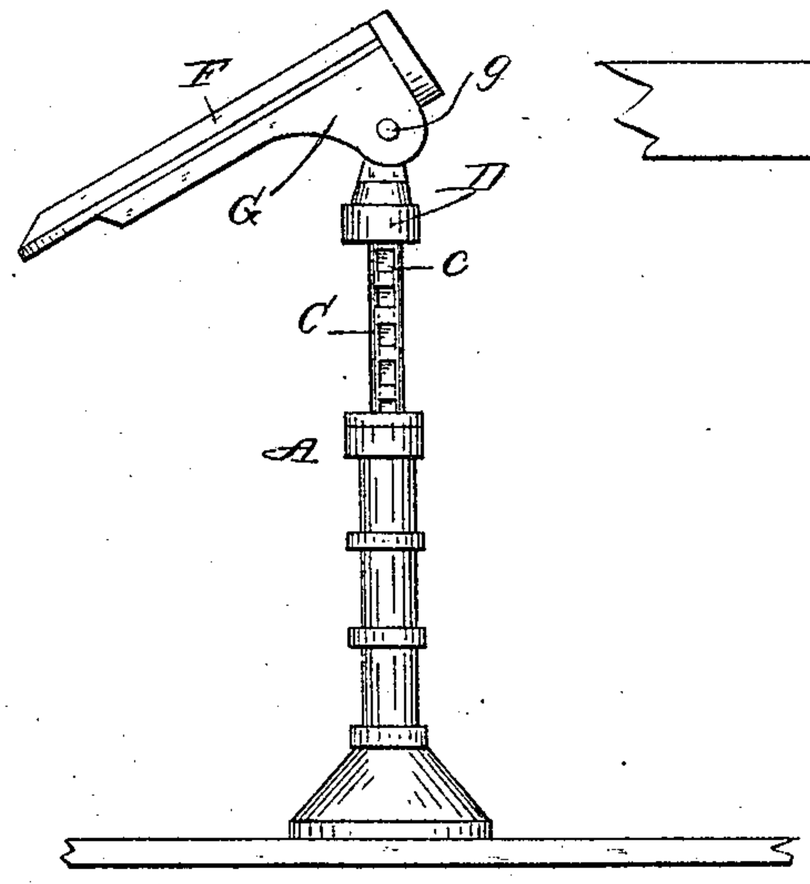


Fig. 4.

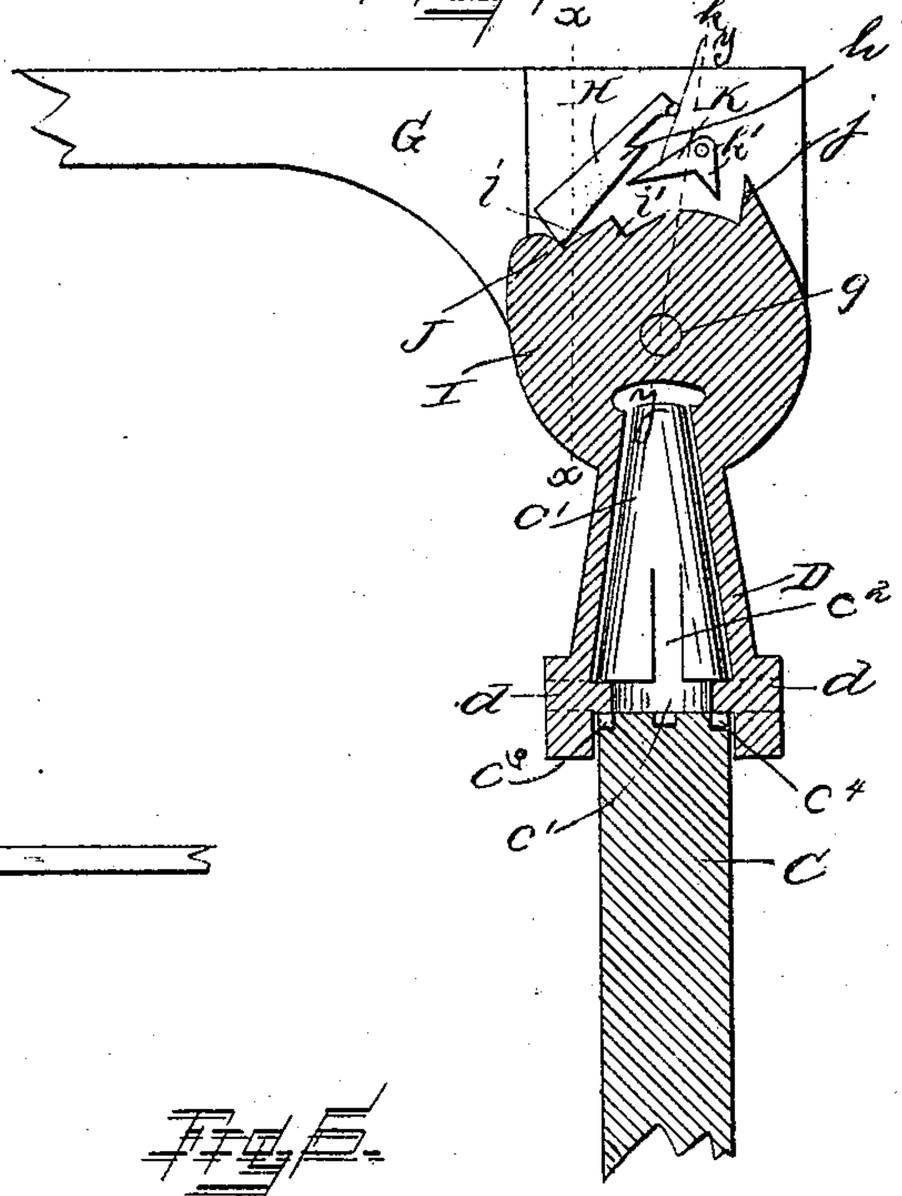


Fig. 5.

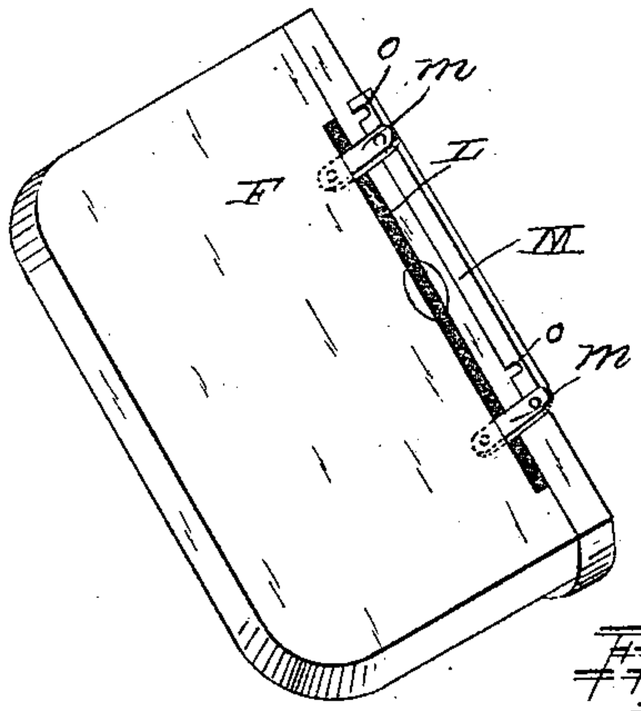


Fig. 6.

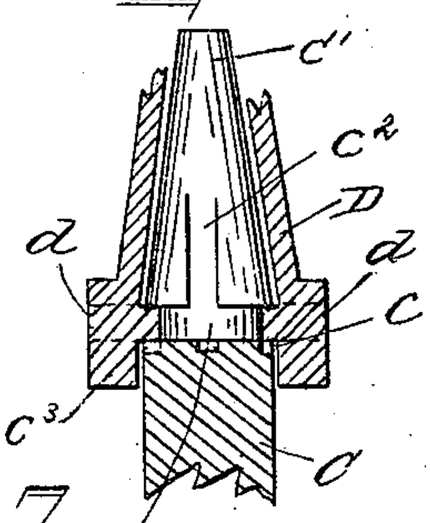


Fig. 7.

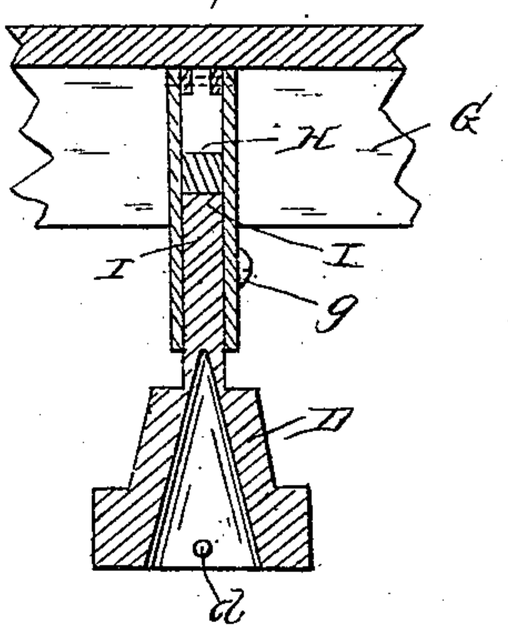
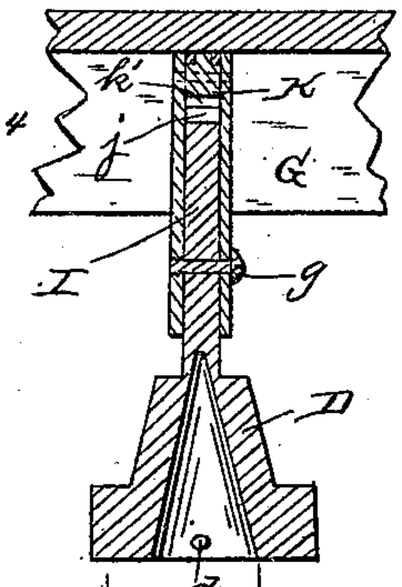


Fig. 8.



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UNITED STATES PATENT OFFICE.

GEORGE J. J. LUTHER, OF AURORA, INDIANA.

SUPPORT FOR CHAIRS, DESKS, AND OTHER ARTICLES OF FURNITURE.

SPECIFICATION forming part of Letters Patent No. 356,074, dated January 11, 1887.

Application filed March 1, 1886. Serial No. 193,590. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. J. LUTHER, a citizen of the United States, residing at Aurora, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Supports for Chairs, Desks, and other Articles of Furniture; 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.

This invention relates to supports for chairs, desks, and other articles of furniture.

It consists, partly, in the combination of a tubular standard and loose gravity-pawls arranged in recesses on opposite sides of its inner face with a vertically and axially movable bar or rod, which forms the immediate support for the chair, desk, or other article of furniture, and has its opposite sides provided with series of notches for engaging said gravity-pawls and thus regulating the vertical adjustment of the rod or bar and what it carries. A single gravity-pawl and a single set of notches might be substituted for the double arrangement above described, but would be less satisfactory.

Said invention further consists in a tilting part of an article of furniture and a notched disk to which it is pivoted, said disk being provided with a tooth, in combination with a pivoted pawl carried by said tilting part and arranged to engage by gravity a notch of said disk, and a second pivoted pawl also carried by said tilting part and arranged to come in contact with said tooth and lift the pawl first mentioned out of engagement with said notch.

Said invention further consists in a pawl having a shoulder and another pawl having legs, in combination with the casing to which they are pivoted, and the disk having notches and a tooth.

Said invention further consists in a disk having notches and a tooth and rounded projection, in combination with a pawl having a shoulder and another pawl having legs, the casing to which said pawls are pivoted, and the desk-top to which said casing is attached.

Said invention further consists in a desk-top having a slot formed therein, in combination with links having their lower ends pivoted to said desk-top within said slot, and a horizontal bar to which the upper ends of said links may fold down within said slot, as hereinafter described, when the book-rest is not in use, all substantially as hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 represents a vertical section from front to rear through a chair having a support constructed in accordance with my invention. Fig. 2 represents a vertical section through the pedestal and rod, taken at right angles to Fig. 1. Fig. 3 represents a side elevation of a desk embodying my invention, the desk-top being shown in a position inclined downwardly from the hinge or point of pivotal support. Fig. 4 represents a detail view of the casing. Fig. 5 represents a detail perspective view of the folding book-rest and the slot in the desk-top into which it fits when not used. Fig. 6 represents a detail view in vertical section of the upper end of the vertically-movable rod or bar (shown in Fig. 3) and of the cap with its inwardly-extending locking-pins. Figs. 7 and 8 represent vertical sectional views taken, respectively, on lines *x x* and *y y* of Fig. 4.

A designates a hollow cylindrical pedestal, closed at the bottom and provided on the inside, near its top, with recesses *a*. The inner faces of these recesses are open, except that each of them has a wall, *a'*, raised from the bottom of said recess, the face of said wall toward said recess being inclined upward in the direction of the axis of the pedestal. Each of these recesses contains a gravity-pawl, B, which has an inner face inclined to fit on the inclined face of wall *a'*, the result of this construction being that the gravity-pawl constantly tends under the influence of gravity to tilt over inwardly, so that it will rest on said wall.

C designates a cylindrical bar or rod having on each of two opposite sides, preferably those corresponding to the front and rear of the chair or other article of furniture to be supported, a series of notches, *c*, adapted to be engaged by said loose gravity-pawls B, respectively, whenever the rod or bar C is turned so that said notches come opposite said gravity-pawls. To relieve the bar from such engagement, I simply raise it a little, the gravity-

pawls being thus easily moved back into upright position within the recess by the action of the inclined lower faces of the notches against them. I then turn said bar, bringing the smooth parts of it opposite said gravity-pawls. It may then easily be raised or lowered to the required position of vertical adjustment and turned back, so that said gravity-pawls will fall into engagement with two of said notches again. The upper end of said rod or bar C is cone-shaped, as shown at C′, and provided with an annular groove, *c′*, running around the base of this cone, two vertical slots, c^2, on opposite sides, extending down through the exterior of said cone to said annular groove. The object of said grooves *c′* c^2 is to provide for the attachment and detachment of a cap, D, shaped somewhat like a candle-snuffer, which has two oppositely-arranged inwardly-extending studs, *d*, adapted to move in said grooves. By fitting these studs into grooves c^2, sliding the cap down till they reach groove *c′*, and turning the cap until they have passed the junction of the grooves *c′* c^2, the cap is locked to the rod. The reverse procedure, of course, separates it.

Sometimes, as illustrated in Figs. 4 and 6, I prefer to form recesses or square notches c^3 c^4 on the under side of groove *c′* and communicating therewith. There may be two or more pairs of these notches. When the studs *d* drop into them, the cap D is of course locked against axial motion. By means of this contrivance the seat or desk top carried by the said cap may be locked, facing to the front or to the side, or in as many other positions as the number of notches c^3 c^4 will allow.

Fig. 1 shows the chair or seat E attached to said cap without adjustability for inclination; but in many instances, especially where the support is to be used with a desk, this last is highly important. A disk, I, Fig. 4, is therefore made rigid with the said cap. The upper edge of said disk, forward of the center, is provided with two or more notches, *i i′*. In front of these is a rounded projection, J, and a rigid tooth, *j*, is raised from the rear part of said disk. The desk-top F has a casing, G, attached to its under side at the rear thereof, and the under side of this casing is open to receive said disk, the side plates being pivoted thereto by a transverse pintle, *g*. On this last said casing and desk-top turn as on a hinge. In the interior of this casing are two pawls, H and K, pivoted to the sides thereof. The pivotal point of pawl H is at its upper end, and its lower end is weighted, so that it tends to act as a gravity-pawl by dropping into notch *i* or notch *i′*. On the upper part of said pawl, on the side toward pawl K, a shoulder, *h*, is formed. Pawl K has approximately the shape of a pair of compasses, the leg *k*, nearer to pawl H, being longer than the other leg, *k′*. These legs extend obliquely downward, diverging, the pivot of the pawl being at the top in the middle angle corresponding in position to the joint of the compass. The leg *k′* is in proximity to tooth *j*, so that it may strike against said tooth when the desk-top is tilted far enough in that direction.

When the desk-top F is raised only far enough for pawl H to drop into engagement with notch *i*, it will do so and hold the said desk-top in the position which the latter then occupies. This may be either horizontal, as shown in Fig. 4, or inclined, as shown in Fig. 3. When the desk-top F is raised a little more, the pawl H will lock the said desk-top in the inclined or horizontal position then reached. When in this position, the leg *k′* of pawl K is in contact with the tooth *j*. By raising the desk-top F a little more the pressure of leg *k′* against the stationary tooth *j* causes pawl K to turn on its pivot, so that the leg *k* of said pawl wipes against pawl H and raises it until its lower end rests on the top of shoulder J, affording support to said top in a third position of adjustment. By raising the desk-top F still farther the same action of pawl in contact with tooth *j* lifts pawl H out of engagement with the disk I. The leg *k*, engaging with the shoulder *h*, holds pawl H out of such engagement until leg *k′* has passed tooth *j*. When this last occurs, the pawls fall by gravity into their first position.

When the desk is to be let down from any position of adjustment, it must first be raised sufficiently for said pawl K to raise and hold pawl H, as aforesaid, temporarily out of position to engage with said disk I. The pawl H is a gravity-pawl, but, being pivoted, is not a loose gravity-pawl, like pawls B, hereinbefore described.

The number of notches *i i′* may be increased to allow greater range of adjustability. A higher degree of inclination than any provided for by the construction shown would often be serviceable—for example, in reading while standing. To provide a rest for books under such circumstances, I make use of a horizontal bar, M, and two supporting-links, *m*. The latter are pivoted at their upper ends to said horizontal bar and at their lower ends to the desk-top F, within a long slot, L, formed in the latter near the hinged side thereof. When these links are turned to the right on their lower pivots, they necessarily fold into horizontal position within said slot, bringing said bar M down with them into the same. Said bar and links are then protected by the material of the desk-top F at the sides of slot L. The under edge of bar M is provided with recesses *o*, which fit, respectively, on the lower pivots of said links when the book-rest is thus folded down within said slot.

Of course my devices for vertical, axial, and inclined adjustment may be applied to any suitable articles of furniture, using, where desired, two or more supports instead of one. Of course only a single stud, *d*, a single vertical slot, c^2, and two recesses, c^3, need be employed.

I am aware that it is not broadly new to provide a chair or desk with a standard hav-

ing serrations and vertically movable in a tubular pedestal, in combination with gravity-pawls, which are pivoted in slots or openings of said pedestal and arranged to lock said standard in any point of vertical elevation. I am also aware that it is not broadly new to employ a pawl which engages with a shouldered disk or head for locking a desk top in any particular degree of inclination, and a dog to release said pawl from such engagement and allow said desk-top to fold down. I do not claim either of these devices, broadly.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a tubular pedestal having recesses at opposite points of its interior, gravity-pawls loose in said recesses and arranged to drop inward, and a rod or bar vertically and axially movable within said pedestal and having notches arranged in series to engage said gravity-pawls, substantially as set forth.

2. The vertically-movable rod or bar having an annular groove near its upper end, and a vertical groove or grooves communicating therewith, in combination with a cap which has stud or studs extending inwardly, for the purpose set forth, said cap serving as a support for the upper part of an article of furniture, substantially as set forth.

3. The rod C, having annular groove c', vertical grooves c^2, and recesses c^3 c^4, on the under side of the latter, in combination with the cap D, having inwardly-extending studs d, substantially as and for the purpose set forth.

4. Pawl H, having shoulder h, and pawl K, having legs k k', in combination with the casing G, to which they are pivoted, and the disk I, having notches i i' and tooth j, substantially as and for the purpose set forth.

5. Disk I, having notches i i', tooth j, and rounded projection J, in combination with pawl H, having shoulder h, pawl K, having legs k k', the casing G, to which said pawls are pivoted, and the desk-top F, to which said casing is attached, all substantially as and for the purpose set forth.

6. A desk-top, F, having a slot, L, formed therein, in combination with links m, having their lower ends pivoted to said desk-top within said slot, and horizontal bar M, to which the upper ends of said links are pivoted in order that said bar and links may fold down within said slot, as described, when the book-rest is not in use.

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

GEO. J. J. LUTHER.

Witnesses:
ALB. POHL,
JOHN A. NEES.