May 29, 1923. 1,456,562

R. NEDDO

STATIONERY CABINET

Original Filed June 27, 1918 2 Sheets-Sheet 1

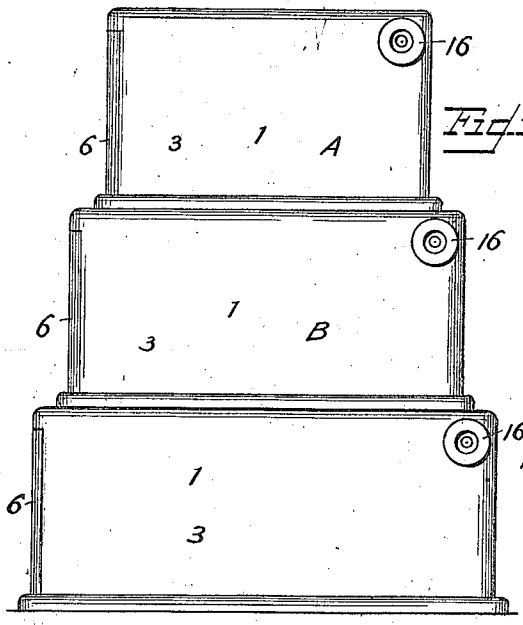


Fig. 1.

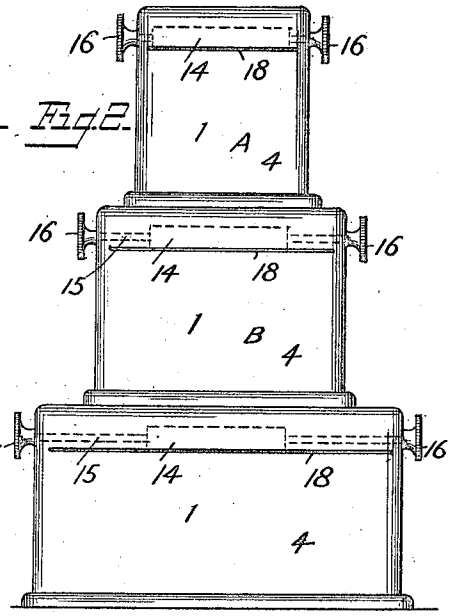


Fig. 2.

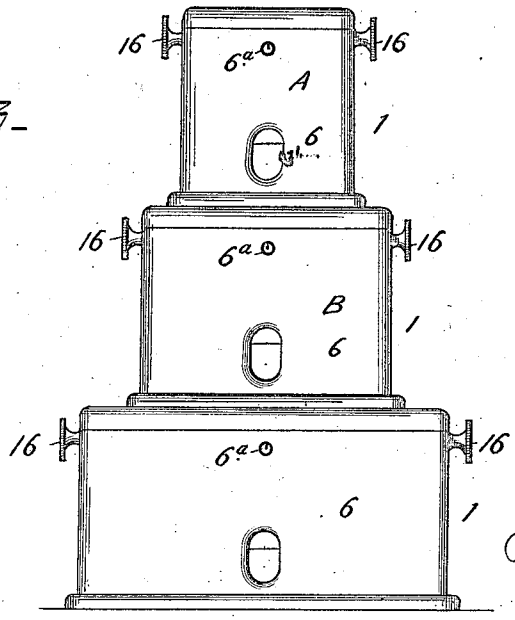


Fig. 3.

Richard Neddo
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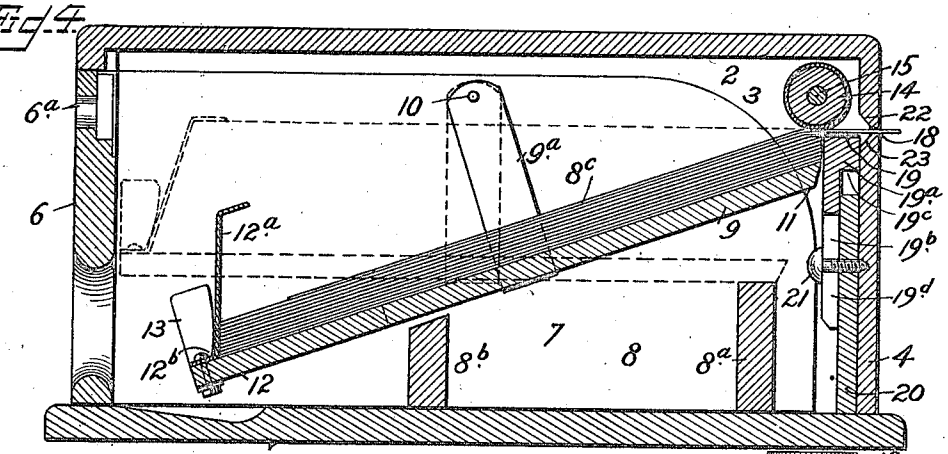
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R. NEDDO

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Fig. 4.



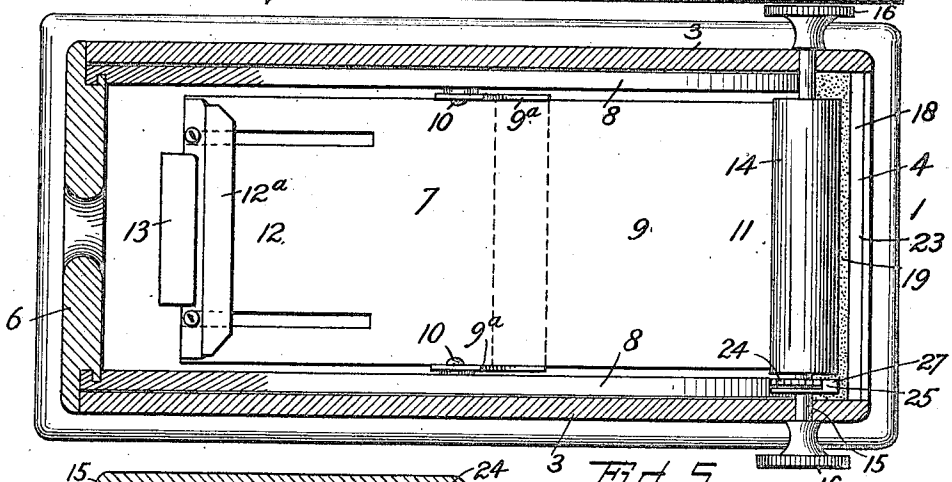


Fig. 5.

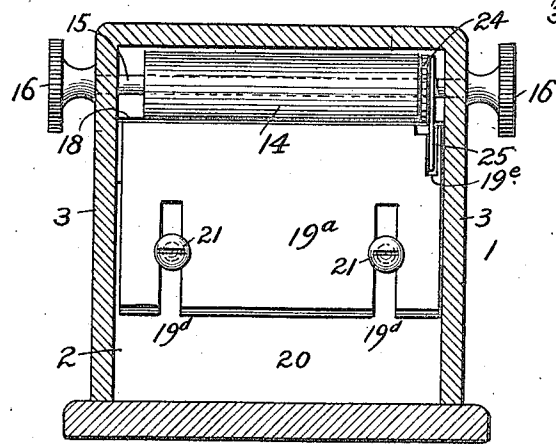


Fig. 6.

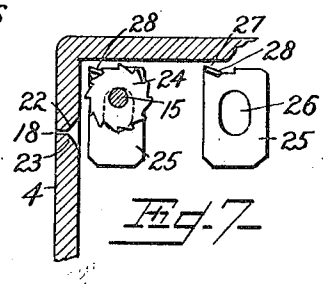


Fig. 7.

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Patented May 29, 1923. 1,456,562

UNITED STATES PATENT OFFICE.

RICHARD NEDDO, OF NORFOLK, VIRGINIA.

STATIONERY CABINET.

Application filed June 27, 1918, Serial No. 242,210. Renewed October 7, 1922. Serial No. 593,144.

To all whom it may concern:

Be it known that I, RICHARD NEDDO, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Stationery Cabinets, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in cabinet boxes adapted to be placed on tables or desks where letters or similar papers are written. Each is adapted to hold a number of sheets of stationery, a number of envelopes, bank checks, or other papers of similar character, and to distribute and supply them singly through an opening in the box provided for such delivery.

Each of the articles comprises one or more boxes, and each box has side walls, a top, bottom and an end wall, which are fixed rigidly in position, together with an end wall which can be opened after being unlocked by a key, these walls inclosing a chamber in which the paper articles are stored, and from which they can be removed only singly.

I have heretofore manufactured and sold articles of this class, but found that they were constructed upon such a principle and required the presence of parts which made the cabinets expensive, allowed but limited room for the holding of the stationery articles and did not deliver the articles one by one with as great accuracy as is desirable.

And the object of the present invention is to provide a construction and relationship of parts which will largely reduce the cost, increase the holding capacity, and increase the accuracy of the delivery.

Fig. 1 is a side elevation of a cabinet embodying my improvements.

Fig. 2 is an end elevation.

Fig. 3 is an elevation from the opposite end.

Fig. 4 is a central longitudinal vertical section.

Fig. 5 is a horizontal section.

Fig. 6 is a vertical transverse section.

Fig. 7 is a view of the ratchet and dog, the dog plate being also shown detached on a somewhat larger scale.

The outer casing of each of the boxes of the cabinet is as an entirety indicated by 1, one of the boxes referred to being indicated by A and another by B and C. This casing of each box incloses a chamber 2, and comprises the side walls, 3, 3, the front wall 4, and the bottom 5, which are permanently and rigidly secured together, and the rear wall 6, which is a movable door secured to the interior paper carrier, and provided with a lock at 6^a for fastening it in place. The interior paper carrier or holder 7 is of the nature of a drawer. It has side walls 8, 8 rigidly secured at their rear ends to the door 6 and at their front parts secured to one or more crossbars 8^a, 8^b. The cross dimensions of this drawer 7 are such as to permit it to hold a stack of paper articles, the dimensions being varied, to correspond to different sizes of letter paper, foolscap, envelopes, bank checks and the like. The stationery articles indicated by 8^c are placed upon a carrier 9, preferably a flat plate of plane dimensions approximating the cross dimensions of the carrier 7, but such as to permit the carrier to move freely vertically therein. This paper support 9 is suspended by links 9^a, hinged at 10 to the inner sides of the walls of the drawer to permit the end parts 11 and 12 to swing up and down. The end at 11 near the delivery is so positioned as to move upward in the feed roller, and press the stationery articles upward. The opposite end at 12 is weighted as at 13, so that this end constantly tends to move downward and throw up the end 11. The rear end of the support 9 is provided with an abutment wall 12^a against which the rear ends of the paper articles rest. By preference it is formed of sheet metal, and is curved or bent as shown at 12^b to hold the articles in such way that their front edges will be moved toward the roller approximately similarly. The cross piece 8^b is so positioned that it can serve as a stop for limiting the forward or downward movement of the rear end 12 of the support 9.

The feed roller is indicated by 14, it being a roller of suitable diameter and of proper construction to engage with the top sheet or paper article of the pile which is being pressed up by the plate 9 and the weight 12.

This roller is mounted in the upper front corner of the casing and carried by shaft 15, which is mounted in and has its ends extended through, and to the outsides of the walls 3, said ends being provided with expanded milled heads 16, by which the roller can be readily manipulated. It is formed so as to have a surface which will quite positively engage with the uppermost stationery article of the pile or pack. This surface can be provided by attaching a sheet of rubber to the outer surface of the roller core, or by applying emery thereto or by attaching a sheet of emery paper or similar material.

The delivery orifice is a slot 18 in the front wall 4, in horizontal plane approximating that of the bottom line of the surface of the roller 14. The width, vertically, of this slot 18 is such as to have it amply large enough to permit the outward passage therethrough of any paper article in the pack or pile in the interior. But as the thickness of each of the sheets in a pile may, in one case, differ from the thickness of each sheet in a pile in another case, adjustable means which will insure that the roller will advance outward through the slot only the uppermost sheet or article, whether thicker or thinner. This is accomplished by means of an adjustable retarding device or cut-off 19, so arranged as to permit one article to pass outward between it and the roller, with freedom, and to prevent the second, third or other article from being also advanced under the roller through the agency of the friction exerted by the under surface of the topmost article on the upper surface of the article below it.

19^a is a plate the upper edge part 19 of which serves as the cutoff. It is adjustable delicately vertically to carry its upper edge in parallelism with the roller surface to a line nearer to or further from that surface. The upper edge part 19 is relatively wide and extends from the wall 4 backward to a line approximating the vertically axial plane of the roller. This upper edge is preferably roughened so as to insure its engaging approximately positively with the ends parts of the stationery sheets or articles below the uppermost one. This effect can be obtained by applying a strip of rubber or gluing emery powder upon it or attaching a strip of emery paper or the like.

As shown, this plate 19^a has a thinner lower part 19^b and a thicker or offset part 19^c. In front of the lower part 19^b there is a plate 20 rigidly secured to the front wall 4 of a thickness approximately equal to the dimension of the offset part 19^c. The plate is slotted at 19^d; and fastening screws 21 are positioned in the slots, they engaging with the backing or filling piece 20.

On loosening the screws the plate can be delicately adjusted so as to have the cut-off or retarding device at 19 brought to the desired position relatively to the roller.

The slot 19^e in the plate piece is for a purpose to be described. Immediately inside of the delivery slot 18 in the front wall 4 there are inclined guides at 22, 23. As shown, they are provided by shaping the upper wall and the lower wall of the passage through the front 4, so that they will incline toward the delivery slot proper. If, for any cause, the front edge of an advancing sheet should be bent or turned upward or turned downward away from the horizontal plane of the slot 18, such edge will impinge upon an inclined wall 22 or 23, and be accurately directed toward the escape slot.

The roller can rotate in one direction only, the direction of feed. It is locked against rotation in the opposite direction by a ratchet wheel 24, and a peculiarly constructed dog 25. The latter is simply a small metal plate carried loosely by the shaft 14, adjacent to the ratchet wheel. The shaft passes through a slot 26 in the plate, which permits a slight radial movement bodily of the dog. Its upper edge is bent or turned over at an angle as at 27, and one end of the flange thus formed is shaped, as at 28, to provide a pawl to engage with the teeth on the ratchet wheel. When the shaft is turned in the feeding direction the ratchet teeth successively lift the dog bodily. After each tooth has passed under the pawl part 28 the weight of the dog draws the pawl down behind such tooth and prevents retraction of the roller. The dog is prevented from swinging in one direction by its body part abutting against the front wall 4. To prevent the cutoff plate 19^a from interfering with the positioning or movements of the dog the slot 19^e is formed in the plate.

The method of using a stationery cabinet of the kind shown and described will be readily understood.

In order to introduce a pile or pack of the articles to be delivered one by one, it is merely necessary to unlock the rear door 6 and draw out the drawer 7, and then place the pack or pile of articles on the holder 9, with their rear ends abutting against the upstanding plate 12. The holder 9 is then by the hand held so that it and the sheets or stationery articles are positioned approximately horizontally, and the drawer is again inserted in place, in the casing. Immediately the gravity of the weight 13 begins to cause the edge part of the front portion 11 of the holder to exert upward pressure on the front edge parts of the sheets of the pile, and to press the upper surface of the uppermost sheet against the lower part of the roller 14. If one then turns the roller, the uppermost sheet and, possibly, two or three of those adjacent,

experience a forward propelling force, the uppermost sheet transmitting some of the force received from the roller to the second sheet through the friction of their contacting surfaces, the second acting similarly upon the third, and so on throughout the series.

But forward advance of the second, third or lower sheets is prevented by the retarding and stopping device at 19, after it has been properly adjusted; the friction and resistance exerted by the upper edge of this part 19 being greater than the advancing force derived from the uppermost sheet through its frictional engagement with those below.

The movable support 9 below the pack or pile is so mounted that the forward edge part 11 moves in such way as to constantly press the front edge parts of the sheets or articles toward the active part of the roller. As the holder swings higher the rear or inner ends of the articles tend to move downward, at least do not rise as far as do the front edge parts. When the sheets at the bottom of the pile have risen to where they begin to approach the roller, their front edge parts are still pressed by the edge of the holder 9 in the same way that the corresponding parts of the uppermost sheets of the original packs are pressed. Hence the separation and delivery of the articles successively is uniform throughout the series, and the delivery continues until the last article has been passed through the slot.

While the sheets are at the forward end of the pile advanced toward the delivering devices with substantially uniform pressure, there is a constant decreasing of the friction exerted by the upper articles upon the lower ones at the rear end of the pile. As the rear end of the support 9 moves downward, the paper articles tend to bend or lift up at their rear ends, specially if the articles have any stiffness whatever. This loosening of the articles of the pile, or tendency of the rear end of each upper one to move upward away from the next below it, causes the decrease in friction referred to, and this in turn increases the assurance that each uppermost article, in turn, will be delivered singly, and separately, from the others. And the lowering of the rear ends of the articles of the pile tends to bend the front end edges of those which are below the uppermost article down to lines below the top of the stopping device 19, and insures that they will be arrested against outward movement.

The paper articles are supported upon the top surface of the flat holder or carrier 9 entirely independently of the bottom and the walls of the casing. The upwardly extending links 9^a at the sides, and the stop or abutment 12^a at the rear end, of the holder confine the paper articles in proper position and prevent their edges from engaging with any parts outside of the holder.

In Fig. 4 the dotted lines show the position of the pile when the holder is filled. The uppermost article of the pile is then approximately in a horizontal plane, and the forward end of the holder 9 is in a vertical plane somewhat behind that of the feed roller. But the shape of the pile and the location of the pivot 10 in relation to the roller and the delivery slot are such that the front end parts of the articles successively approach, and are pressed against, the roller on the same lines.

I have heretofore made cabinets of this class, in each of which I employed a holder below the paper articles which moved from one position to another in horizontal parallelism under the action of springs. In the present device I have dispensed with the springs, a weight being sufficient to advance the paper articles and provide the pressure against the roller. I can insert a larger number of the articles and deliver them with greater accuracy because of the eliminating of friction.

What I claim is:

1. In a stationery dispensing cabinet, the combination with the casing having a vertical wall with a delivery slot near its top, the discharge roller within the casing and mounted directly on its walls and positioned near said slot, the drawer bodily separable from, and adapted to be inserted into, the casing, and the paper support hinged upon the drawer and arranged to support the paper articles independently of the bottom and walls of the casing and to swing upward at its inner delivery end and to press the extreme edge part of each paper article against the under side of the discharge roller.

2. In a stationery dispensing cabinet, the combination with the outer casing having a vertical wall with a delivery slot near its top, a discharge roller mounted on the casing and positioned near said slot, a flat paper holder arranged to swing bodily and longitudinally upward at its delivery end and to support a pile of paper articles independently of the walls and bottom of the casing, an inclined stop for the paper articles at the rear end of the support, the drawer adapted to be inserted into the casing on horizontal lines extending toward the discharge roller and hinged to the paper holder.

3. In a stationery dispensing cabinet, the combination with the casing having a vertical wall with a delivery slot near its top, a discharge roller mounted directly on the casing and positioned near said slot, a bodily and longitudinally swinging holder for stationery articles arranged to support them entirely independently of the bottom and

walls of the casing and having at its outer end and at its sides upward extending devices for engaging with the edges of the paper.

4. In a stationery dispensing cabinet, the combination with the outer casing having a vertical wall with a delivery slot and a discharge roller in the casing near said slot, of the longitudinally movable drawer adapted to be inserted into said outer casing, and the swinging support for the series of articles pivoted to the said drawer and adapted to tilt around the axis of the pivot and advance the articles longitudinally successively towards the roller and the slot.

In testimony whereof, I affix my signature.

RICHARD NEDDO.