C. E. PITTENGER.

INDEX CABINET.

APPLICATION FILED DEC. 31, 1913.

1,130,332.

Patented Mar. 2, 1915.

3 SHEETS—SHEET 1.

FIG. 1.

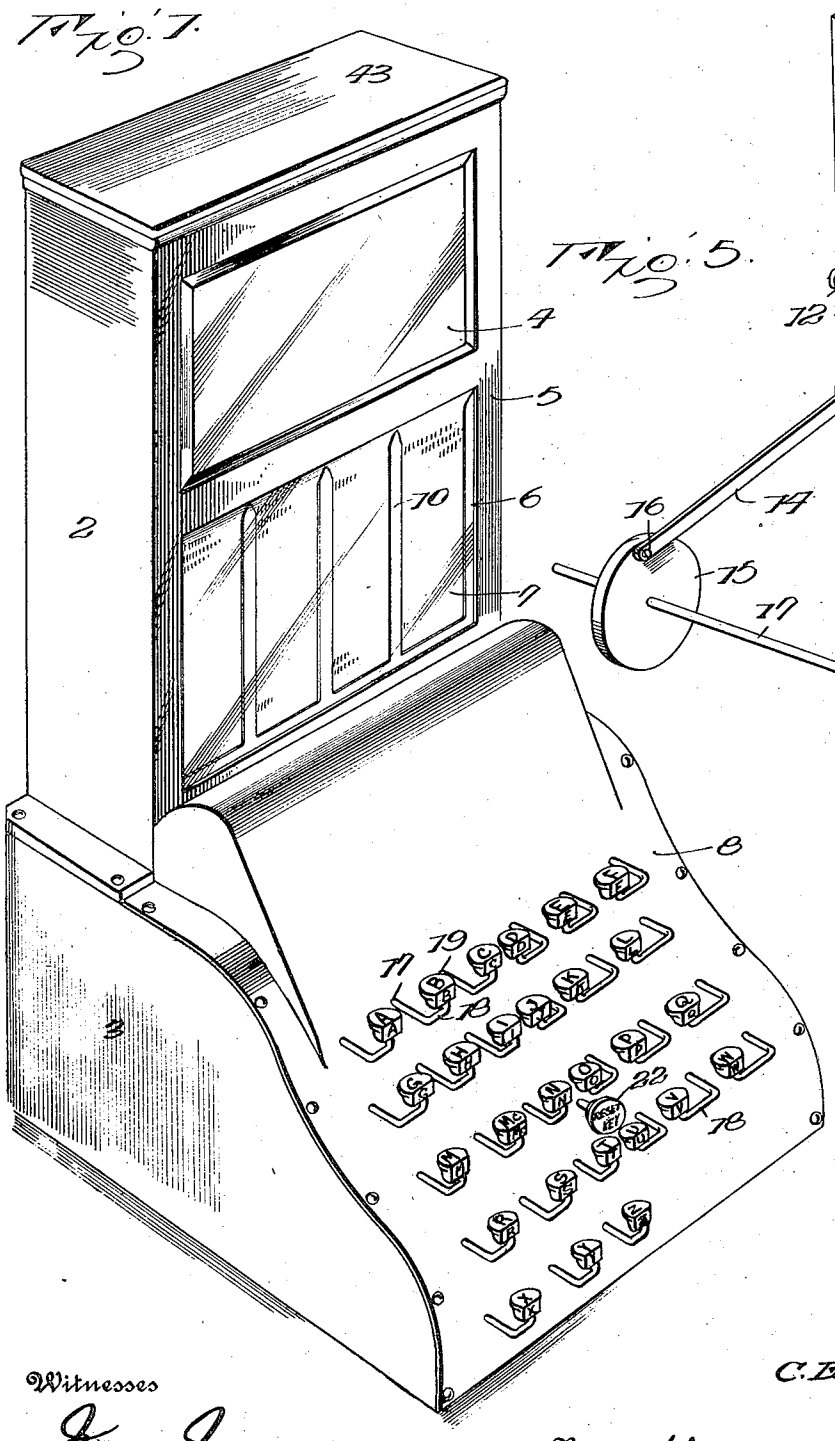


FIG. 5.

Witnesses

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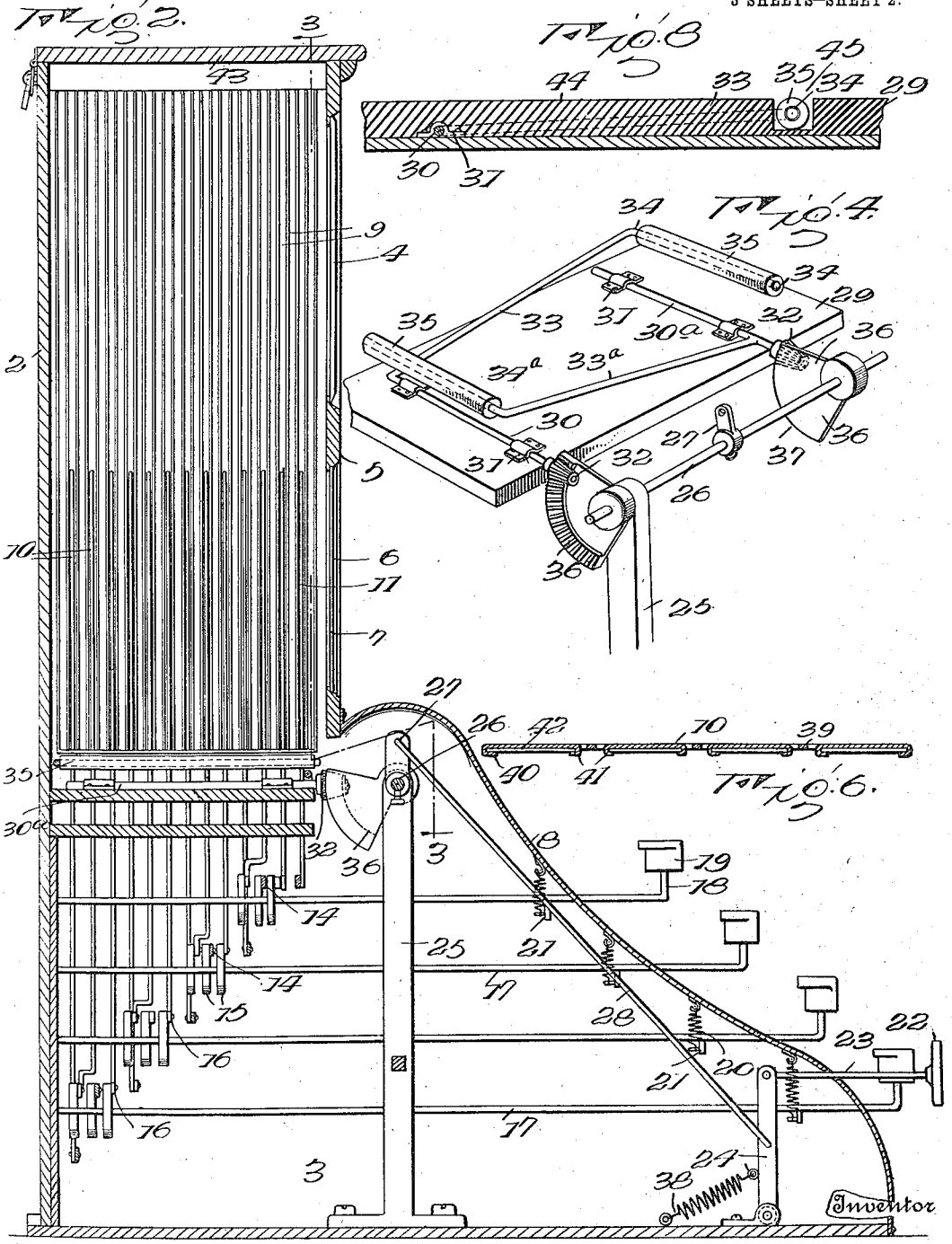
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3 SHEETS—SHEET 2.



Witnesses

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3 SHEETS—SHEET 3.

Fig. 3.

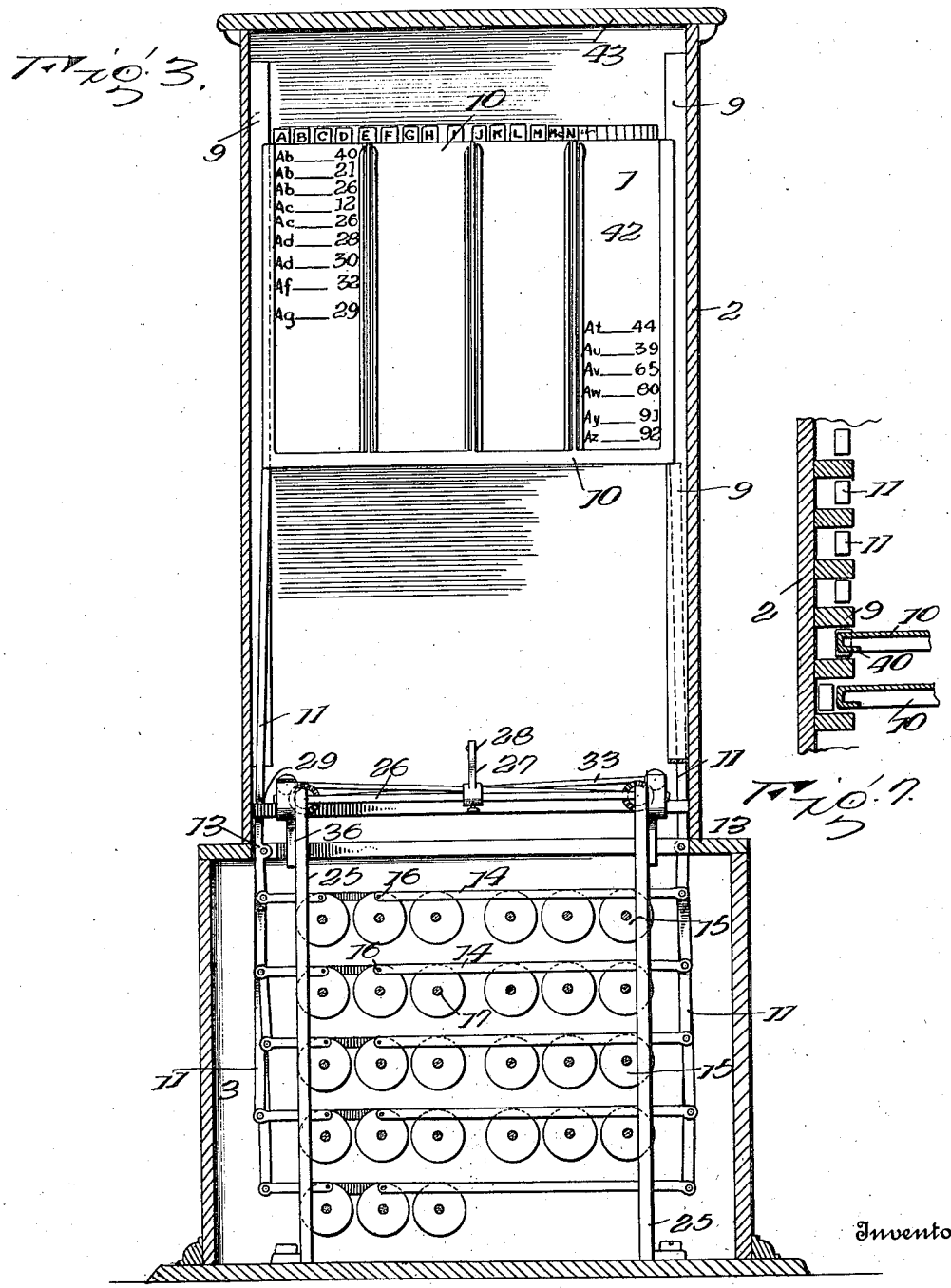


Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES E. PITTENGER, OF FALLS CITY, NEBRASKA, ASSIGNOR OF ONE-HALF TO JOHN WHITWORTH, OF FALLS CITY, NEBRASKA.

INDEX-CABINET.

1,130,332. Specification of Letters Patent. Patented Mar. 2, 1915.

Application filed December 31, 1913. Serial No. 809,785.

To all whom it may concern:

Be it known that I, CHARLES E. PITTENGER, citizen of the United States, residing at Falls City, in the county of Richardson and State of Nebraska, have invented certain new and useful Improvements in Index-Cabinets, of which the following is a specification.

My invention relates to index cabinets and particularly to automatic indexes.

The primary object of my invention is the provision of a mechanically-operated index for use in posting accounts and the invention is designed for the purpose of making it quicker and easier to find the number of a certain account than by using ordinary index books or card catalogues.

A further object of the invention is to provide an index cabinet so constructed that any desired index card may be shifted to a display position by the depression of a key, and still another object is the provision of means whereby one or more index cards may be shifted from a display position to a concealed position within the cabinet by the actuation of a lifting key.

A further object is to provide a very simple and easily operated mechanism whereby these results may be achieved.

A further object of the invention is the provision in a cabinet of the character described of index slides and sheets so formed as to permit the ready introduction of slips of paper or cardboard upon which the names indexed might appear, these slips being readily removable and replaceable to permit corrections or additions.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view of an index cabinet constructed in accordance with my invention. Fig. 2 is a vertical section of such a cabinet. Fig. 3 is a front elevation of the cabinet with the lower part of the casing broken away and the key-actuating rods shown in section. Fig. 4 is a fragmentary perspective detail view of the card lifting mechanism. Fig. 5 is a fragmentary perspective view of one of the card latches or detents and the operating means therefor. Fig. 6 is a transverse section through one of the card holders or index members. Fig. 7 is a fragmentary horizontal section of one of the side walls of the case 2, showing the guides 9 and the latches 11. Fig. 8 is a fragmentary horizontal section of the floor or platform 29 showing the rubber covering thereon.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to these drawings, and particularly to Figs. 1 and 2, it will be seen that exteriorly my invention comprises a more or less rectangular case or housing, designated 2 and including a base designated 3 which forms a continuation of the case 2. The front of the case 2 above its middle is closed by a panel 4. This panel may be in the form of a mirror or of any suitable construction and is preferably opaque. Below the panel 4 the lower portion 5 of the case 2 is open, as at 6, this opening preferably being traversed by a transparent pane 7. The front 8 of the basal portion of the case is preferably downwardly curved or inclined, as illustrated plainly in Figs. 1 and 2 to permit of the proper arrangement and placing of the actuating keys.

As shown in Figs. 3 and 7, the inside walls of the upper case 2 are formed with vertical guides 9 spaced from each other to provide a plurality of channels or grooves within which the index holders or members 10 operate. The particular construction of these index holders will be later described. The holders containing the index slips shift up and down in the guide grooves formed by the members, in the manner of window sashes.

When the index holders are raised to their uppermost position they are supported behind the back panel 4 and are entirely concealed. When, however, they are allowed to be dropped by the mechanism hereinafter to be described, they will drop downward in front of the window or transparent pane 7 so that they will be readily observed.

The case 2 will be of relatively great depth and therefore contain a very large number of these index holders, or it may be relatively shallow and contain comparatively few of the index holders. Of course, this is a matter that will depend upon the extent of the indexing.

For the purpose of holding the index holders 10 in a raised position within the

case 2 I provide, as illustrated in Fig. 5, for each holder, a latch or detent 11 which is disposed in one of the grooves formed between the guides 9 and which is pivoted at 12 upon a pin 13, which extends from front to rear of the casing. Each latch is connected by means of a transverse connecting rod 14 to the wrist-pin of a crank. As illustrated, this crank has the form of a disk 15 with a wrist-pin 16 to which the rod 14 is connected. There is a crank or disk 15 for each one of the latches 11 and each disk 15 is mounted upon a horizontally disposed shaft 17 which is mounted in suitable bearings and extends from front to rear of the machine and projects out through the front casing plate 8, as shown clearly in Fig. 2. For the purpose of rotating the shaft 17, the shaft is formed at its outer end where it projects out beyond the plate 8 with a crank-arm 18 carrying at its end a button or key 19. Normally holding the crank-shaft from rotation is a spring 20 which is connected at its upper end to any suitable support, as for instance, to the plate 8 and which at its lower end is connected to an arm 21 projecting from the shaft 17. It will be seen that upon a depression of the key 19 the shaft 17 will be locked against the force of the spring 20. This will turn the crank 15 through a certain angular distance in the direction of the arrow in Fig. 5 and this will act to force the upper end of the latch 11 outward or toward the wall of the casing, thus causing this upper end of the latch to escape from beneath the corresponding holder 10, whereupon the weight of the holder will cause it to drop into such position that it is observable through the transparent pane or window 7. When the holder is forced upward again, it will force the upper end of the latch 11 outward and then the spring 20 will cause this latch to spring inward beneath the lower edge of the holder and thus support the holder in a raised position.

I have now described the particular construction of each of the latches 11 and the operating means therefor. It will of course be understood that there are as many latches 11 as there are holders 10, the latches being disposed in staggered relation and on opposite sides of the case 2. Each of these latches is exactly of the same construction and each is connected by a connecting rod to the crank on a corresponding shaft 17, each shaft being provided with a key. Preferably there are at least as many holders 10 as there are letters of the alphabet, and there are as many keys as there are holders. Each key 19 is designated by a letter, as will be seen clearly in Fig. 1, and the holder which is actuated by any particular key contains thereon the names indexed under this letter, whatever it may be.

Of course, means must be provided for raising the holders from their lower position to a position in the upper part of the cabinet after they have dropped, and to this end I provide the lifting key 22 which projects out through the opening in the front 8 and which, as illustrated, moves horizontally. This key 22 is connected by means of a rod 23 to a lever 24 which is pivotally mounted at its lower end. Supported in uprights 25, or in any other suitable manner is a transverse rock-shaft 26 which has projecting from it an arm 27 connected to the lever 24 by means of a rod 28.

Forming the lower end of the case 2 is a plate or platform 29 upon which is mounted the parallel oppositely disposed rock-shafts 30 and 30ª. These rock-shafts, as illustrated, are mounted in bearings 31 attached to the plate or floor 29. Each rock-shaft carries at its forward end a bevel gear wheel 32. One rock-shaft 30 has an angularly projecting arm 33 disposed at its rear end. This arm 33 extends transversely across the floor or plate 29 and is then forwardly bent as at 34 and carries upon it a rubber roller 35. The other rock-shaft 30ª carries an arm 33ª at its forward end, this arm extending laterally toward the rock-shaft 30 and being inclined slightly rearwardly and having a bent extremity 34ª upon which is mounted a cushion or roller of rubber 35. The two rollers or cushions 35 are disposed in alinement with each other and are of such length as to extend beneath all of the holders 10 so that any one of the holders when it is in its depressed position will rest upon the cushion members 35 of both of the rock-shafts.

Mounted upon opposite ends of the shaft 26 are the sector gears 36 having gear teeth 37 engaging with the bevel gear wheels 32. Now it will be seen that upon the key 22 being drawn outward, the shaft 26 will be rocked and, its sector gears engaging with the bevel gears 32, cause the shafts 30 and 30ª to be rocked in opposite directions and thus raise the members 35 upward within the casing 2, lifting whatever holders may have dropped upon the members 35 to such height that they will pass the latches 11 and will be caught between the latches, the latches acting in this sense as pawls. A spring 38 will act to throw the lever 34 and its attached parts back to their original position and this will turn the lifting arms 33 and 33ª back to their original positions automatically. While I have illustrated the resetting or lifting key 22 as being in the form of a rod 23 having a head, which head is adapted to be pulled outward in order to lift the holders to their original position, it is to be understood that many other arrangements might be made for operating the resetting or lifting mechanism without varying the principle upon which the mechanism

operates. The same is true of the unlatching keys 19 and the particular means for operatively connecting these keys to the crank 15. I do not wish, therefore, to be limited to this exact construction, as it is apparent that many mechanical equivalents might be employed therefor.

While I do not wish to be limited to any specific form for the index slip holders, I preferably form each holder as illustrated in Fig. 6, of a plate 39, preferably formed of thin sheet metal such as aluminum, as light as possible, each plate being provided with means for containing a plurality of slips of paper or cardboard, and as illustrated, each plate is formed at its margins with the integral flanges 40 and at a plurality of points with the vertical slip guides illustrated as formed by punching out and bending up strips 41 from the material of the plate 39.

It is obvious that slips 42 of paper or cardboard may be disposed vertically in the guideways so formed, and be readily removed or replaced therein. As before stated, each holder will correspond to one or more letters of the alphabet, thus the first holder in its order will correspond to the letter A, the second holder to the letter B, etc., there being a plurality of holders, for the same letter, where there are any names to be indexed under that letter, or one holder may be used for a plurality of index letters, as in the case of X, Y and Z.

The operation of my invention will be obvious from what has gone before. The names to be indexed, or the initials of such names (according to the index system used) may be placed on the slips 42 in conjunction with the numerals referring to the ledger pages or to the ledger pages of the account. The upper end of the case 2 is closed by means of a hinged door 43, whereby these several index holders may be readily withdrawn or placed in position. The index holders are normally supported in the upper portion of the cabinet by means of the latches 11 and when it is desired to use the index, the appropriate key 17 is depressed, thus forcing out the latch 11 and permitting the corresponding slip holder or card holder to drop. This holder drops down upon the members 35 and rests thereon; these members being of rubber will cushion the shock due to the falling of the holder. In this position the card or slip may be readily observed through the transparent pane 7.

If it is desired to replace the card holder the resetting or lifting key 22 is operated and this will cause a rotation of the rock-shafts 30 and 30a, and the consequent lifting of the members 35 which, as they move, will lift the card-holder above the corresponding latch, by reason that both of the members 35 lift together and at the same instant the slide or card holder will move upward freely without any side friction.

It will be obvious that it is not necessary after each holder is dropped to immediately return it to its concealed position, but it is obvious that by using the cards one after another working from the card nearest to the back of the case to the other nearest the front of the case that the holders may be dropped one after another and then that all of the holders may be returned to their concealed position by one operation of the resetting or lifting key, or any number of holders may be returned.

Preferably the upper face of the plate or floor 29 will be covered by rubber 44, as shown in Fig. 8, and preferably the roller 35 will normally be retained within depressions 45 in this rubber so that the shock of a dropping holder will be cushioned, and any noise prevented.

The keys 19 may be formed in any suitable manner, but preferably they are provided both upon the top and on the front with the letter corresponding to the holder.

While for the sake of clearness I have shown the mechanism out of its proper proportion, as a matter of fact, the operating mechanism may be disposed in a relatively small space and the main portion of the cabinet will be occupied by the slides or card-holders.

Having thus described the invention what is claimed as new is:—

1. In a structure of the character described, the combination of a casing having a display opening, a plurality of vertically movable slides mounted in the casing, means for supporting the slides normally above the display opening, means for dropping the slides singly to display position, a rock shaft mounted in the casing below the display opening, an arm extending from the rock shaft and having its terminal extending angularly to bear against the lower edges of all the dropped slides, and means for actuating said rock shaft whereby to return all said slides to normal position.

2. In a cabinet of the character described, a case having a display opening at the lower portion of its front and provided with a plurality of vertical guideways, a plurality of sliding index members mounted one in each guideway, a plurality of latches disposed one in each guideway and projected into position to engage the lower edges of the index members to thereby retain said members in a raised position, key-operated means for shifting any one of said latches to permit the corresponding index member to drop to a display position, and key-actuated resetting mechanism adapted upon actuation to shift all of the dropped index members to a raised position, said resetting mechanism including parallel rock-shafts,

arms extending from said rock-shafts parallel to each other, said arms having angular terminal ends extending beneath all of the index members.

3. In a structure of the character described, a case, a plurality of vertical guideways, a plurality of slides carried in the guideways for vertical movement, and means for raising said slides and comprising parallel rock-shafts extending from front to rear and each carrying a bevel gear wheel, angular arms mounted on said rock shafts, the terminal ends of said arms extending from front to rear of the case, a rock shaft extending transversely of the case and having sector gears mounted thereon engaging with the bevel gears on said rock-shaft, and key-actuated means for rocking said second-named rock-shaft.

4. In a structure of the character described, a case, a plurality of vertical guideways, a plurality of slides carried in the guideways for vertical movement, and means for raising said slides and comprising parallel rock-shafts extending from front to rear and each carrying a bevel gear wheel, angular arms mounted on said rock-shafts, the terminal ends of said arms extending from front to rear of the case, a rock shaft extending transversely of the case and having sector gears mounted thereon engaging with the bevel gears on said rock-shaft, and key-actuated means for rocking said second-named rock-shaft, and including an arm projecting from the rock-shaft, a button movable outward by manual actuation, and operative connections between said button and the arm and the rock-shaft.

5. In a structure of the character described, a vertically disposed case for containing index members, said case being formed with a display opening at its lower portion, the sides of the case being formed with vertically disposed guides, a plurality of index members slidably mounted in said guides for free vertical movement, a plurality of latches, one for each index member mounted in said guideways, each latch being pivoted at its middle and being vertically disposed, a plurality of rock-shafts extending inward from the front of the case, one for each latch, a crank mounted on each rock shaft, a connecting rod from said crank to the corresponding latch, springs acting to rotate the rock-shafts in such position as to project the upper ends of the latches inward, the outer ends of the rock-shafts being formed each with a crank-arm and a key thereon, and manually actuatable key-operated means for lifting said index members from a lowered to a raised position.

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

CHARLES E. PITTENGER. [L. S.]

Witnesses:

LEVI FREDERICK,

HARRY FIEKER.