

J. H. SENCINDIVER.
 COIN CONTROLLED VENDING MACHINE.
 APPLICATION FILED SEPT. 23, 1909.

977,683.

Patented Dec. 6, 1910.

2 SHEETS—SHEET 1.

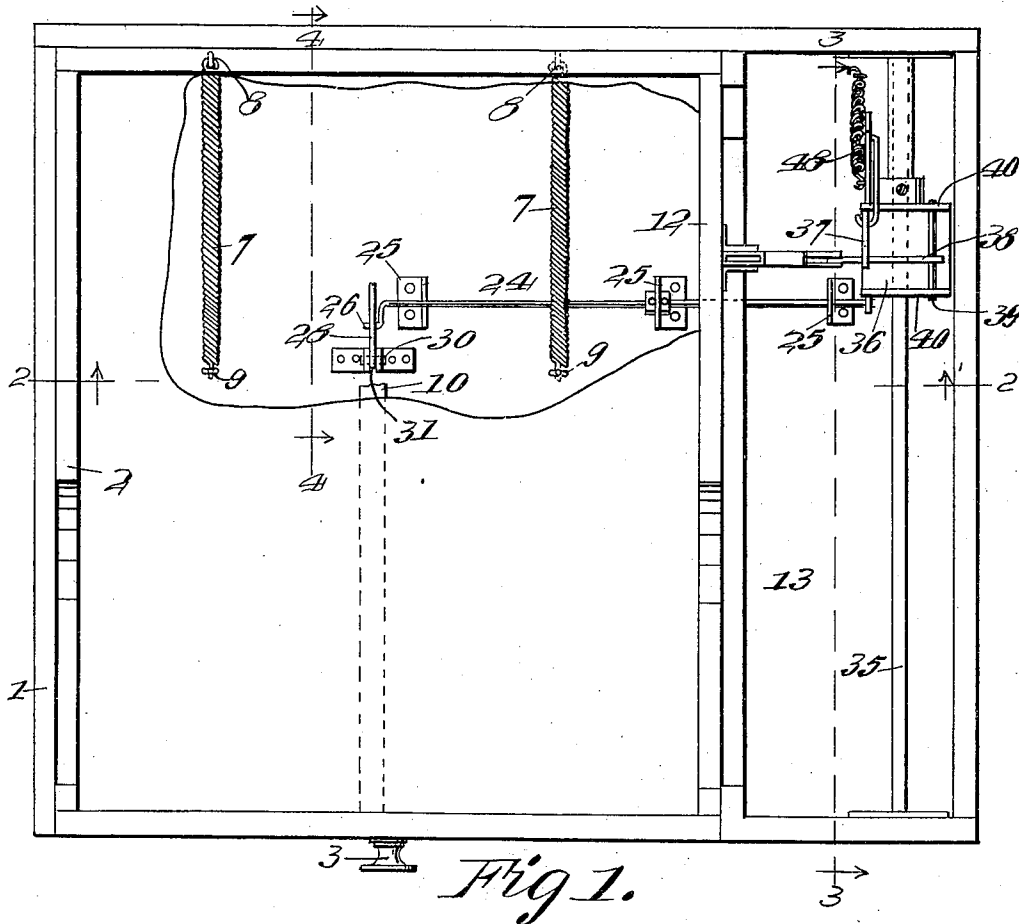


Fig. 1.

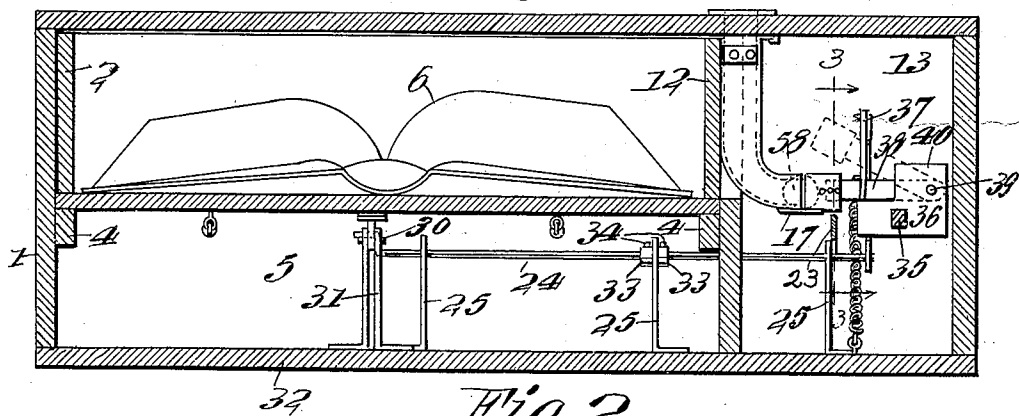


Fig. 2.

Witnesses
 R. R. Bond.
 Edith R. Bond.

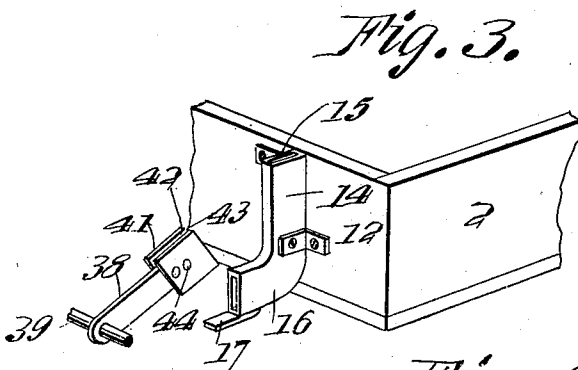
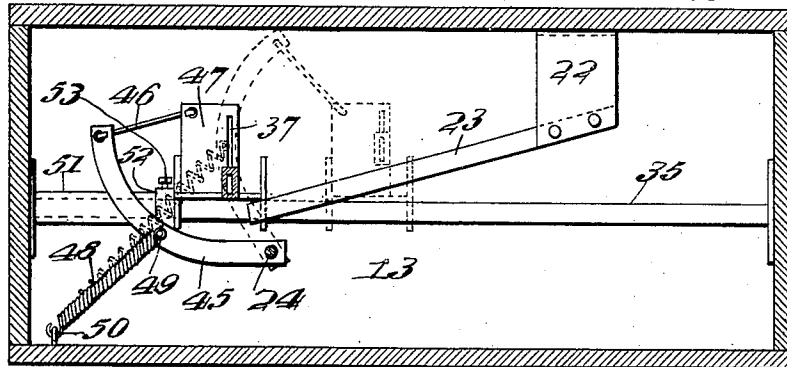
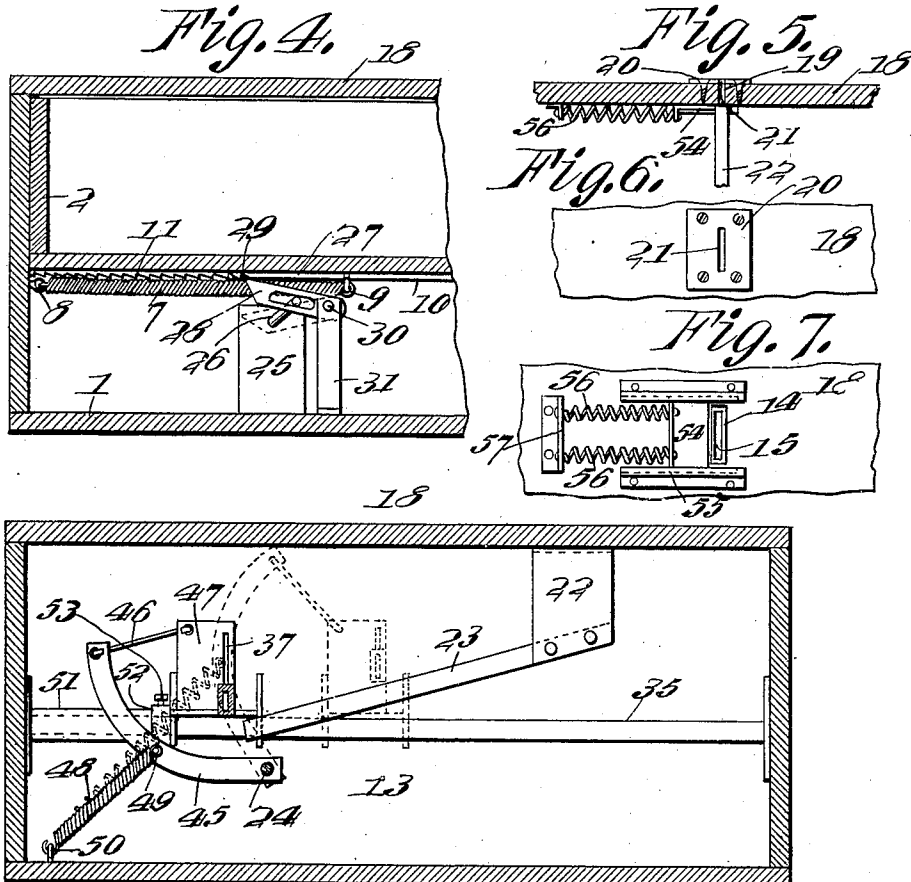
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 Judson H. Sencindiver,
 by E. R. Bond Attorney

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UNITED STATES PATENT OFFICE.

JUDSON H. SENCINDIVER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO
CABINET VENDING CO. (INC.), OF WASHINGTON, DISTRICT OF COLUMBIA.

COIN-CONTROLLED VENDING-MACHINE.

977,683.

Specification of Letters Patent.

Patented Dec. 6, 1910.

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To all whom it may concern:

Be it known that I, JUDSON H. SENCINDIVER, a citizen of the United States of America, and resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

This invention relates to certain new and useful improvements in coin-controlled vending machines, and it has for its objects among others to provide a simple, yet efficient and durable vending machine embodying a coin-controlled locking mechanism for a drawer or other movable member.

While the present invention is designed primarily, and is herein illustrated as adapted for use in connection with a drawer containing a directory, it is evident that the said invention is applicable to various other uses and it is to be understood that it is to be in no wise restricted to its use with a city directory or analogous book. It may be employed to control a drawer for money or other articles or any movable object, regardless of the use to which the latter is to be put.

The invention has for a further object to provide a construction for the above purpose which shall embody few parts, those cheap of manufacture and readily assembled and yet reliable in their action and not liable to become deranged or injured in any way.

It has for a further object to provide simple and efficient means controlled by the movement of the drawer or other movable object for closing the entrance to the coin chute when the drawer is open, the same being moved back to its normal position as the drawer is closed.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a top plan with the cover removed and parts broken away. Fig. 2 is a vertical cross section on the line 2—2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a vertical section from front to rear on the line 3—3 of Fig. 1. Fig. 4

is a section on the line 4—4 of Fig. 1, looking in the direction of the arrows. Fig. 5 is a sectional detail with parts in elevation. Fig. 6 is a detail in top plan showing the coin slot. Fig. 7 is a bottom plan of the parts seen in Fig. 5. Fig. 8 is a perspective detail of the coin chute and the cooperating pivoted part.

Like numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 designates a suitable case or inclosure within which is mounted to slide a drawer or the like 2 provided with a suitable knob or the like 3 by which it may be manipulated. This drawer, as shown, is mounted for movement upon suitable guides 4 of any suitable character, there being a space or chamber 5 below the bottom of the drawer for the reception of the parts beneath the drawer and which will soon be described.

In the drawer 2 is shown a directory 6 to which many persons desire to have access. It is evident, however, that the mechanism soon to be described is in no wise confined in its use to a city directory, the drawer or receptacle being adapted for containing any article or articles which it may be desired to keep from ready access by the customers of a store or any other persons. The drawer is designed to be kept normally in its closed position by suitable means, as, for instance, springs 7, seen best in Fig. 1, and also in Fig. 4, being attached at one end, as at 8, to the inner wall of the rear part of the case 1 and at their forward ends, as at 9, to some suitable means upon the under side of the drawer. When the drawer is opened, it is held in such position by the hand of the operator or other means, it being designed that as soon as the person using the directory is through with the same, the springs will throw the drawer to its closed position and the drawer will be automatically locked. The drawer is provided upon its under face with a bar 10 secured thereto in any suitable manner and provided at its rear end with a plurality of teeth 11.

Upon a side 12 of the drawer adjacent the compartment 13, within which the operating parts are disposed, is secured in any suitable manner a coin chute 14, the entrance 15 to which is at a point substantially

flush with the upper edge of the drawer, as seen best in Fig. 8. This chute extends vertically for a greater portion of its distance, its lower end being curved outwardly, as seen at 16, away from the wall or side 12 of the drawer to which it is attached. Upon the lower end of the chute, extending from the under side thereof, is a lip or ledge 17, the object of which will soon be made apparent. This chute, with its passageway, is, in the present instance, designed to receive a penny or one cent but it is evident that the machine may be designed for operation by coins of different values and sizes if desired.

The top or cover 18 of the case, which is held fixedly in position, is provided with a coin slot 19 around which is preferably an escutcheon or protecting plate 20, as seen clearly in Figs. 5 and 6, which latter is provided with an opening or slot 21 coincident with the coin passage 19 in the cover or top of the apparatus.

22 is a bracket or hanger depending from the under side of the cover and extending therefrom in a direction inclined upwardly from the rear to the front is a rigid bar 23, which may be of any suitable configuration in cross section and seen best in Fig. 3.

24 is a rock shaft mounted in suitable bearings 25 secured to the bottom of the case within the compartment 5, as seen clearly in Figs. 1 and 2. At its inner end, it is provided with the crank arm 26, the free end of which works in an elongated slot 27 in the pawl 28 having a pointed end 29 for cooperation with the teeth 11 of the bar 10, seen clearly in Fig. 4. This pawl is pivotally mounted upon a shaft or pin 30 supported in suitable uprights 31 rising from the bottom 32 of the case. This crank 26 is designed to travel the whole length of the slot, being limited in its movement by the end walls of the latter. Suitable means, as collars 33, on the shaft 24 and provided with set screws 34, serve to hold the rock shaft in position and hold it against undue movements.

35 is a guide member extending from front to rear of the device within the compartment 13, being secured to the front and rear walls in any suitable manner. This guide member may assume any desired shape in cross section. It serves as a guide for the carriage 36, seen clearly in Figs. 1, 2 and 3. This carriage is mounted for longitudinal movement upon said guide member and has rising therefrom a slotted member 37 in the slot of which is designed to move an arm 38 pivotally mounted at 39 in suitable uprights 40 on the carriage. The free end of this arm 38 carries the member 41 which is provided with a slot 42 in its upper surface. The dimension of this slot from the

outer end 43 to the inner end thereof formed by the pin 44 or the like is less than the diameter of a one cent piece, or of the coin to be employed, for a purpose which will soon be evident. Fast upon the end of the rock shaft 24, within the compartment 13, is a curved arm 45, the other end of which is connected by link 46 with the standard 47 rising from the carriage 36 and which may be a continuation of the slotted member 37, if desired.

48 is a spring connected at one end, as at 49, to the curved member 45 between its ends and at the other end to some fixed point, as shown at 50, on the bottom of the case. A sleeve or the like 51 on the inner end of the guide member 35, against which engages a collar 52 provided with a set screw 53, serves to limit the inward movement of the carriage.

54 is a sliding plate mounted to travel in suitable guides 55 upon the under side of the cover, springs 56 being provided, connected at one end to said slide and at the other end to some fixed member, as 57, upon the under side of the cover of the apparatus.

With the parts constructed and arranged substantially as hereinbefore described, the operation, briefly stated, is as follows. Normally the drawer is in its closed position and is locked against withdrawal by the engagement of the pointed end 29 of the pawl 28 with the teeth 11 of the bar 10 upon the under side of the drawer. The drawer cannot be opened until after a coin has been introduced. When the drawer is closed, the sliding plate 54 is, by reason of the engagement therewith of the coin tube 14, pushed back, so as to leave unobstructed the openings or passages 21 and 19 to the passage 15 of the coin tube or chute. When it is desired to get access to the directory or other contents of the drawer, the coin is dropped through the passages 21 and 19 into the coin chute, whereupon the coin falls down through the vertical portion of the chute and into the horizontal portion thereof and partially into the slotted member 41 carried by the arm 38, as indicated by dotted lines at 58 in Fig. 2, being at this time supported upon the lip or flange 17 of the curved member 16 of the chute. In this position, the members 41 and 16 are locked together and, as soon as the drawer is pulled open, the drawer and the carriage are given a movement toward the front, the carriage moving upon its guide 35, and, as soon as the carriage begins its movement, the rock shaft is turned by reason of its connection with the carriage through the curved arm 45 and link 46, thus throwing the pawl 28 downward sufficiently to disengage it from the teeth 11 of the bar 10, so that there is nothing to prevent the opening of the drawer. As

the drawer moves forward, the member 41, riding upon the upper inclined face of the member 23, is gradually lifted, until the parts assume the position shown by dotted lines in Figs. 2 and 3 and full lines in Fig. 8, when the coin drops into the bottom of the receptacle 13. The carriage is then released and is turned to its normal position by means of the spring 48, carrying with it its attached parts and returning the rock shaft 30 to its normal position and throwing the pawl 28 into its elevated position, that shown by full lines in Fig. 4, ready to automatically lock the drawer when the latter is returned to its normal position after the party is through using the directory. As the parts return to their normal position, the member 41 drops and is again in position in alignment with the lower curved end of the coin chute, in which position the parts are shown in Fig. 1 and by full lines in Fig. 2. As the drawer is pulled forward, the coin chute 14 is moved away from its engagement with the sliding plate 54, when the springs 56 project said plate under the coin passage 19 in the top 18 so that no coin can be introduced into the coin tube. When the drawer is closed, the coin tube comes in contact with the front end of the sliding plate 54, as seen in Fig. 7, pushing the same back against the tension of its springs 56 and the coin tube comes to rest with its slott in vertical alignment with the coin passages 21 and 19, as indicated clearly in Fig. 5.

From the above, it will be seen that I have devised a simple, cheaply constructed, yet efficient, durable and reliable device for the purposes for which it is designed, and, while the structural embodiment of the invention as hereinbefore disclosed, is what I at the present time consider preferable, it is evident that the same is subject to changes, variations, and modifications in details, proportion of parts, etc., without departing from the spirit of the invention or sacrificing any of its advantages. I therefore do not intend to restrict myself to the precise construction and arrangement of parts hereinbefore set forth, but reserve the right to make such changes, variations and modifications as come properly within the scope of the protection prayed.

What is claimed as new is:—

1. In a device of the character stated, a slidable member, means for automatically closing the same, means for locking the same as it is closed, and means coacting with said locking means embodying a rock shaft on which one member of said locking means is mounted for disengaging it from said member for controlling the movement of the latter.

2. In a device of the character stated, a slidable member, means for automatically

closing the same, means for locking the same as it is closed, and means coacting with said locking means embodying a rock shaft on which one member of said locking means is mounted for disengaging it from said member for controlling the movement of the latter, one portion of said means being movable with the slidable member.

3. In a device of the character stated, a slidable member, means for automatically closing the same, means for automatically locking the same when closed, a carriage, cooperating means movable with the carriage, and a connection between the carriage and the locking means.

4. In a device of the character stated, a slidable member, means for automatically closing the same, means for automatically locking the same when closed, a carriage, cooperating means movable with the carriage, a connection between the carriage and the locking means, and means cooperating with a portion of said locking means for separating the latter.

5. In a device of the character stated, a slidable member, a locking device therefor, controlling mechanism, and an inclined member fixed with relation to and cooperating with one portion of said mechanism.

6. In a device of the character stated, locking means, a movable member, a locking means therefor, a slidable carriage, connections between said carriage and locking means, and means carried in part by the slidable member and in part by said carriage and means for disengaging the members after the partial movement of the slidable member.

7. In a device of the character stated, a slidable member, a locking means therefor, a slidable carriage, connections between the same and said locking means, a two-part controlling means, and an inclined member fixed with relation to and arranged for engagement with one part of said two-part means.

8. In a device of the character stated, a slidable member, a locking means therefor, a slidable carriage, connections between the same and the locking means in the path of and actuated by relatively fixed means, a two-part means, an inclined member carried by the under side of said slidable member for engagement with one part of said last-named means, and a spring for returning said carriage to its normal position.

9. In a device of the character stated, a drawer, a carriage, a cooperating device movable with the carriage, locking means for the drawer, and a connection between the carriage and said locking means.

10. In a device of the character stated, a drawer, drawer-locking means, a carriage, a cooperating device movable with the car-

riage, a connection between the carriage and said locking means, and an inclined member cooperating with a portion of the said movable means.

5 11. In a device of the character stated, a slidably mounted drawer, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar, a rock shaft for actuating said pawl, and cooperating devices, one member being slidably mounted
10 for movement independent of the drawer and also movable with the drawer for a portion of its movement and one member of which is carried by said drawer.

15 12. In a device of the character stated, a slidably mounted drawer, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar, a rock shaft for actuating said pawl, and cooperating devices, one member of which is carried by
20 said drawer, the other member being slidably mounted for movement independent of said drawer and an inclined member fixed to the under side of said movable drawer.

25 13. In a device of the character stated, a slidably mounted drawer, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar, a rock shaft for actuating said pawl, and cooperating devices, one member of which is carried by
30 said drawer, the other member being slidably mounted for movement independent of said drawer, and also movable with said drawer for a portion of its movement.

35 14. In a device of the character stated, a slidably mounted drawer, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar, a rock shaft for actuating said pawl, cooperating devices,
40 one member of which is carried by said drawer, the other member being slidably mounted for movement independent of said drawer and also movable with said drawer for a portion of its movement, and means
45 for moving the same in a vertical direction to disengage it from the drawer.

15. In a device of the character stated, a slidably mounted drawer, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar, a rock shaft for actuating said pawl, cooperating devices,
50 one member of which is carried by said drawer, the other member being slidably mounted for movement independent of said drawer and also movable with said drawer
55 for a portion of its movement, means for moving the same in a vertical direction to disengage it from the drawer, and a spring for returning the same to its normal position.
60

16. In a device of the character stated, a movable drawer, a locking means therefor, a slidably mounted carriage, a curved arm connecting said carriage and locking means,

cooperating devices on said drawer and carriage, and an inclined member for engagement with the member on the carriage. 65

17. In a device of the character stated, a movable member, a locking means therefor, a slidably mounted carriage, a curved arm connecting said carriage and locking means, cooperating devices on said member and carriage, an inclined member for engagement with the member on the carriage, and a spring connected with said curved arm. 70 75

18. In a device of the character stated, a movable member, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar and having an elongated slot and an unlocking means embodying a rock shaft having a crank engageable in said slot. 80

19. In a device of the character stated, a movable member, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar and having an elongated slot and an unlocking means embodying a rock shaft having a crank engageable in said slot and a lock embodying a member operatively connected with said rock shaft. 85

20. In a device of the character stated, a movable member, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar and having an elongated slot, an unlocking means embodying a rock shaft having a crank engageable in said slot, and a lock embodying cooperating members, a slidable carriage upon which one of said members is mounted, and a connection between said carriage and said rock shaft. 90 95

21. In a device of the character stated, a movable member, a toothed bar thereon, a pivotally mounted pawl for engagement with said bar and having an elongated slot, an unlocking means embodying a rock shaft having a crank engageable in said slot, a lock embodying cooperating members, a slidable carriage upon which one of said members is mounted, a connection between said carriage and said rock shaft, and an inclined member for moving said member in a vertical direction as the member is moved forward. 100 105 110

22. In a device of the character stated, a movable member, a locking means therefor, a slidably mounted carriage, connections between the carriage and one member of the locking means, a spring for returning said carriage to its normal position, cooperating devices carried by the member and carriage, and an inclined bar with which the member on said carriage engages and by which it is moved vertically as the member is pulled forward. 115 120

23. In a device of the character stated, a movable member, a locking means therefor, a slidably mounted carriage, connections between the carriage and one member of the locking means, a spring for returning said 125

carriage to its normal position, coöperating devices carried by the member and carriage, an inclined bar with which the member on said carriage engages and by which it is
5 moved vertically as the member is pulled forward, and means for returning said member and parts to their normal position.

24. In a device of the character stated, a toothed bar, a pivotally mounted pawl for
10 engagement with said bar, a rock shaft for

actuating said pawl, and coöperating devices, one member of which is bodily movable with relation to said rock shaft.

Signed by me at Washington D. C. this 23 day of September 1909.

JUDSON H. SENCINDIVER.

Witnesses:

PERCY H. RUSSELL,
E. H. BOND.