F. H. HOBERG.

PAPER CABINET.

APPLICATION FILED APR. 2, 1914.

1,154,632.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

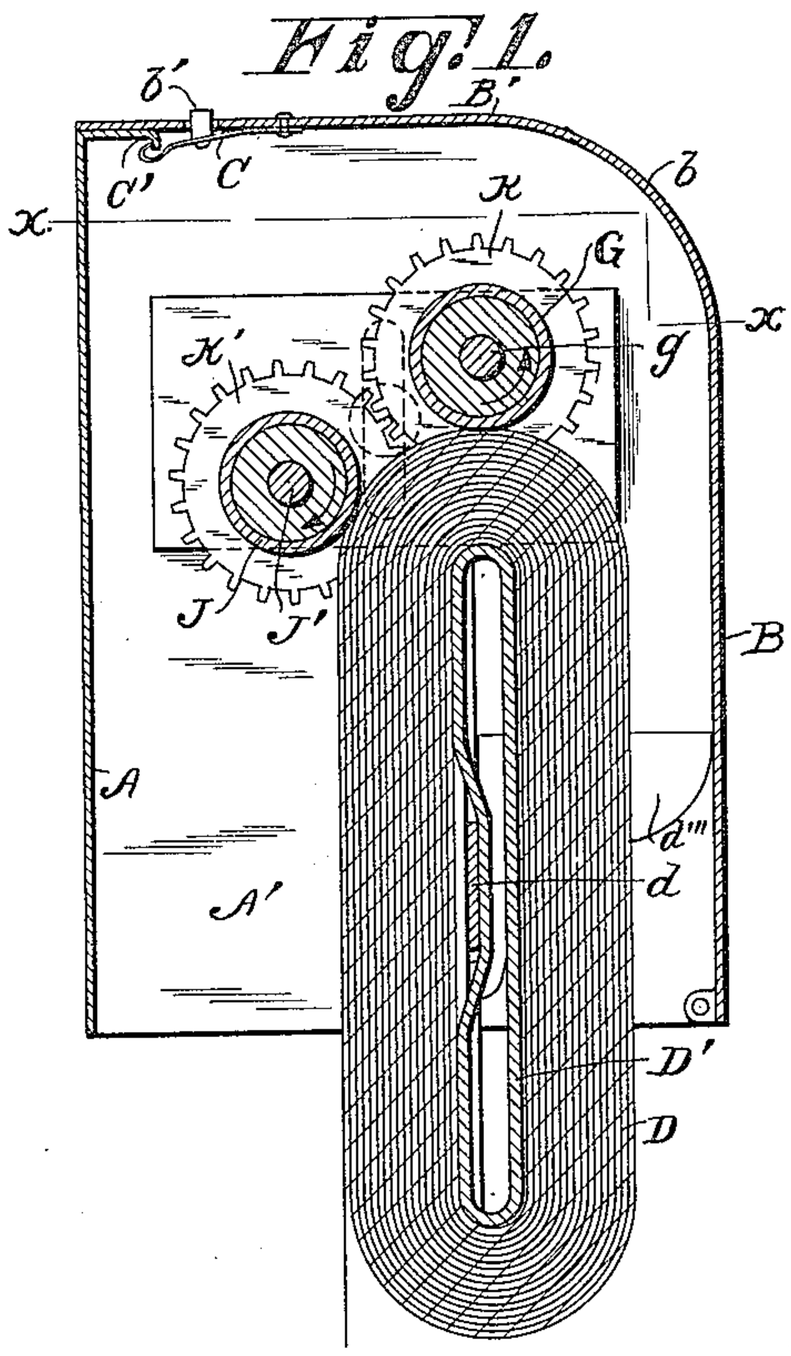


Fig. 2.

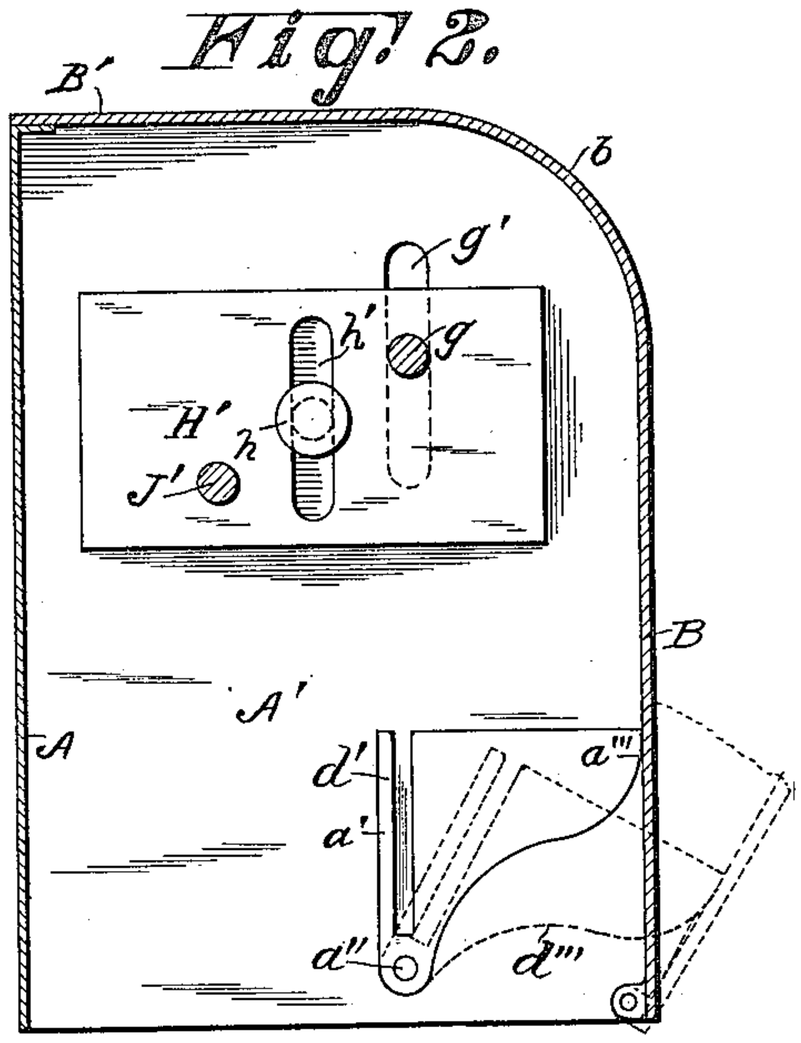
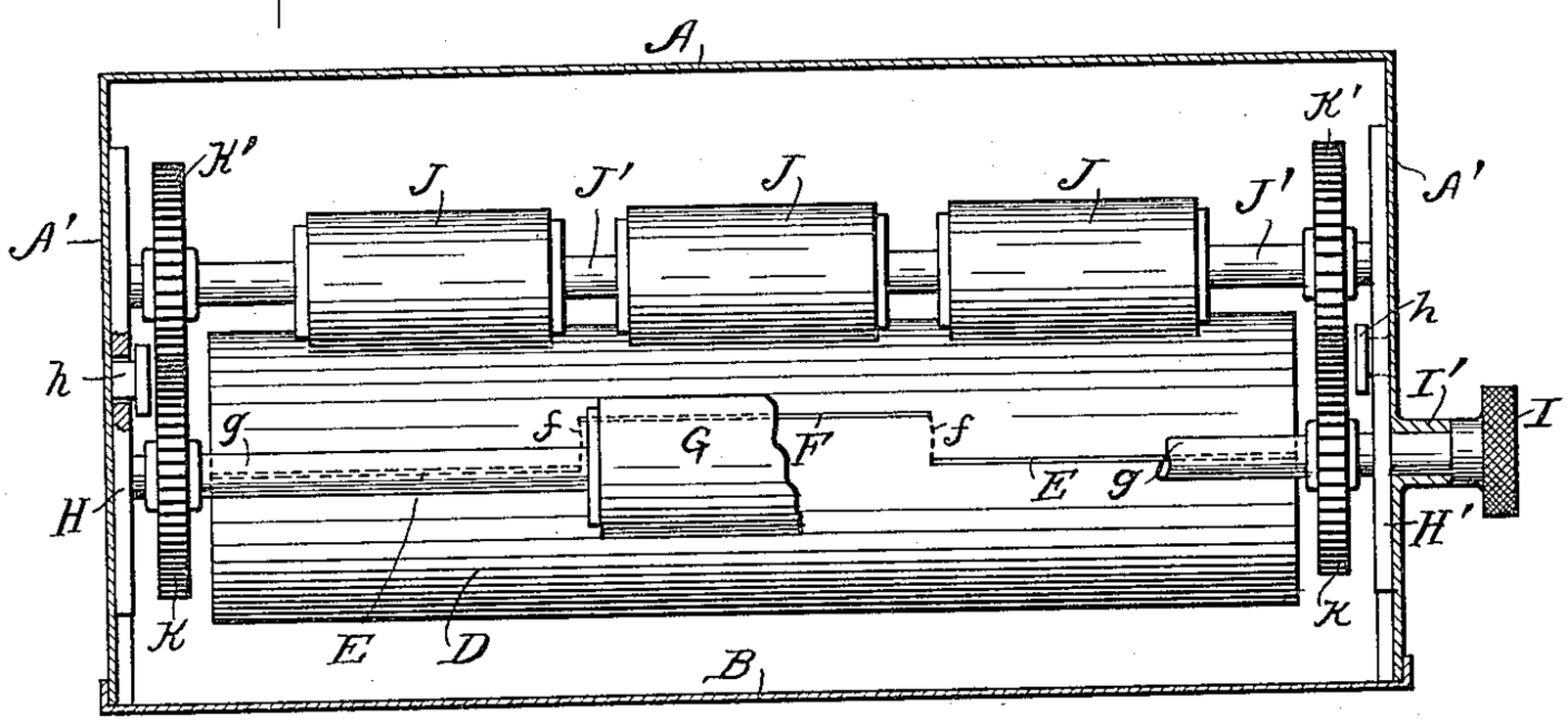


Fig. 3.



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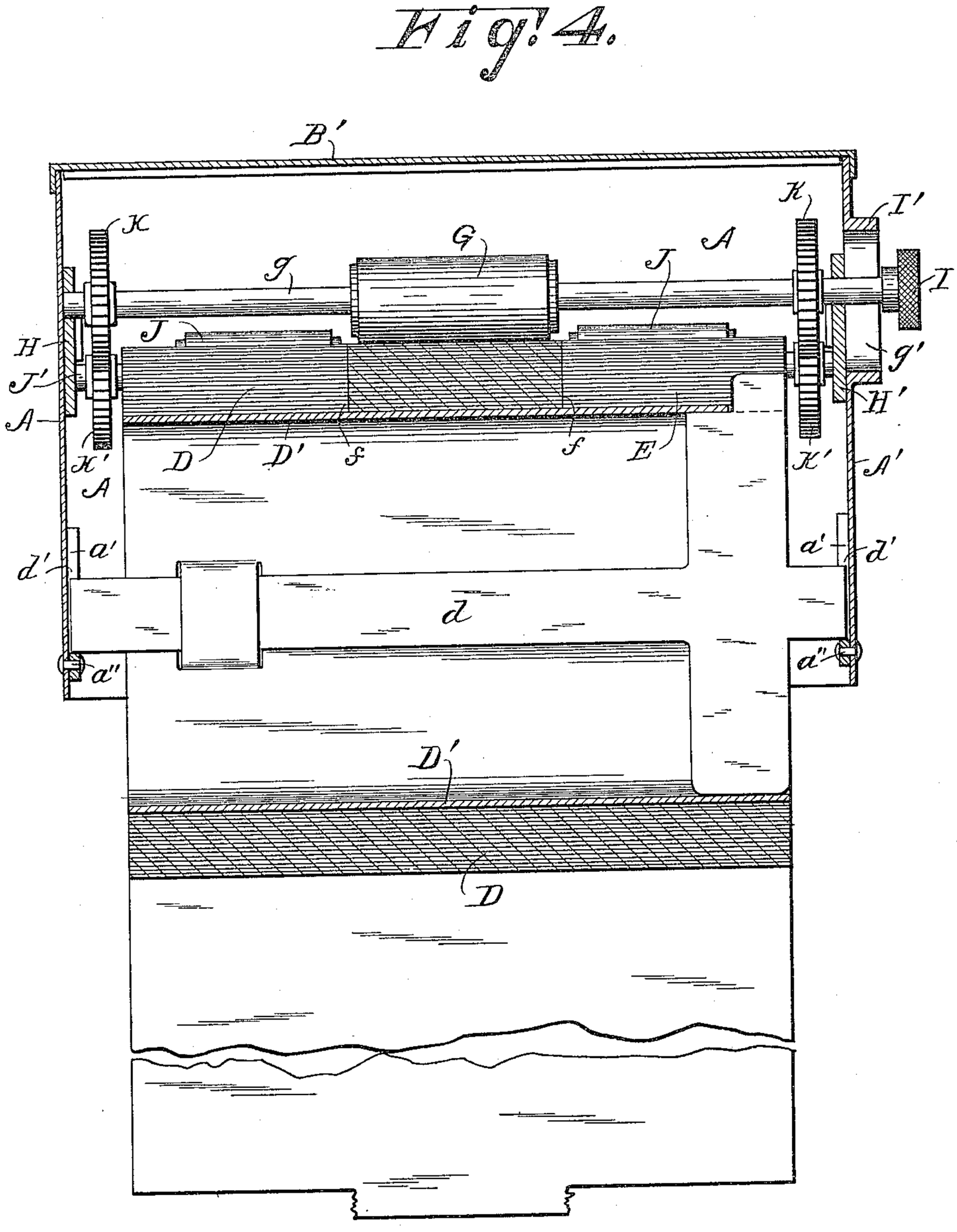
2 SHEETS—SHEET 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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PAPER-CABINET.

1,154,632. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed April 2, 1914. Serial No. 828,959.

To all whom it may concern:

Be it known that I, FRANK H. HOBERG, a citizen of the United States, residing at Green Bay, county of Brown, and State of Wisconsin, have invented new and useful Improvements in Paper-Cabinets, of which the following is a specification.

My invention relates to improvements in cabinets for rolled strips of paper such as toilet paper, toweling, etc., said rolls of paper being partially severed at the top side of the package to facilitate the withdrawal of the paper from the cabinet in successive sheets.

The object of my invention is to provide means whereby the withdrawal of a sheet will automatically set in motion mechanical devices for exerting friction upon the second sheet to start the same and facilitate its withdrawal following the withdrawal of the first sheet, all the sheets in the package being thus capable of successive withdrawal.

In the drawings—Figure 1 is a sectional view of a cabinet embodying my invention drawn transversely to the package and showing the package and the sheet discharging rollers in position. Fig. 2 is a similar view with the rollers and package removed. Fig. 3 is a transverse sectional view drawn on line *x*—*x* of Fig. 1, showing the rollers and package in plan. Fig. 4 is a vertical sectional view, drawn to a plane exposing the shaft *g* and roller G, and also cutting the paper package through the core thereof.

Like parts are identified by the same reference characters throughout the several views.

A wall plate A is provided with end plates A′, which constitute flanges projecting outwardly from the wall plate. A cover plate B is hinged to the flanges A′ at or near their lower outer corners. The cover plate B is elbowed at *b* and the upper portion B′ forms a cap plate which may be provided with a spring latch C adapted to engage a catch C′ on the wall plate. The latch C may be manually retracted by a push button *b′*, which projects through the cap B′, whereby the cap may be disengaged and permitted to swing upon the hinge pins *a* to open position. The plates B, B′, back wall A and end walls A′ constitute a cabinet open at the bottom.

The package D is oval in form, the paper being wound upon a paste board core D′ of ordinary type except that one wall of the core is slitted to receive a flat supporting bar *d*, whereby the core and package may be supported from the end walls of the cabinet, said end walls being provided with tilting package holders *a′*, provided with sockets *d′* adapted to receive the ends of the core supporting bar *d*. The package holders *a′* are each pivoted to the end of the casing at *a″*, preferably underneath the socket *d′* and the outer portion *d‴* of the package holder is made sufficiently heavy to cause said holder to tilt forwardly by gravity as indicated by the dotted lines in Fig. 2, when the cover plate B is swung to open position. But when the cover plate B is closed, it strikes the outer margin of the part *a‴* of the package holder and tilts the package holder to a position with the plate *d* occupying a vertical plane, the socket *d′* being then in a vertical position. The part *a‴* performs the double function of supporting the holder in its normal position from the cover plate B and of tilting the holder when the cover plate is open. When the package holders are tilted, the package may easily be inserted, since the ends of the bar *d* project from the respective ends of the package and slip easily into the then inclined sockets *d′*.

At one end the bar *d* is provided with an upwardly projecting arm *d″* which enters a slit *e* in the end of the paper package, whereby the package is securely held against any tendency to rotate.

The package of paper is cut inwardly from each end along the top of the package to form slits E. Another slit F is cut in the central portion of the package along a line parallel with the slits E but offset therefrom, leaving the side portions of the package connected at *f*, the package being otherwise divided into a series of superposed sheets, each sheet being connected with the next by narrow tongues at *f* extending between the extremities of the slit *f* and the respective slits E. A starting roller G having a frictional peripheral surface is mounted above the package in a position to bear upon the paper between the inner extremities of the respective slits E along a line parallel with the slit F and adjacent to said slit. This roller G is provided with a supporting shaft *g*, one end of which is journaled in a plate H loosely mounted on one interior wall A′ of the cabinet. The other

end of the shaft *g* extends through a hole in a similar plate H′ loosely mounted on the interior surface of the opposing end wall of the cabinet, but this end of the shaft *g* also extends through a slot *g′* (Fig. 2) of the cabinet wall and is provided with an exterior knob I. The side margins of the slot *g′* are preferably provided with outwardly projecting flanges I′ affording bearings for this end of the shaft *g*. The roller G and shaft *g* are supported from the package of paper when the package is in position, the roller G resting upon the upper surface of the package. The plates H and H′ are additionally connected with the end walls of the cabinet by headed pins *h*, which extend through vertical slots *h′* in these plates, said slots permitting the plates to move upwardly and downwardly, whereby the roller G is permitted to follow the package as it contracts in diameter upon the withdrawal of successive sheets. Another roller, which I call the starting roller J, is mounted upon a shaft J′ which is connected with the plates H and H′, the ends of the shaft being journaled in these plates. This roller J bears upon the surface of the package near the top and at its inner side, as clearly shown in Fig. 1. The shafts *g* and J′ are connected with each other by gear wheels K and K′, one set of these gear wheels being located near each end of the cabinet. In Fig. 3 a series of three rollers J is illustrated upon the shaft J′. It is of course immaterial whether these rollers are continuous or whether they constitute a series of short rollers, as shown in Fig. 3. The plates H, H′ being simply guided by the end walls of the cabinet within the range of movement permitted by the slots *h′* and *g′*, it is obvious that both rollers will exert a pressure by gravity upon the surface of the package. The package being in position and the initial or starting sheet having a hanging free end, as shown in Fig. 1, it is obvious that if this end of the sheet is grasped and pulled downwardly, it will tear away from the second sheet along the dotted lines or across the tongues at *f*. As this initial sheet moves downwardly after thus tearing away from the second sheet, the roller or rollers J will be rotated in the direction indicated by the arrows thereon in Fig. 1. The motion of this roller or of the rollers J will be transmittted through the gear wheels K′ and K to the starting roller G. This starting roller will thus be revolved in the direction indicated by the arrow thereon in Fig. 1 and will cause the upper detached end of the second sheet to move forwardly away from the line of severance or slits E and F, thus insuring that this detached end will drop by gravity and hang below a cabinet and below the package in the same manner that the initial sheet is illustrated as hanging in Fig. 1. The withdrawal of this second sheet will of course again actuate the roller J and again transmit motion to roller G to start the third sheet in the same manner, and as the sheets are successively withdrawn, the rollers move downwardly and continue to bear upon the surface of the remaining portion of the package.

I claim—

1. The combination with a cabinet open at the bottom and adapted to receive and support an oval rolled package of paper, of a set of parallel rollers located in the upper portion of said cabinet and adapted for vertical movement therein, one of said rollers being located in a position to bear upon the top of a paper package supported in said cabinet and the other roller being in a position to bear upon said package near the top, and means for transmitting motion from one of said rollers to the other.

2. The combination with a cabinet open at the bottom and adapted to receive and support an oval rolled package of paper, of a set of parallel rollers located in the upper portion of said cabinet and adapted for vertical movement therein, one of said rollers being located in a position to bear upon the top of a paper package supported in said cabinet and the other roller being in a position to bear upon said package near the top, and means for transmitting motion from one of said rollers to the other, together with means for actuating one of said rollers from the exterior of the cabinet.

3. The combination with a paper cabinet, adapted to receive and support an oval package of paper therein, which comprises a continuous strip partially severed at the top of the package by slits substantially parallel with but offset from each other, a roller mounted in said cabinet and adapted to bear progressively upon the top of the package and upon the outer sheet thereof in space between the offset slits, another roller in motion transmitting connection with the first mentioned roller and adapted to bear upon the opposite end portion of the outer sheet from that upon which the first mentioned roller bears, substantially as described.

4. The combination with an inclosing cabinet provided with a vertically movable rotary starting roller adapted to bear upon a paper package between end slits and at one side of an offset slit in such package, whereby the rotation of said starting roller will cause the end of the sheet to drop on that side of the offset slit on which the roller bears, together with an actuating roller in gear connection with the starting roller and adapted to bear upon the package on the opposite side of said offset slit.

5. The combination with a cabinet adapted to receive oval paper packages, of a set of plates loosely mounted and adapted to slide vertically upon the interior faces of the end walls of said cabinet, a set of rollers journaled in said plates and adapted to bear upon a package of paper within the cabinet adjacent to the top of the package, motion transmitting connections between said rollers adapted for roller rotation in opposite directions, whereby one of said rollers will actuate the end of a sheet on the package downwardly on one side thereof and the other of said rollers will actuate the other end of the sheet downwardly on the opposite side of the package when said rollers are rotated.

6. The combination with a cabinet adapted to receive oval paper packages, of a set of plates loosely mounted and adapted to slide vertically upon the interior faces of the end walls of said cabinet, a set of rollers journaled in said plates and adapted to bear upon a package of paper within the cabinet adjacent to the top of the package, motion transmitting connections between said rollers adapted for roller rotation in opposite directions, whereby one of said rollers will actuate the end of a sheet on the package downwardly on one side thereof and the other of said rollers will actuate the other end of the sheet downwardly on the opposite side of the package when said rollers are rotated, one of said rollers being adapted to be actuated by the friction of a withdrawing sheet and the other of said rollers being adapted to be actuated manually from the exterior of the cabinet.

7. The combination with the end walls of a paper cabinet, of a pair of flat plates constituting package holding members, each pivoted at its lower end to one end wall and provided with a socket extending downwardly in its upper margin, said members in front of said slots, having forwardly projecting portions and being adapted to automatically tilt forwardly by gravity when the cabinet is opened; and said cabinet having a door adapted when closed, to support said members in package holding position, substantially as described.

8. The combination with a paper holding cabinet provided with a door, of a pair of package holding members pivotally mounted within the cabinet at the respective ends thereof, each of said package holding members being provided with a socket adapted to receive a package supporting bar and also provided with an arm projecting into contact with the cabinet door, said arm being adapted, when the door is open, to tilt the package holding members by gravity to an inclined position to facilitate the insertion and removal of the packages and package supporting bars.

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

FRANK H. HOBERG.

Witnesses:
LEVERETT C. WHEELER,
IRMA D. BREMER.