Sept. 15, 1925. 1,553,954

P. D. PARSONS

DISPENSING CABINET

Filed Oct. 21, 1921

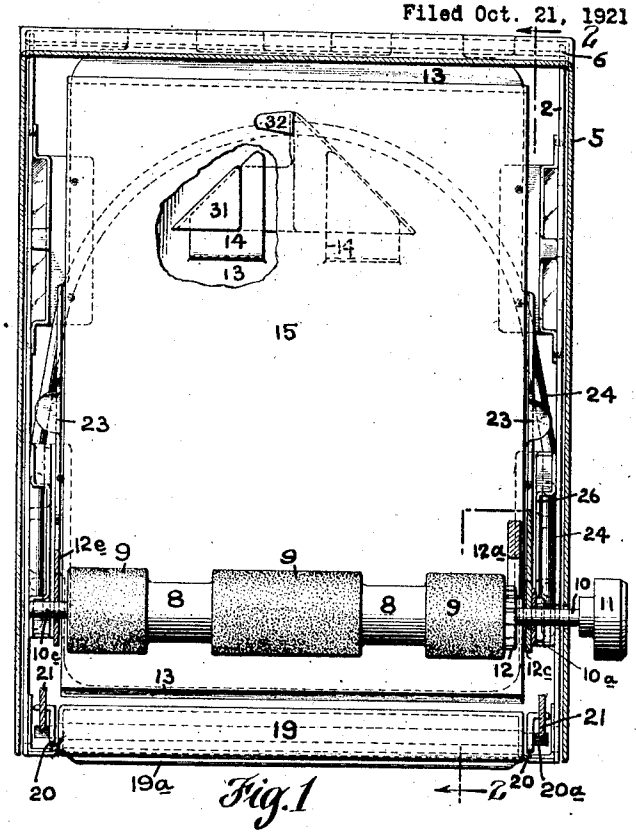


Fig. 1

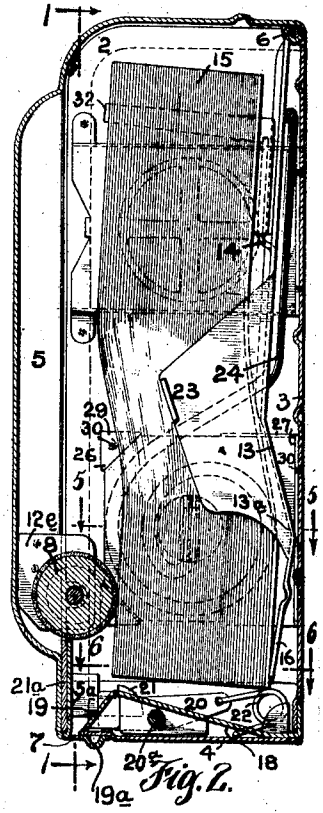


Fig. 2.

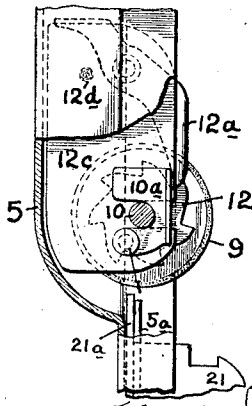


Fig. 4

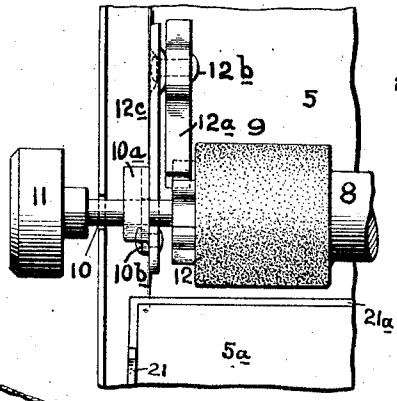


Fig. 3.

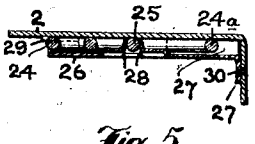


Fig. 5.

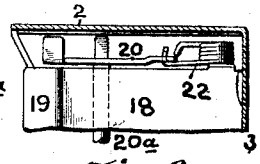


Fig. 6.

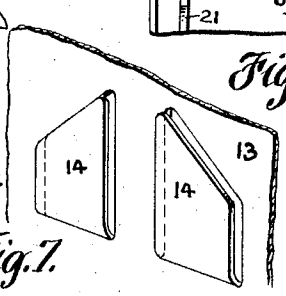


Fig. 7.

WITNESSES:

Gustav Genzlinger.

INVENTOR

Philip D. Parsons

BY

ATTORNEY

Patented Sept. 15, 1925. 1,553,954

UNITED STATES PATENT OFFICE.

PHILIP D. PARSONS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SCOTT PAPER COMPANY, A CORPORATION OF PENNSYLVANIA (1922).

DISPENSING CABINET.

Application filed October 21, 1921. Serial No. 509,247.

To all whom it may concern:

Be it known that I, PHILIP D. PARSONS, a citizen of the United States, and resident of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Dispensing Cabinets, of which the following is a specification.

The object of my invention is to provide an improved construction of dispensing cabinet, for toilet papers, formed of pressed sheet metal and embodying details of construction which insure it to be more efficient and durable than constructions of similar devices heretofore in use.

My object is further to form the various operative parts of the cabinet, as far as possible, of sheet metal stamped or pressed in forms and shapes, whereby, when assembled, they provide a suitable inclosure for a package of toilet paper and means for pressing the latter in contact with the dispensing devices, so that one sheet at a time may be delivered.

My object is also to so shape the various sheet metal parts, which are to retain relatively rigid positions, that they may be properly secured in place by electric welding, for more rapid assemblage in completing the structure.

My object is also to provide the lower part of the cabinet adjacent to the discharge orifice with a finger guide which shall prevent the finger accidentally closing the orifice at time of discharging the paper and which might have a tendency to turn the lower edge of the paper to interfere with its proper discharge at a time when the intent was to grasp the lower edge of the paper.

My object is also to so shape the sheet metal parts adjacent to the discharging orifice, that they present rounded surfaces with the avoidance of all abrupt edges and thereby insure an unobstructed discharge of the paper.

With the above and other objects in view, the nature of which will be more fully understood from the description hereinafter, the invention consists in the novel construction of dispensing cabinet, as hereinafter more fully described and defined in the claims.

Referring to the drawings: Fig. 1 is a front sectional view on line 1—1 of Fig. 2, of a cabinet embodying my improvements, the front cover being removed to show the interior; Fig. 2 is a vertical sectional view of the same taken on line 2—2 of Fig. 1; Fig. 3 is a rear elevation of a portion of the cover and dispensing roller; Fig. 4 is a sectional side view of the same; Fig. 5 is a transverse section through a portion of the body and spring, taken on line 5—5 of Fig. 2; Fig. 6 is a sectional plan view of the lower part of the case, taken on line 6—6 of Fig. 2; and Fig. 7 is a perspective view of a portion of the presser plate.

The case is provided with sides 2, back 3 and bottom 4, and is adapted to be closed by a front cover 5, extending over the top and hinged to the back at 6. The lower part of the cover 5 is provided with latch hooks 21 which engage locking arms 20, said locking arms being secured to a rock shaft 20^a and spring pressed into locking engagement by coil springs 22.

In the particular construction embodied in my improved cabinet for providing the hinged cover 5 with the latch hooks 21, I form the bottom of the cover with an upwardly bent flange 5^a, forming a groove in which a transverse plate 21^a is fitted and which has its ends bent at right angles to form the latch hooks 21. This plate 21^a may be spot-welded in position upon the cover plate 5, if so desired. The advantage of this construction is that it gives a three-ply thickness of the cover at the lower edge where it is naturally weakest, if left as a single ply, and furthermore, while permitting quick and accurate assemblage, furnishes a rounded lower edge to the cover which provides a relatively smooth discharge orifice at 7.

The bottom of the case is formed of two sheet metal parts 4 and 18, the latter being flanged at the rear and spot-welded to the back 3 of the case. The plate 18, furthermore, is inclined upward from the rear to a considerable distance above the horizontal bottom plate 4 and is then extended downward on an incline at 19 to form with the cover a tapering slotted discharge orifice 7, the same extending the whole width of the case and through which the sheets of paper are successively discharged. The lower edge of the inclined plate portion 19 is bent under in the form of a transverse rib 19^a, provid-

ing thereby a shelf over which the forward end of the bottom plate 4 extends, as is clearly shown in Fig. 2. These parts may be welded together, if desired. The transverse rib 19ª is arranged close to the rear of the orifice 7 and is adapted to prevent the fingers from pressing against the orifice when attempting to take hold of a sheet which is being fed therethrough, so that there shall be no obstruction to the passage of the sheet through the orifice, at least to a position in which it may be grasped. This rib 19ª may be provided in any other suitable manner, if so desired. The inclined plate 18 extends over the transverse rod 20ª and shields it. The end of the rod 20ª is adapted to receive a suitable key for rocking the rod and oscillating the locking arms 20 for releasing the latch hooks 21 of the cover when it is desired to open the cabinet.

The upper end of the inclined plate surface 19 is slightly to the rear of the forward sheets of the paper package 15 when pressed against the discharging roller 8, so that when the sheet is fed downward it will pass in front of the inclined surface 19 and be guided down to the orifice 7. This discharge orifice 7 is formed between the end of plate 19 and the bottom plate 4 on the one part and the lid 5 on the other, so that when the hinged cover is raised, the discharge orifice is completely open in the front and permits easy cleaning in case of clogging. The cover 5 is provided near its lower part with a roller 8 having roughened surfaces at 9, preferably formed of abrading material such as emery or corundum cemented upon the roller, the latter usually being of wood and secured upon a metal shaft 10. This shaft 10 is journaled in suitable bearings on the cover so as to be carried by and moved with it. It is further provided with the usual ratchet wheel and pawl device at 12 and 12ª for preventing backward rotation, and with a hand wheel 11 upon the outside of the cabinet by which to rotate the shaft 10 and its roller 8. This construction of the roller and means for operating it may be of the well known construction and will need no further explanation.

While the general construction of the roller and the general manner of supporting it is similar to what has heretofore been employed, the specific means for providing a bearing for it embodies features of novelty in the following particulars: At the end of the roller most distant from the ratchet wheel, there is a plate 12ᵉ which is welded to the cover 5 and said plate is provided with an aperture in which the end 10ᶜ of the shaft of the roller 8 extends, and whereby it is journalled. At the other end of the roller, adjacent to the ratchet wheel, the shaft 10 is supported in a slotted part of a plate 12ᶜ which is spot-welded, as at 12ᵈ, for example, to the cover, and the shaft 10 is held in position in the slot by the latch 10ª which is pivoted to the plate 12ᶜ at 10ᵇ, said latch having sufficient friction to maintain itself in the position shown in Fig. 4, when turned thereto for retaining the roller in its journaled position. The pawl 12 is gravity actuated and is hinged at 12ᵇ to the plate 12ᶜ, its construction being such that it maintains its engagement with the ratchet wheel 12 by gravity, and its upper end extends sufficiently rearward as to contact with the cover plate to prevent abnormal movement which might cause it to engage with the paper of the package. When the cover 5 is turned upward, the latch 10ª may be turned downward to release the roller shaft 10 and the roller may then be lowered at the end having the knob 11 and withdrawn from its bearing at the other end; and reversely, in assembling the parts, the journal at one end of the roller may be inserted in the plate 12ᵉ and the shaft 10 at the other end placed in the socket in the plate 12ᶜ, and the latch 10ª turned into locking position, as shown in Fig. 4.

Hinged at or adjacent to the hinge point 6 of the cover is the presser plate 13, the lower part 16 thereof being bent forward slightly and adapted to approach the roller 8 but held against the contacting with it by the two side arms 23 which rest against the cover plate 5, when the plate 13 is in its most forward position. The function of this plate 13 is to support and force the paper pad or tablet 15 against the roughened surfaces 9 of the roller 8, said pressure for performing this function being provided by the spring 24. If it were not for the arms 23 acting as limit stops for the plate 13, the spring 24 would force the lower part 16 of the plate against the abrading surface 9 of the roller, which would not only injure the plate, but where the roughened surface 9 is cemented to the roller 8, said roughened surface material would be objectionably removed to the destruction of the efficiency of the roller as a discharging device. The side arms 23 also act as side guides for the paper package 15 to insure its being positioned properly to cooperate with the dispensing feeding roller 9.

Attention is also directed to the special shape of the presser plate, wherein it is bent somewhat in a zigzag shape which throws the lower portion backward of the upper portion and provides thereat a part 13ª which will contact with the back 3 to limit the extent to which the plate may move backward, and at the same time provide between the lower part 16 and the upper portion of the presser plate a recessed part over which the package hangs and

whereby more or less yieldingness is given to the package, which insures a more satisfactory contact with the roller. It is further to be understood that this recessed portion permits the lower end of the paper package to assume an obliquely forward position so that when the end 16 presses the paper forward against the roller, the detached sheet, under the action of the roller, has a tendency to travel obliquely forward under the roller and insure its entering into the discharge orifice 7. It will be further seen that side plates 23 of the presser plate are of considerably vertical depth, so that they form a strong brace between the upper and lower portions of the presser plate and hence maintain it in rigid shape and prevent bending or springing adjacent to the middle bent portions thereof. This rigidity is important, because the action of the spring 24, in forcing the presser plate toward the roller, acts upon the presser plate near its upper or hinged end and it is desirable that the plate shall not have undesirable elasticity. It will also be seen that the rear extension 13[a] of the presser plate provides a stop against the rear plate 3, which insures a space back of the plate and between it and the rear plate in which the spring 24 may extend and have free play.

In addition to the foregoing features of the presser plate, 13, it is also provided near its upper end with two upwardly extending tongues 14 which are stamped out of the body of the presser plate so as to present free upper ends which are preferably pointed and present oblique upper edges which, together, give a more or less triangular construction over which the socket of the paper package may be hung. These tongues extend upwardly parallel to the plate but project slightly therefrom, as will be understood by reference to Figs. 2 and 7. By providing two tongues 14, in place of one wide arrow pointed tongue, the plate is stronger because there remains the vertical continuation of the plate between the tongues 14, as will be understood by reference to Fig. 7.

The spring 24 is of a construction which provides great elasticity and strength, is easily secured in position in the case, and the possibility of its breaking under strain is entirely overcome. As shown, this spring is bow-shaped and has its lower ends spirally coiled as at 24[a], to provide great elasticity, each of said spirally coiled parts having their spiral portions in the same plane so that a minimum space is required therefor in the case. This is important, as it permits the large coils to extend up on each side of the paper tablet 15 and pressure plate 13 without objectionable width being necessary to the case. The coil 24[a] has its inner end 25 bent upward and received in a slot formed by two flanges 28 struck up from a retaining plate 26 (Figs. 2 and 5), said retaining plate being provided with rear and top flanges 27 and corner flanges 29 which are spot-welded as at 30. These retaining plates are in this manner securely fastened to the back and sides of the casing and provide shallow compartments in which the spiral spring portions 24[a] of the spring 24 are housed and held with freedom of action while the upper or bow-portion 24 of the spring directly acts upon the presser plate. The upper or bow end of the spring presses upon the plate 13 near its hinged end and consequently a very small movement of the spring produces a considerable movement of the lower end 16 of the plate. Moreover, because of the small movement required of the spring, it may be made of relatively thick wire and hence is not liable to set or break in use.

While in a general way the paper package may be hung upon the presser plate 13 or in position to be acted upon by said presser plate, in any suitable manner, nevertheless I prefer to employ a package having a metallic socket 31 provided with a forwardly extending tongue 32 passing through the assembled sheets of the package near their upper portions and from which the sheets are hung and capable of being torn by the action of the roller, in succession, as each sheet in turn comes in contact with the roller. The shape of the socket 31 in in a general way triangular, so that it fits upon the upwardly extending tongues 14; and the obliquity of the contacting edges of the tongues and socket centralizes the paper package upon the backing plate.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable, and while I have in the present instance shown and described the preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that I do not restrict myself to the details, as the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a dispensing cabinet, the combination of the casing having a discharging aperture at the extreme bottom, means for suspending a paper package within the casing and above the discharge aperture, means for discharging the sheets of the paper package successively downward through the discharging aperture, and a downwardly extending transverse rib adjacent to one side of and projecting greatly below the surface of the other side of the discharging

aperture for preventing the fingers from closing the aperture, and wherein further the transverse rib portion is arranged adjacent to and at the rear of the discharge ribs and projecting downward therefrom, the cabinet on the inside at the bottom is provided with an inclined sheet metal wall forming the rear part of the throat of the discharge orifice, the lower portion of which is bent backward and forms the downwardly extending rib, and the case further provided with a bottom plate having its forward end resting upon the top of the rib portion and supported thereby.

2. In a dispensing cabinet, the combination of the casing having a discharging aperture at the extreme bottom, means for suspending a paper package within the casing and above the discharge aperture, means for discharging the sheets of the paper package successively downward through the discharging aperture, and a downwardly extending transverse rib adjacent to one side of and projecting greatly below the surface of the other side of the discharging aperture for preventing the fingers from closing the aperture, and wherein further the dispensing cabinet is provided with a hinged cover at the front, the lower edge of which forms the front wall of the throat leading to the discharge orifice, and said lower end of the cover bent upward to provide a socket and a smooth rounded lower edge to the orifice, and a latch hook extending from a plate fitted in the socket at the lower portion of the cover and movable therewith, the cabinet further provided with latching means for engaging the latch hook.

3. In a dispensing cabinet for toilet paper, the body part having therein means for suspending a package of paper and pressing it forward and also having at the lower front edge an inclined plate providing a tapering discharge throat for the paper sheets and extending below and under the front edge of the body part, said body of the cabinet combined with a hinged sheet metal cover at the front thereof hinged at its upper and rear part to the body and having its lower edge bent upward to form a rounded lower edge to constitute the front wall of the tapering throat, and a discharging roller carried by a hinged cover immediately above the upwardly bent lower edge of the cover and adapted to act upon the paper sheets when pressed forward against it for discharging them successively through the tapered throat, and wherein the cabinet is further provided with a plate secured in position between the outer and inner plate portions of the lower end of the cover and provided on its ends with rearwardly extending latch hooks, and latch devices carried by the body of the cabinet for engaging the latch hooks.

4. In a dispensing cabinet for toilet paper, the body portion thereof combined with a cover plate having a discharging roller carried at its lower part, a presser plate hinged to the upper and rear portion of the cabinet body and its lower portion in alinement with the roller, the said presser plate having its body portion bent into a zigzag form and with side flanges holding said bent portions in rigid relation and also acting as lateral guides for the paper package and limit stops for the forward movement of the plate toward the roller.

5. The invention according to claim 4, wherein further the presser plate has its upper portion stamped whereby it is provided with two forwardly and upwardly projecting integrally attached tongues having oppositely inclined upper edges clear of the surface of the plate to form a more or less triangular support for a socket portion on the paper package and providing a central continuance of the plate between the projections.

6. In a dispensing cabinet for toilet paper, a body portion having a presser plate movable outwardly at its lower part, combined with a hinged cover plate at its front portion, said cover plate provided near its lower portion with two rear rearwardly extending plates electrically welded to the cover plate at a distance from its respective side edges, one of said plates provided with an aperture constituting a bearing and the other provided with a notch and a hinged locking plate to close the orifice of the notch, a discharging roller having a journal at one end adapted to fit the hole in one of the plates and having a shaft at the other end adapted to fit the notch in the other of the plates and be held therein, said roller provided with a ratchet wheel, and a gravity actuated pawl engaging the ratchet wheel and pivoted to the notched plate, the construction being such that the roller is detachably supported on the cover by means wholly within the same and independent of the side flanges thereof.

In testimony of which invention, I hereunto set my hand.

PHILIP D. PARSONS.