No. 748,967. PATENTED JAN. 5, 1904.

T. A. MATTHEWS.

STATIONERY CABINET.

APPLICATION FILED JUNE 1, 1903.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.

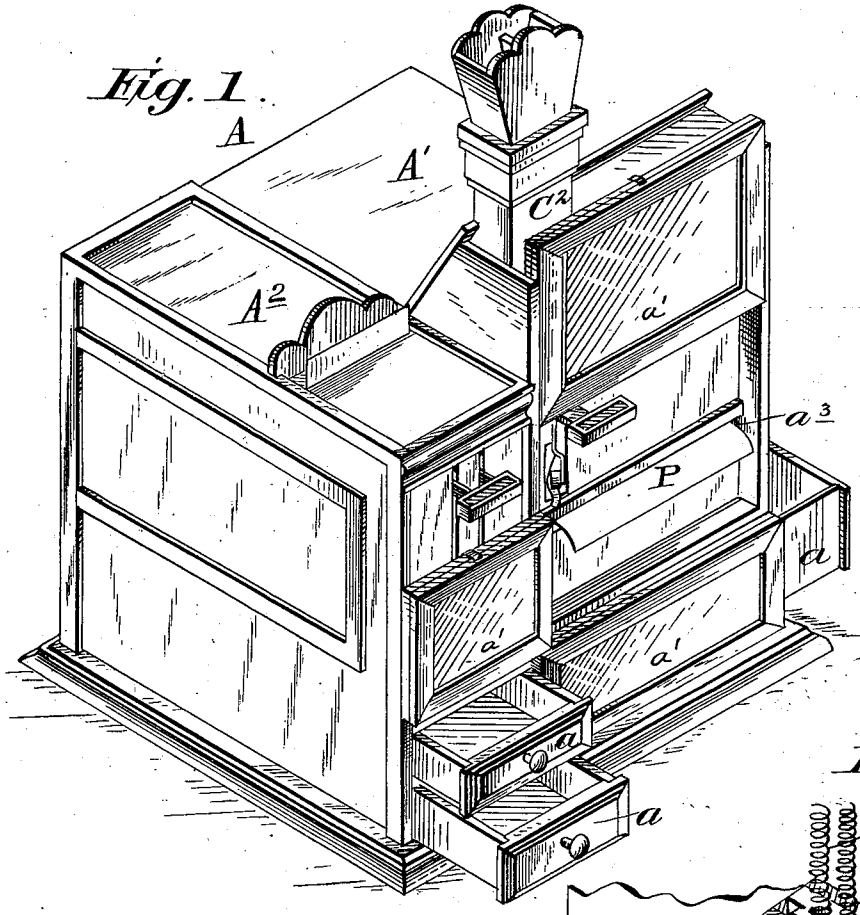


Fig. 4.

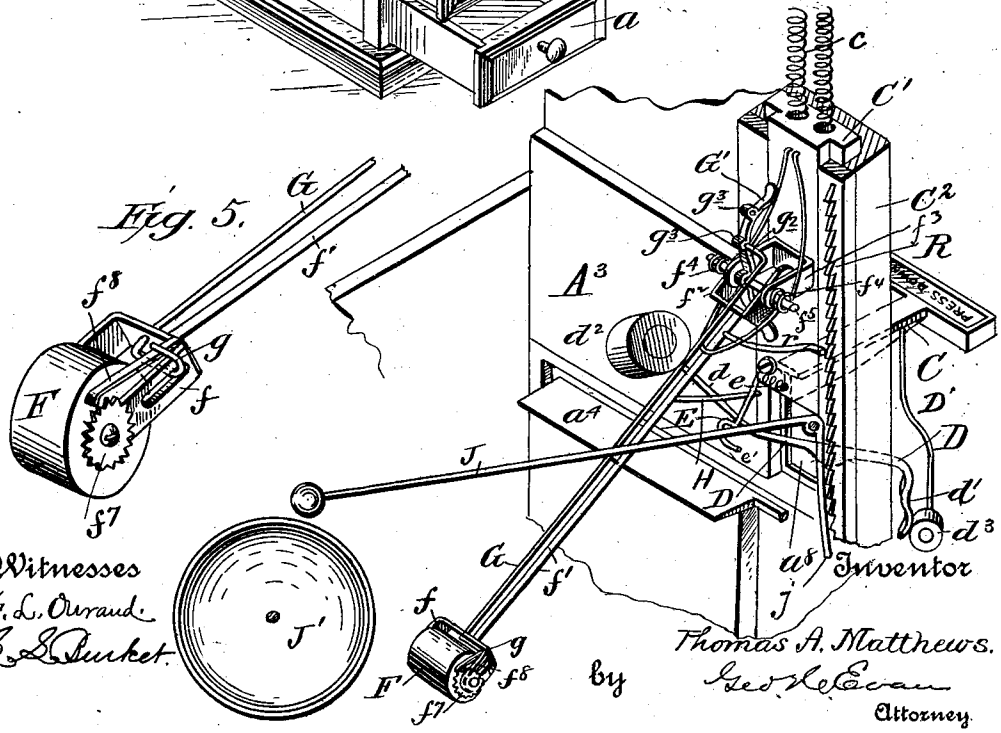


Fig. 5.

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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 3.

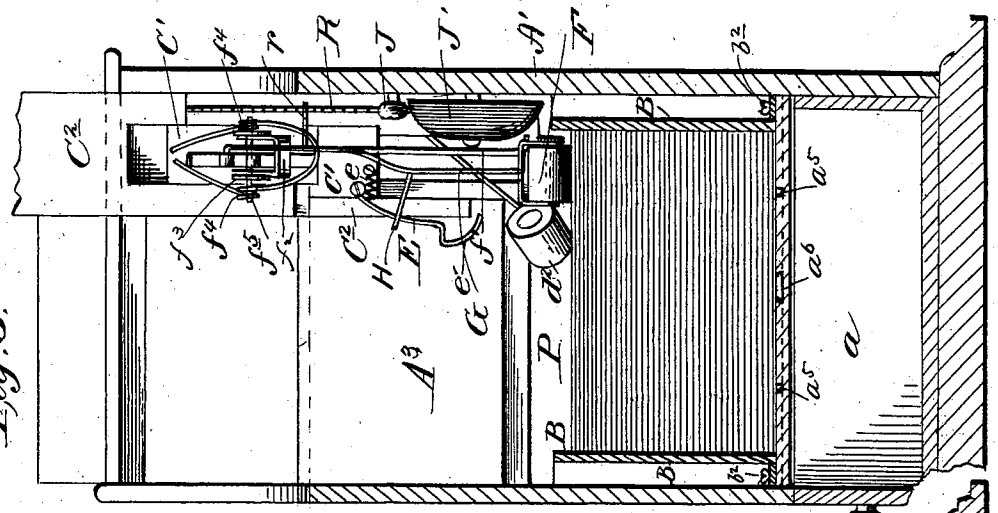
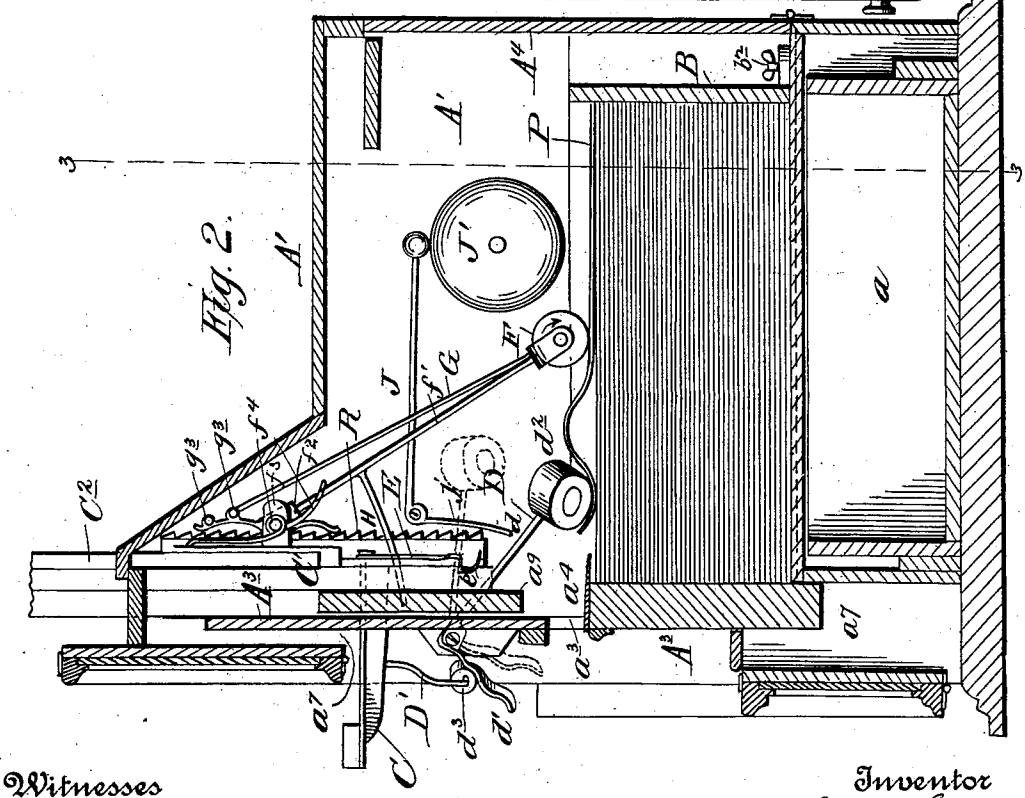


Fig. 2.



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NO MODEL. 3 SHEETS—SHEET 3.

Fig. 7.

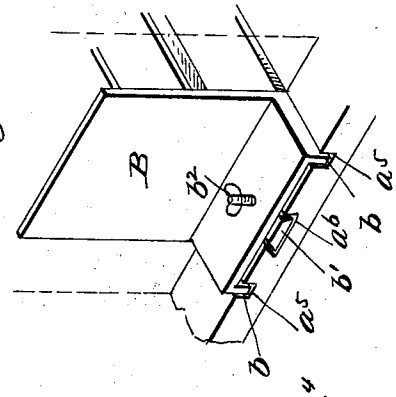


Fig. 8.

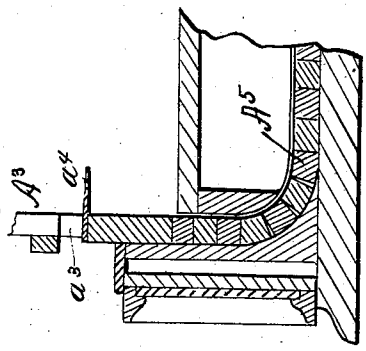
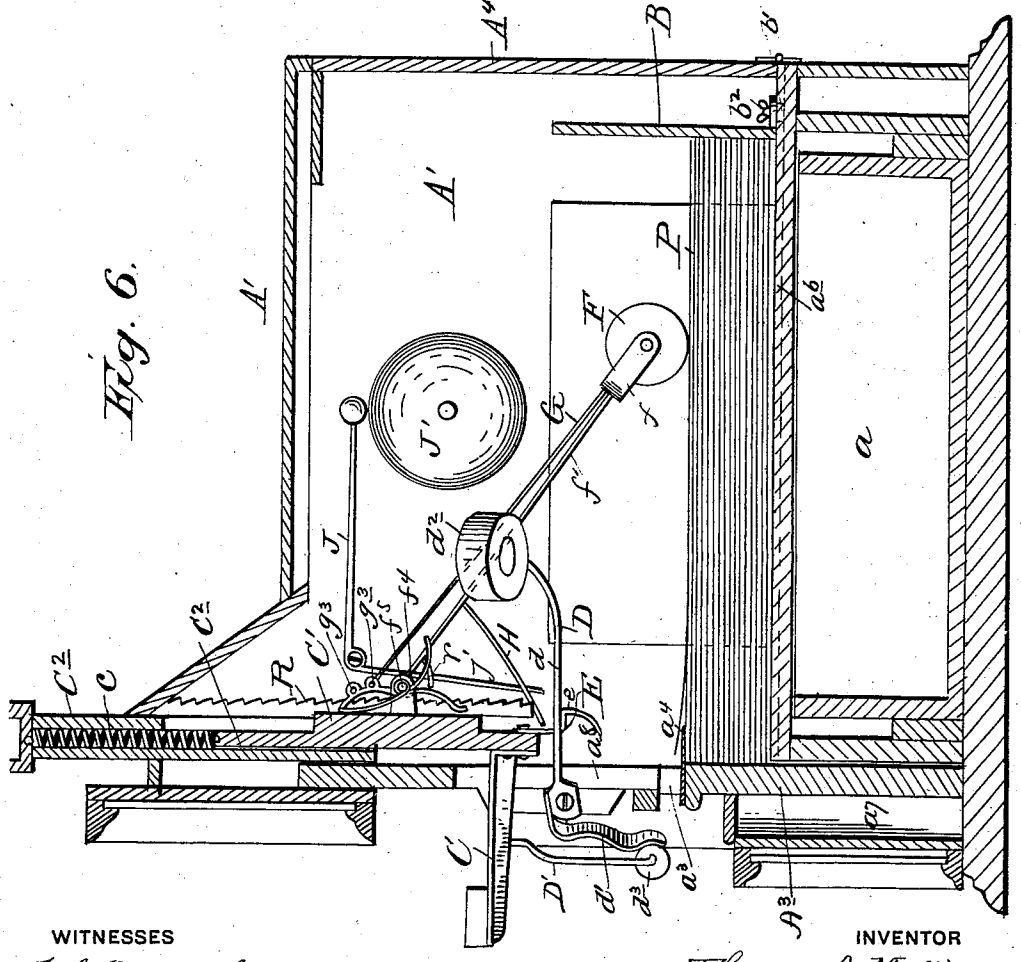


Fig. 6.



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No. 748,967. Patented January 5, 1904.

UNITED STATES PATENT OFFICE.

THOMAS A. MATTHEWS, OF NASHVILLE, TENNESSEE.

STATIONERY-CABINET.

SPECIFICATION forming part of Letters Patent No. 748,967, dated January 5, 1904.

Application filed June 1, 1903. Serial No. 159,586. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. MATTHEWS, a citizen of the United States, residing at Nashville, Davidson county, Tennessee, have invented certain new and useful Improvements in Stationery-Cabinets, of which the following is a specification.

The object of the invention is primarily to provide a simple and effective mechanism for feeding the sheets of paper from the cabinet one at a time, also to provide means for limiting the upward throw of the feeding mechanism as the pile of paper is lowered, and also to provide means for clamping the mass or body of paper while a single released sheet is being fed from the cabinet. These objects I accomplish by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a perspective of my improved cabinet. Fig. 2 is a sectional side elevation. Fig. 3 is a section on line 3 3, Fig. 2. Fig. 4 is a detail perspective of the paper-feeding mechanism from the rear. Fig. 5 is a detail perspective of the paper-feeding roll and its pawl-and-ratchet mechanism. Fig. 6 is a sectional side elevation with the paper-lifter raised and the paper-feeding roller about to begin its forward movement. Fig. 7 is a detail view of one of the paper-adjusting slides, and Fig. 8 is a detail sectional elevation of a modified form of front panel.

A designates the cabinet, made up in any desired shape and provided with any desired number of drawers a and advertising-panels a'. The cabinet will preferably be made in two compartments A' A^2, the former for containing writing-paper and the latter for envelops. The envelop-cabinet A^2, however, forms the subject of a separate application, filed of even date herewith, and will not, therefore, be further referred to herein.

The paper-cabinet A' is provided with a vertically-sliding front wall A^3, provided between its ends with a horizontal slot a^3, the bottom wall of which is provided with an inwardly-projecting flange or lip a^4 to rest upon the pile of paper P in the cabinet, as best shown in Fig. 2. The paper is introduced through a door A^4 at the rear of the cabinet and is held at its rear and sides between the gages or slides B, which are provided with parallel depending flanges b, working in kerfs a^5 in the bottom of the compartment, and each gage is provided between its flanges b with a dovetail slide b' and a set-screw b^2, said slide working in dovetail grooves a^6 in the bottom of the cabinet and the screw serving to clamp the gages at any desired point, according to the length and width of the paper to be served from the cabinet. The sliding front wall A^3 works in a vertical guideway a^7 at the front of the cabinet and is provided at one side with a vertical slot a^8, through which projects the vertically-sliding operating-arm C of the feeding mechanism, the slot a^8 being of such a length that when the lip or clamp a^4 rests on the paper the arm C may still slide downward toward the paper for a purpose to be presently described. This operating-arm C projects from a vertically-reciprocating carrier or slide C', mounted in a vertical slideway C^2, extended somewhat above the top of the cabinet. This carrier or slide C' is suspended at the upper end from two contractile springs c c, secured to the upper end of the slideway C^2 and serving to hold the carrier or slide C' in its elevated position. When the slide C' is thus elevated, the arm C will engage the upper wall of the slot a^8, and so hold the sliding front A^3 elevated also. A cross-piece a^9 (see Fig. 2) extends across the cabinet directly behind the sliding front panel A^3 and forms the rear of the guideway.

D is the paper-lifter in the form of an angle-lever pivoted at its angle to the sliding panel A^3, with its long arm d extending inwardly through the slot a^3 and its shorter curved arm d' at the outer side of the panel. The arm d' is set at an angle laterally and provided with a piece of rubber d^2 or other suitable material in the form of a roller or other shape. It will be seen, therefore, that when the operating-arm C is depressed it will allow the front panel A^3 to slide down and carry with it the paper-lifter, which, as its name indicates, lifts or gives the initial movement to a sheet of paper. This movement is best shown in Fig. 2, where the panel A^3 has moved down till its flange or lip a^4 is about to clamp the pile of paper, and just at this time the rubber piece d^2 has engaged the top sheet and moved its front edge from under the flange a^4 and buckled it.

D′ is a releasing-arm carried by operating-arm C and provided with a roller d^3 at its lower end, which engages the arm d' of the lifter D in the downward movement of said arm C to move arm d^2 from the paper, whereupon the front edge of the sheet of paper will move forwardly and lie on top of the flange or lip a^4, as shown in dotted lines. As the arm C moves down the lever-arm d will be raised till it engages a swinging catch E, pressed outwardly by a spring e and having a curved prong e' at the lower end, which projects into the upward path of the lever-arm d, so as to cause said lever-arm to retract it and allow the spring e to project the latch under said arm d and hold it raised.

F is the paper-feeding roller mounted in a yoke f at the lower end of a rearwardly-inclined arm f', pivoted at its upper forward end by means of a yoke f^2 to a bracket f^3, secured to the inner face of the carrier or slide C′. The arm or rod f' is pressed down by a spring f^4, which is coiled between its ends about the axis f^5 of said arm and at its end engaging the arm or rod f' and the slide C′, as shown in Figs. 2, 3, and 4. It will be seen, therefore, that as the slide C′ moves down the roller F will travel rearwardly along the paper without sliding the top sheet, as the roller runs free in this direction, and as the roller f runs to the rear the inclination of the arm f' will be increased and the spring f^4 placed under tension, so that when the slide C′ moves upwardly again the spring will force the roller F down on the paper and cause it to move forwardly toward slot a^3. In this forward movement roller F must be locked, so as to frictionally engage the top sheet of paper and slide it out through slot a^3, where the person may grasp it (see Fig. 1) and remove it. This action is effected by placing the ratchet f^7 on the roller F and a spring-pawl f^8 on the yoke f. This pawl f^8 normally springs away from the ratchet, so that the roller F is free to rotate in its rearward movement; but the moment the roller begins its forward movement to feed the paper it is locked by said pawl. This is effected by a pawl-operating rod G, sliding through bearings in the yoke f and provided with a loop or cranked end g, overlying the upper side of the pawl and serving when rod G moves toward the roller to press the pawl down into engagement with the ratchet. The upper end of the rod G is connected to a rocking lever G′, pivoted on the axis f^5, the connection being effected by passing the cranked end g^2 of the rod G through any one of a plurality of apertures g^3 in the lever G′ above its pivotal point. The rods G′ and f' have different centers of movement or different pivtal points, and hence the rod G′ is caused to slide in the yoke f. As the slides A^3 C′ move upwardly an arm H on the rod f' moves toward the hook E and pushes it from under the lifter D just as the parts have reached their normal positions. Then the roller d^3 of arm D′ will also have moved upward from the arm d' of the starter, so that the rubber piece d^2 will descend toward the pile of paper to lift the next sheet, when the arm C′ is again depressed.

R is a vertical rack alongside the guideway C^2 and is engaged by a pawl r, carried by the rod f', whenever the pile of paper has decreased to such an extent as to allow the rod f' to swing far enough forward to bring the pawl r into engagement with said rack. The pawl r also acts on the arm j of the angular bell-hammer J and causes the hammer to strike the bell or gong J′ after the delivery of every sheet, so that the proprietor or attendant where the cabinet is placed may be kept advised as to the amount of paper being used.

The operation, briefly stated, is as follows: The operating-arm C is pressed down, which allows the panel A^3 to descend, until its lifter D moves a sheet back, as in Fig. 2, whereupon the lip or flange a^4 will rest on the pile of paper. The continued downward movement of the arm C will cause the feed-roller F to roll freely rearwardly, and the releasing-arm D′ will raise the lifter D till it engages the hook E, the rod G being moved upwardly by its lever G′ as rod f' moves rearwardly, so as to cause its loop or crank g to move from contact with the pawl f^8. The arm C will now be released, and the springs c will raise it and the slide C′, which carries the rods f' G, so that the roller F will now be locked by the opposite movement of rod G and crank g and be drawn forward to push a sheet of paper out through the cabinet. In this upward movement the arm H will move the catch or hook E out of engagement with the lifter D and allow it to descend to its operative position. As the pile of paper decreases the extent of the movement of the rod f' toward the front will increase and its pawl r will engage rack R and prevent upward movement of the feed devices, so that the upper stroke of the arm C will not increase as the pile decreases but will remain practically the same till the paper is exhausted.

If desired, the lower end of the front wall A^3 may be made flexible, as shown at A^5, so as to slide inwardly under the paper-space. (See Fig. 8.)

The paper receptacle or "cabinet," as I term it for convenience, may be made as a separate article, or it may form part of a desk or other article of office fixture or furniture, and in using the term "cabinet" I intend to embrace a space or receptacle for the paper.

What I claim is—

1. A paper-feeding mechanism comprising a vertically-sliding front panel having a horizontal opening for the discharge of the paper, a paper-lifting device mounted on the said panel and provided with a friction device to move the front edge of the top sheet of paper rearwardly, as the panel moves downwardly, a vertically-movable carrier or slide having an operating-arm extending out through a vertical slot in the said sliding panel, means for raising the paper-lifting device when the

panel-opening is on the level with the said top sheet and a paper-feeding device mounted on the said carrier or slide to engage and feed the sheet of paper out through said panel-opening when the carrier is moved upwardly.

2. A paper-feeding mechanism comprising a vertically-sliding panel having a horizontal opening for the discharge of the paper, a ledge or lip extending inwardly from the bottom of said opening, a paper-lifting device mounted on said panel and provided with a friction device to move the front edge of the top sheet rearwardly as the panel moves downwardly, a vertically-movable carrier or slide having an operating-arm extending out through a vertical slot in the said sliding panel, means for raising the paper-lifting device when the lip on the sliding panel reaches the pile of paper to allow the retracted front edge of the sheet to spring forward upon said lip, and a means for feeding the sheet of paper forwardly through the panel-opening as the carried slide moves upwardly.

3. A paper-feeding mechanism comprising, a vertical-sliding panel having a horizontal opening for the discharge of the paper, a ledge or lip extending inwardly from the bottom of said panel-opening, a paper-lifting device mounted on said panel and provided with a friction device to move the front edge of the top sheet rearwardly as the panel moves downwardly, a vertically-movable carrier or slide having an operating-arm extending out through a vertical slot in said sliding panel, means for raising the paper-lifting device when the lip on the panel reaches the pile of paper to allow the retracted front edge of said top sheet to spring forward upon said lip, a catch for holding the lifting device raised, means mounted on said carrier or slide for feeding said top sheet forwardly through the panel-opening as the carrier moves upwardly and means for retracting the catch of the paper-lifting device to allow it to resume its normal position.

4. A paper-feeding mechanism comprising, a vertically-sliding front panel having a horizontal opening for the discharge of the paper, a paper-lifting device mounted on the panel and provided with a friction device to move the front edge of the top sheet of paper rearwardly, as the panel moves downwardly, a vertically-movable carrier or slide having an operating-arm extending out through a vertical slot in the said sliding panel, means for raising the paper-lifting device when the panel-opening is on the level with said top sheet, a paper-feeding device mounted on said carrier or slide to feed the sheet of paper out through said panel-opening when the carrier or slide is moved upwardly, and means for automatically limiting the upward throw of the carrier as the pile of paper decreases.

5. A paper-feeding mechanism comprising, a vertical-sliding front panel having a horizontal discharge-opening for the paper, an angle-lever provided at its inner end with a friction device to move the front edge of the top sheet rearwardly as the panel descends and pivoted at its angle to the panel, a vertically-reciprocating carrier or slide provided with an operating-arm extending through a vertical slot in the panel and provided with a depending arm to engage the outer member of said angle-lever and raise the friction device from the paper, a catch to hold the lever in said raised position, a spring-pressed rod pivoted at its upper forward end to the carrier or slide and having a friction-roller at its lower rear end to travel freely along the paper to the rear when the slide is moved down, means for locking the roller against rotation as its carrying-arm moves forwardly during the upward movement of the carrier to feed the sheet through the panel-opening, and a releasing-arm on the roller-carrying rod to engage and release said catch.

6. A paper-feeding mechanism comprising, a vertically-sliding panel provided with a horizontal opening for the discharge of the paper, means for moving the front edge of the top sheet rearwardly and releasing it when the said opening is on a level therewith, a vertically-reciprocating carrier having an operating-arm extending out through a vertical slot in the said panel, a rod pivoted to the said carrier and having a friction-roller journaled at its lower end, a spring pressing the rod downwardly, a ratchet connected to said friction-roller, a normally disengaged pawl for the ratchet to allow the roller to run free in its rearward movement over the paper, a sliding rod having a crank or loop at its lower end to move the pawl into locking engagement with said ratchet, a lever or pivoted arm to which the upper end of the pawl-operating rod is pivoted beyond the axis of the roller-carrying arm for the purpose stated.

7. A paper-feeding mechanism comprising, a vertically-sliding front panel having a paper-discharge opening, a vertically-reciprocating carrier or slide, a rod pivoted to the slide and provided at its lower end with a roller to feed the paper out through the said panel-opening, a spring pressing the arm down toward the paper, a bell-operating arm projecting from the roller-carrying arm, a bell-hammer in the path of said bell-operating arm, and a gong, substantially as described.

8. In a paper-feeding mechanism, the combination with a vertically-reciprocating carrier, of an arm pivoted thereto and having a roller journaled on its opposite end, a ratchet on the roller, a normally disengaged pawl therefor to allow the roller to rotate freely toward the rear of the sheet, a pawl-operating rod in sliding engagement with the roller-carrying rod and provided at its lower end with means for throwing the pawl into locking engagement with the ratchet to lock the roller as it moves toward the front edge of the sheet to feed it, a lever pivoted between

its ends on the axis of the roller-carrying rod and pivotally connected thereabove to the upper end of the pawl-operating rod.

9. In a paper-feeding mechanism the combination with two independent vertically-sliding members one having a vertical slot and the other having an operating-arm extending through and working in the slot, a paper-lifter carried by one of said members to move the front edge of the sheet rearwardly for the purpose described and the other having a device for feeding the sheet forwardly.

10. In a paper-cabinet the combination with the mechanism for feeding the sheets outwardly one at a time, of adjustable side and rear gages to receive the pile of sheets between them and each having depending flanges, a dovetail rib and a set-screw, the bottom of the paper-space being grooved for said flanges and ribs.

11. The cabinet or receptacle having a vertically-sliding front panel provided with a horizontal slot for a discharge of the paper and having a flexible lower end, a paper-lifter carried by said panel, of a vertical movable carrier having an operating-arm extending through a vertical slot in the front panel, and a paper-feeding device on the said carrier to feed a sheet outwardly through the panel-slot.

12. In a paper-feeding mechanism the combination with two independent vertically-sliding members one having a vertical slot and the other having an operating-arm extending through and working in the slot, a paper-lifter carried by one of said members to move the front edge of the sheet rearwardly for the purpose described and the other having a device for feeding the sheet forwardly, a vertical, stationary rack, and a pawl on the paper-feeding device to engage the rack as the feeding device moves forwardly and limit the upward throw of the said vertically-sliding members.

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

THOMAS A. MATTHEWS.

Witnesses:
I. B. MURREY,
A. B. WHITE.