June 24, 1930. H. A. CONSOR ET AL 1,765,568

VISIBLE INDEX SYSTEM

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Fig. 1

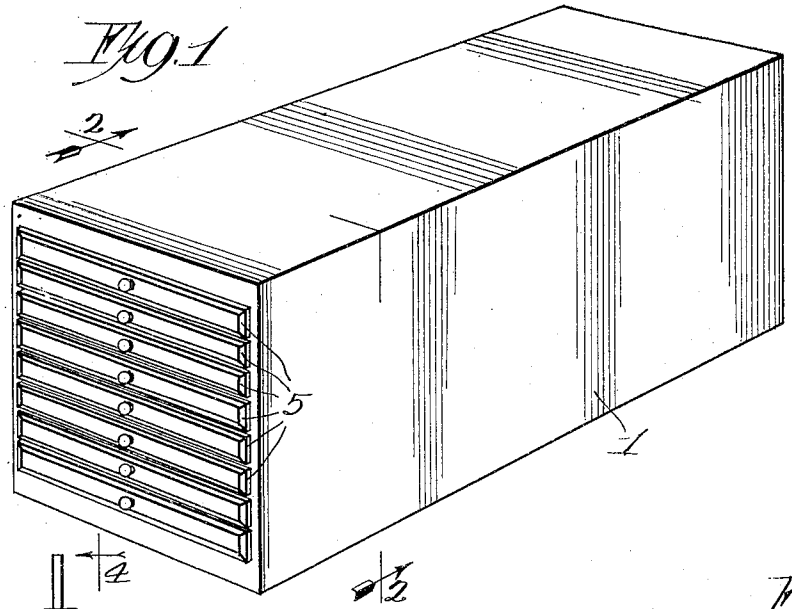


Fig. 3

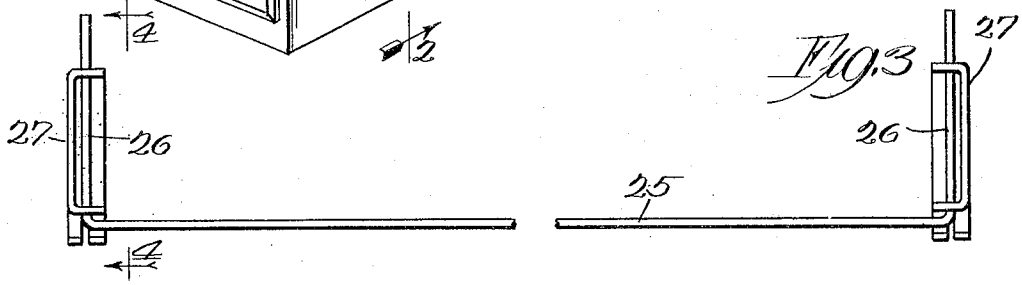


Fig. 2

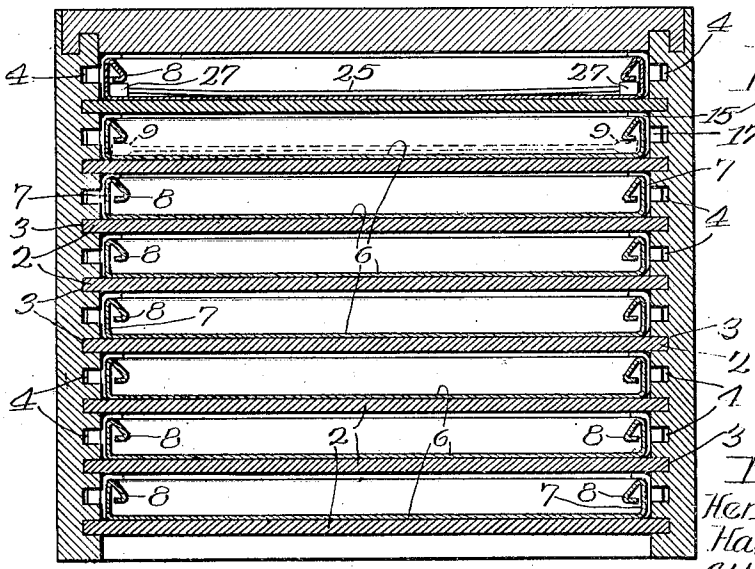
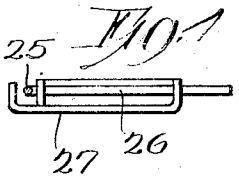


Fig. 1



Inventors:
Herbert A. Consor
Harold L. Matthes
Albert G. Wuest
By Arthur A. Durand Atty.

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Fig. 5

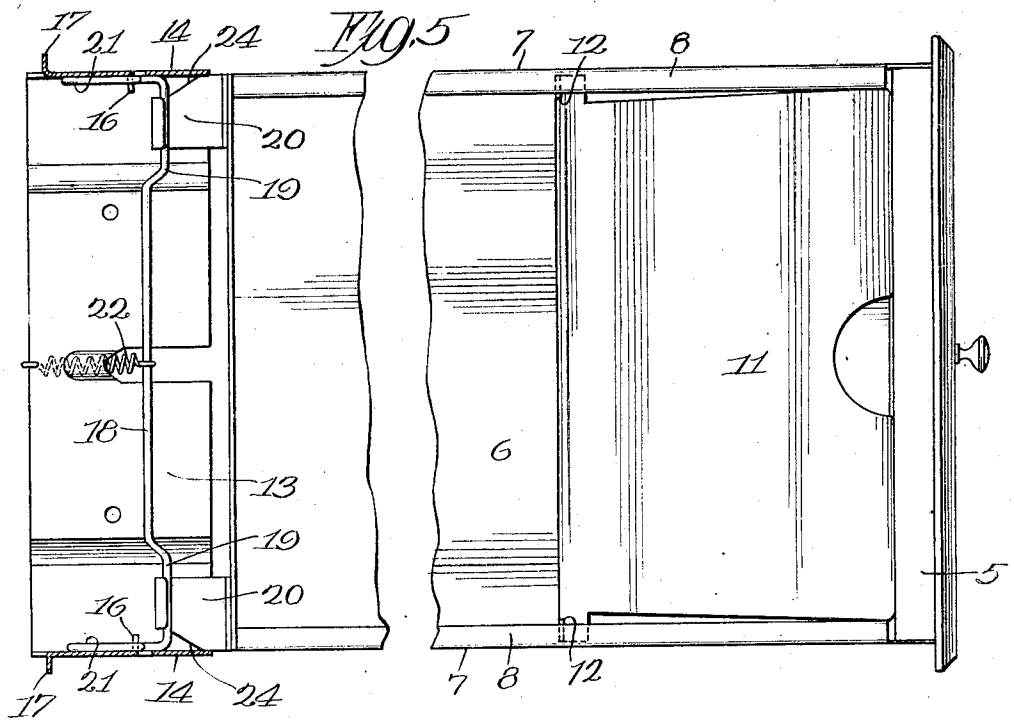


Fig. 6

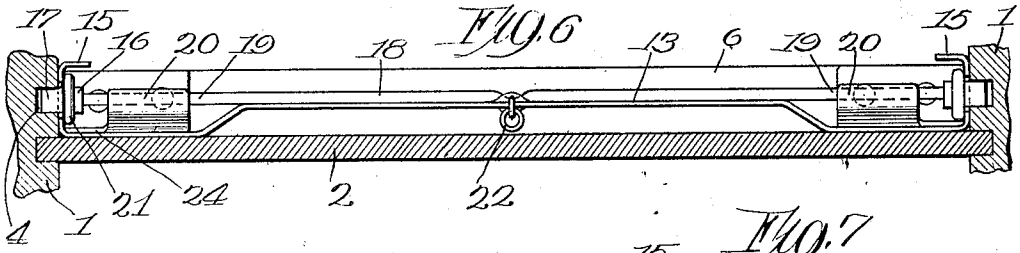


Fig. 7

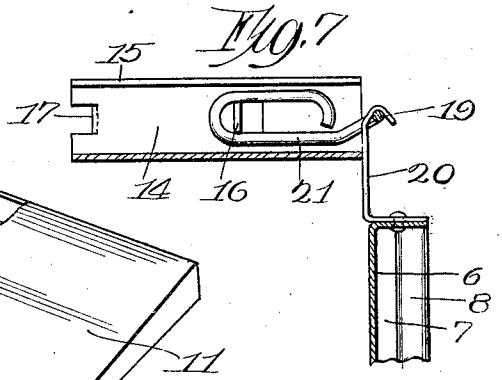
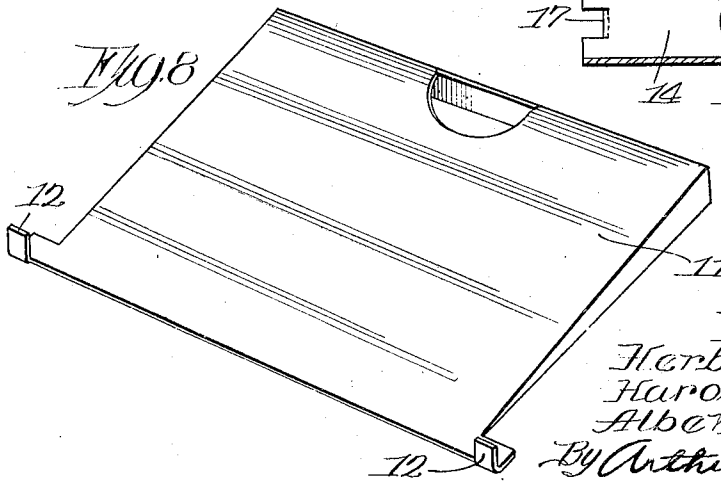


Fig. 8



Inventors:
Herbert A. Consor
Harold L. Matthes
Albert G. Wuest
By Arthur H. Durand
Atty.

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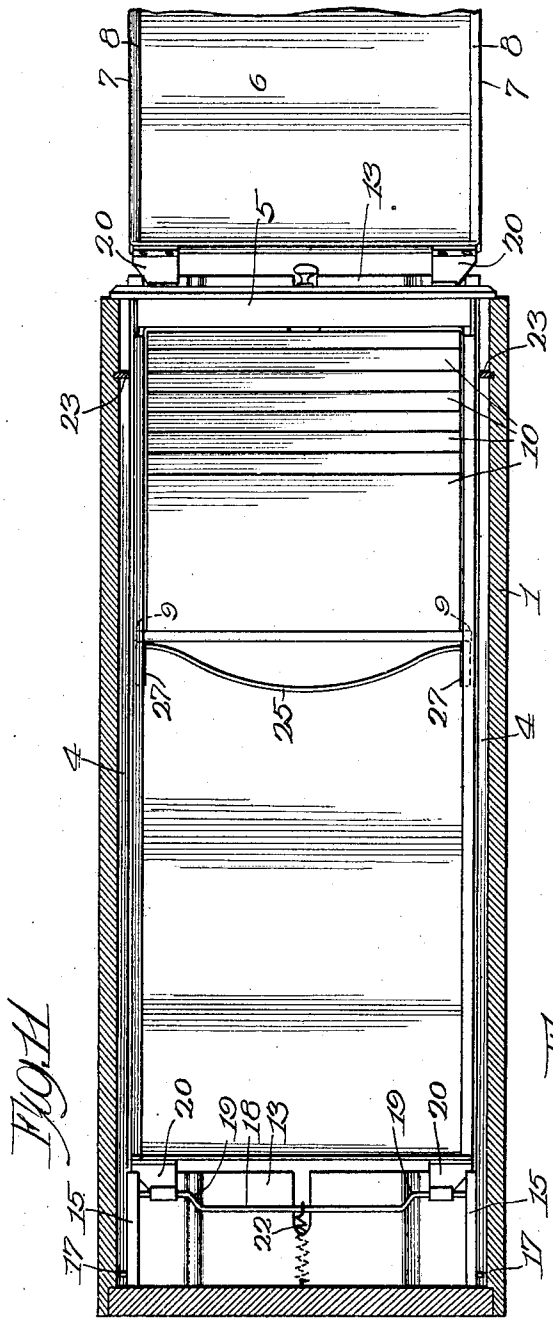


Fig. 11

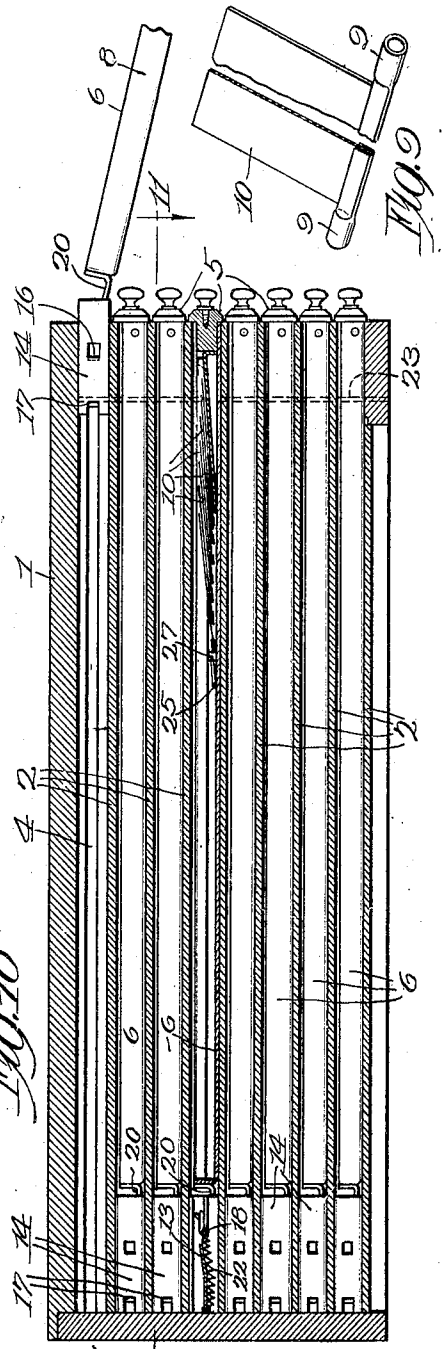


Fig. 9

Fig. 10

Inventors:
Herbert A. Consor
Harold L. Matthes
Albert G. Wuest
By Arthur H. Durand
Atty.

Patented June 24, 1930 1,765,568

UNITED STATES PATENT OFFICE

HERBERT AUSTIN CONSOR, HAROLD LOUIS MATTHES, AND ALBERT G. WUEST, OF MONROE, MICHIGAN, ASSIGNORS TO THE WEIS MANUFACTURING COMPANY, OF MONROE, MICHIGAN, A CORPORATION OF MICHIGAN

VISIBLE INDEX SYSTEM

Application filed September 12, 1925. Serial No. 55,993.

This invention relates to so-called visible index cabinets and drawers therefor, of the kind in which the index cards are detachably held on a tray or drawer which slides freely into and out of the cabinet, and in which the said cards are arranged flatwise in overlapping relation, when the tray or drawer is pushed into the cabinet, but are adapted to be swung upwardly and spread apart for the purpose of inspection thereof, when the tray or drawer is pushed out.

Generally stated, the object of the invention is to provide a novel and improved cabinet and drawer construction, and a novel construction of slide and other elements, tending to increase the general efficiency and desirability of a visible index system of this particular character, as will hereinafter more fully appear.

It is also an object to provide certain details and features of construction and combinations tending to increase the general efficiency and desirability of a visible index structure of this particular character.

To these and other useful ends, the invention consists in the matters hereinafter set forth and claimed, and shown in the accompanying drawings, in which

Figure 1 is a perspective of a visible index cabinet and drawer construction, embodying the principles of the invention;

Figure 2 is a transverse section, on a larger scale, on line 2—2 in Figure 1;

Figure 3 is an enlarged detail view of the follower employed on each drawer of said cabinet;

Figure 4 is a detail section on line 4—4 in Figure 3;

Figure 5 is a plan view of one of the drawers of said cabinet, with certain portions thereof in horizontal section, and with certain portions shown broken away for convenience of illustration;

Figure 6 is a rear end elevation of the drawer and slide construction shown in Figure 5, on a larger scale, with the adjacent portions of the cabinet shown in vertical section;

Figure 7 is a detail sectional view, on the same scale as Figure 6, showing the manner in which the drawer is supported by the slide, when the drawer is pushed out and allowed to hang down vertically;

Figure 8 is a perspective of the inclined plane employed in each drawer to support the cards;

Figure 9 is a perspective, with portions broken away for convenience of illustration, of one of the cards and card holders employed in connection with the drawers shown in the drawings;

Figure 10 is a vertical longitudinal section of the cabinet and drawers, showing the upper drawer and slide pulled out, this view being on substantially the same scale as Figure 1; and

Figure 11 is a horizontal section on line 11—11 in Figure 10, showing one of the lower drawers pulled out, and broken away for convenience of illustration.

As thus illustrated, the cabinet 1 is rectangular in shape, and may be constructed of wood, or any other suitable material, being provided internally with horizontal partitions 2 inserted in grooves 3, as shown, these grooves being formed horizontally on the inner surfaces of the side walls of the cabinet. Intermediate grooves 4 are also formed parallel with said grooves 3, as shown, for a purpose which will hereinafter appear.

Each drawer 5 is formed of sheet metal and has a sheet metal bottom wall 6 and upstanding side walls 7, as shown in Figure 2 of the drawings. These side walls are bent down inside to form overhanging portions 8, and below these overhanging portions the visible card holders 9 are inserted, so that the cards 10, detachably secured to said card holders, are free to swing upward and be separated, such as is necessary for inspection. The card holders 9 are inserted by skewing them around obliquely to the drawer, so that they will rest upon the bottom wall of the drawer, and by then straightening them around until they are at right angles to the drawer so that the end portions of the holders 9 are then held under the overhanging portions 8 of the drawer, but with perfect freedom of the holders to slide longitudinally of the drawer.

An inclined plane 11 is inserted in the front

portion of each drawer, as shown, with the upturned portions 12 underneath the overhanging portions 8, so that this inclined plane can slide longitudinally of the drawer. The cards 10 lie in overlapping relation, upon the said inclined plane, so that the cards at the front end of each drawer do not lie flatwise upon the bottom of the drawer but are held in slightly raised position, as shown in Figure 10, and such inclination of the cards is maintained throughout the length of each drawer, obviously, by this arrangement.

The sheet metal slide 13, which is at the rear of each drawer, is provided at opposite sides with the upturned portions 14, which are in turn bent over and inwardly to provide horizontal portions 15 at the top. Below these horizontal portions 15, the sheet-metal slide, at each side, is provided with inturned lugs 16 and with outturned lugs 17, as shown.

The transverse rod 18 is formed of bent portions 19 to be engaged by the sheet-metal hooks 20 formed on the rear end of each drawer, and this rod is provided with longitudinal and parallel portions 21, in the form of loops, as shown in Figure 7, each loop extending around one of the lugs 16, previously mentioned, whereby the rod 18 is capable of sliding relatively to the sheet-metal slide 13 in a direction longitudinally of the drawer. Normally, the rod is held against such relative movement by the coil spring 22 that connects the rod to the rear edge of the sheet-metal slide 13, as shown. The lugs 17 travel in the grooves 4, as shown, and these grooves have stops 23 near the front of the cabinet, so that the outward movement of the slide 13 toward the front of the cabinet is limited by these stops. When the stops 23 engage the lugs 17, the slide 13 comes to a standstill, but because of the relative sliding connection between the slide 13 and the rod 18, the latter continues to move outward against the tension of the spring 22, as shown in Figure 7, until the drawer can hang down vertically, the hooks 20 supporting the drawer on the portions 19 of the rod, in the manner shown. The hooks 20, it will be seen, are beveled at 24 to facilitate reinsertion of the drawer in the cabinet, when the drawer is pushed back in the cabinet, in a manner that will be readily understood.

The cards and card holders, of course, can be of any known or approved form, but the form shown in Figure 9 may be employed, and is operative in connection with the sheet-metal drawers or trays shown and described. When a drawer or tray is pulled out and allowed to hang down, as indicated in Figure 7, the cards can be spread apart for inspection, and can be manipulated easily in a manner to facilitate inspection thereof.

When the drawer is raised for reinsertion in the cabinet, the spring 22 will pull the rod 18 back into normal position, and the insertion of the drawer will push the slide 13 back to normal position, as shown in Figures 10 and 11 of the drawings. When a drawer is pulled outward, the slide 13 moves in unison therewith until the lugs 17 strike the stops 23, and then the slide 13 stops moving, but the rod 18 moves outwardly a further distance, as previously explained, so as to carry the rear or inner end of the drawer or tray entirely outside of the cabinet, thereby to permit the drawer to hang down vertically, if so desired.

It is desirable, of course, to hold the card holders 9 together, and for this purpose a follower of the kind shown in Figure 3, and as indicated in Figure 11, is employed in each drawer or tray. This follower comprises a swinging, or flexible, or resilient rod 25 having rearwardly bent end portions 26 that extend through the sheet-metal pieces 27, as shown. These sheet-metal pieces 27 slide readily under overhanging portions 8 of the drawers or trays, when the follower is in position. The rod 25, however, is longer than the distance between the sides of the tray or drawer, and for this reason the rod must be sprung or bowed to permit insertion of the follower in the drawer or tray. Preferably, the rod 25 is bowed or sprung upwardly, and after the sliding pieces 27 are in position, the bowed rod is then pushed downwardly until it retains itself against the bottom of the drawer or tray, in the manner shown in Figure 11 of the drawings. The follower is easily manipulated and moved from one position to another, when necessary or desirable, as in the insertion and removal of cards and card holders.

The cards 10, of course, can be of any suitable character, and by cards is meant any sort of flat element or member which can be folded down and arranged in overlapping relation. A connection between each drawer and its follower provides a hingelike connection to permit the drawer or tray to swing vertically and relatively to its follower. As shown, if the cabinet is resting upon a table, any drawer can be pulled out and allowed to assume an inclined position by resting its outer end upon the table, or, if it be desired to have the drawer hang vertically when pulled out, the cabinet can then be mounted on any suitable support, or can be brought over closer to the edge of the table so that the drawer, when pulled out, will hang vertically, as shown. Of course, each drawer or tray is also detachable from its allotted follower, as the hooks 20 are of such a character that they can be unhooked from the rod portions 19, should it be desired to entirely detach any drawer or tray from the cabinet structure.

From the foregoing, it will be seen that additional or new cards and holders may be inserted readily at any desired point, by

moving the follower back and separating the cards and holders at the desired point or points, and by inserting the new card or cards and holders in the manner explained.

As shown in Fig. 10 of the drawings, it will be seen that the inclined plane 11 has its highest point disposed a distance below the tops of the side portions of the tray, thereby providing clearance for the cards below the overlying wall which holds the cards down. In addition, it is this overlying wall which necessitates the pivotal connections between the resilient wire 26 and the slide portions 27, as this resilient wire must be pressed down upon the bottom of the tray to permit the latter to be pushed into the cabinet. Hence, after this wire has been bowed, in upright position, to permit the insertion of the card follower in the tray, the said wire is then rotated on its pivotal end portions to permit it to be pressed down flatwise against the bottom of the tray, thereby permitting the tray and the cards to be pushed into the cabinet.

Without disclaiming anything, and without prejudice to any novelty disclosed, what we claim as our invention is:

1. In a visible index system, the combination of a cabinet, a member slidable therein, a follower for the inner end of the member, the cabinet having means to provide guides for said member and follower, and to keep the follower in the same plane, means to limit the outward movement of the follower, a spring controlled lost motion connection between the follower and said member permitting relative movement between said member and the follower in the plane thereof, by movement of the member away from the follower, after the follower reaches the limit of its outward movement, so that the said member may be free to swing down and hang vertically, said connection having spring means on the follower to draw the member and follower toward each other a distance when the member is pushed back in the cabinet.

2. A structure as specified in claim 1, said follower comprising a sheet metal plate, and said connection comprising a bent rod movable on said plate with the spring normally resisting relative horizontal movement between said rod and plate, together with hooks on the inner end of said member to engage said rod, forming a hinge connection permitting the member to swing vertically and relatively to the follower.

3. A structure as specified in claim 1, said connection comprising hooks on the rear end of said member, said follower having means horizontally movable thereon to engage said hooks, forming a hinge connection permitting the member to swing vertically and relatively to the follower.

4. In a visible index system, the combination of a cabinet, a member slidable in and out of said cabinet, a follower for said member, and spring controlled means on said follower to permit relative movement between said member and follower, after the follower reaches the limit of its forward sliding movement, operative to draw the member and follower a distance toward each other when the member is pushed back into the cabinet.

5. A structure as specified in claim 4, said spring controlled means comprising a bent rod on said follower subject to the spring control and comprising means permitting a relative horizontal sliding action between said rod and follower, said rod being disposed upon and above the follower.

6. A structure as specified in claim 4, said spring controlled means comprising an element movably mounted upon said follower, and comprising a spring permitting relative horizontal movement between said element and follower, after the follower reaches its said limit of movement, means upon said member to detachably engage said element.

7. A structure as specified in claim 4, said spring controlled means comprising a hinged joint intermediate of the said member and follower, said follower having means movable horizontally thereon whereby said member is adapted to swing down.

Specification signed this third day of Sept., 1925.

HERBERT AUSTIN CONSOR.
HAROLD LOUIS MATTHES.
ALBERT G. WUEST.