No. 756,804. PATENTED APR. 5, 1904.

A. E. SEXTON.

TOILET PAPER HOLDER.

APPLICATION FILED MAR. 7, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

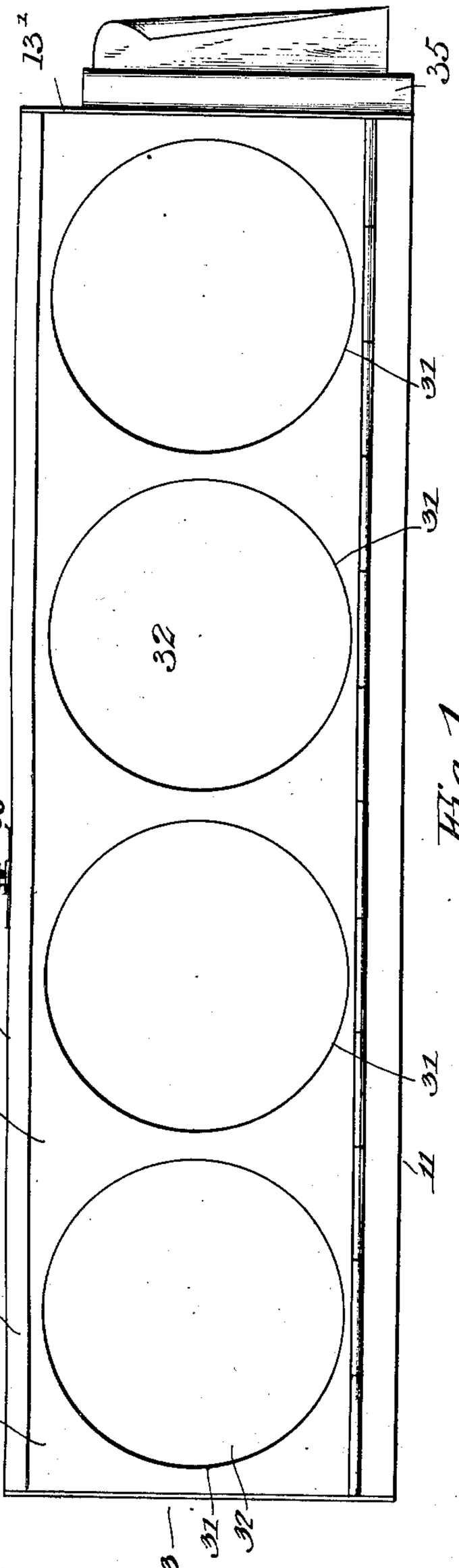

Fig. 1.

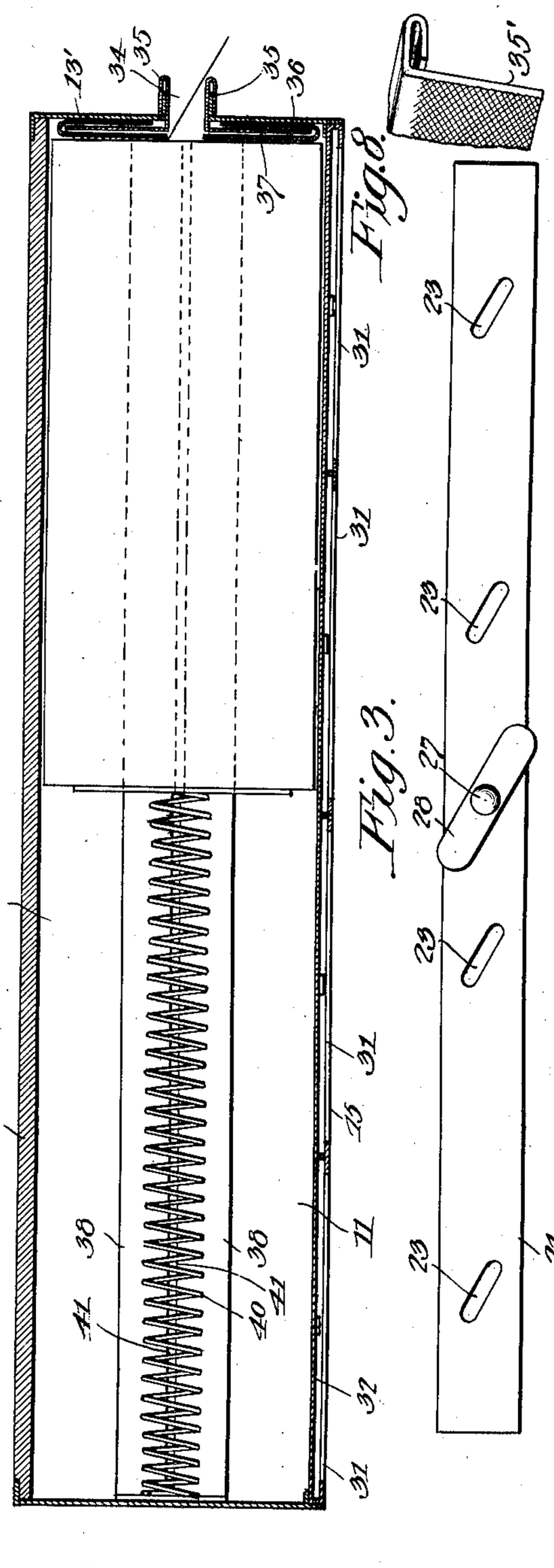

Fig. 3.

Fig. 5.

Fig. 8.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

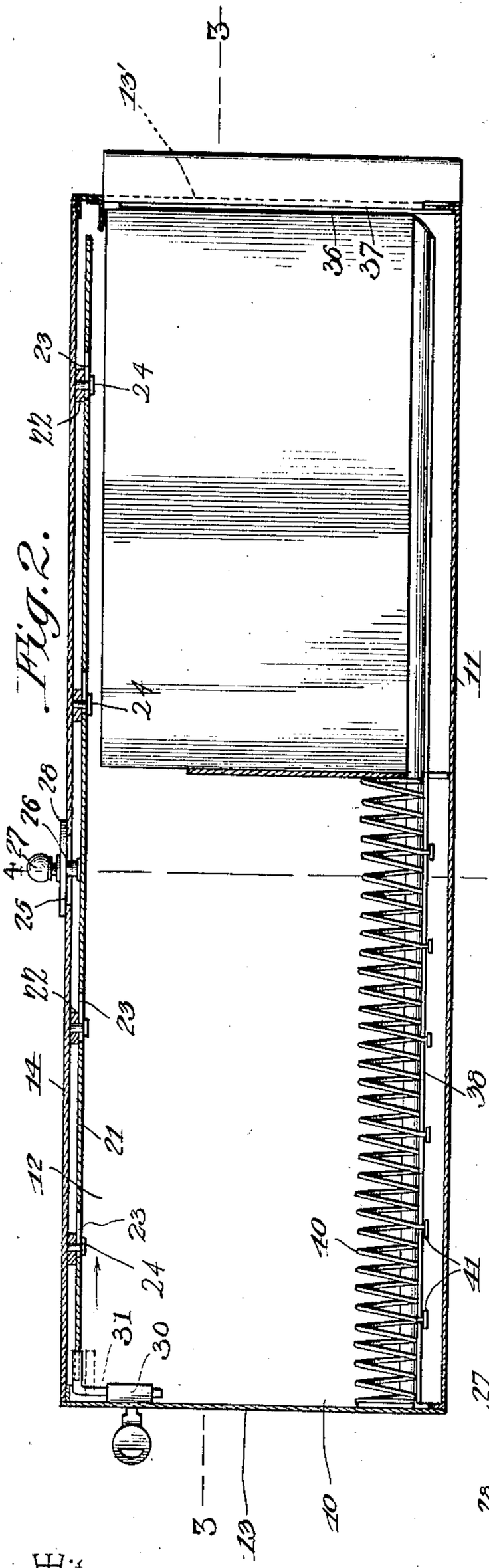


Fig. 7.

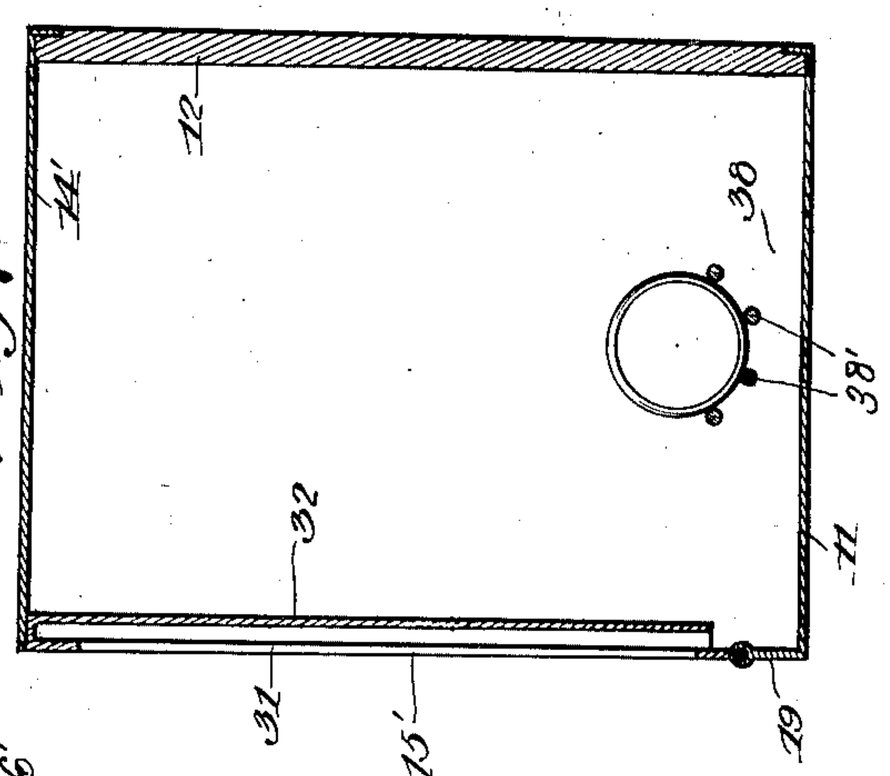


Fig. 6.

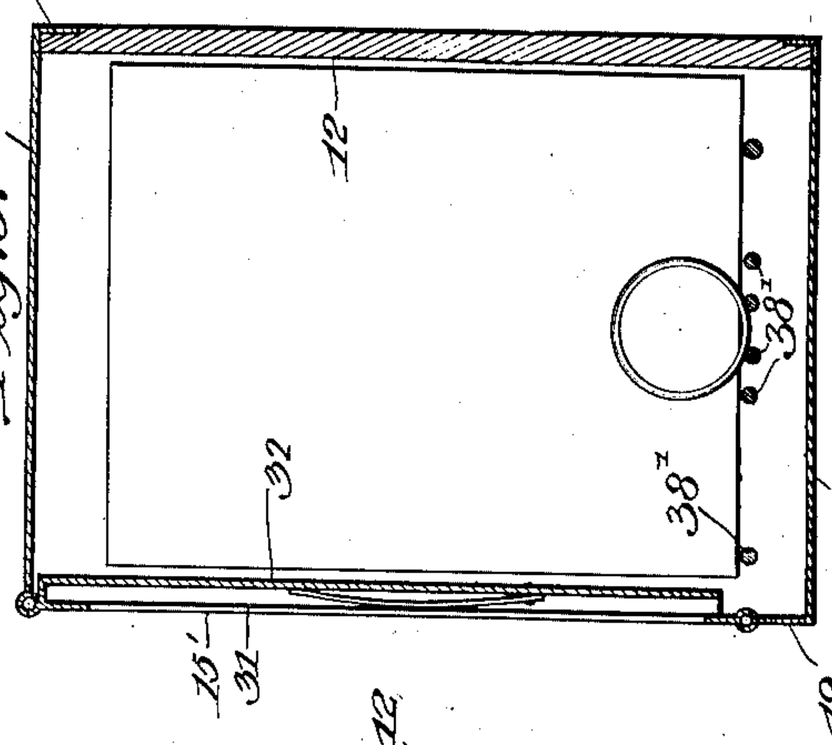
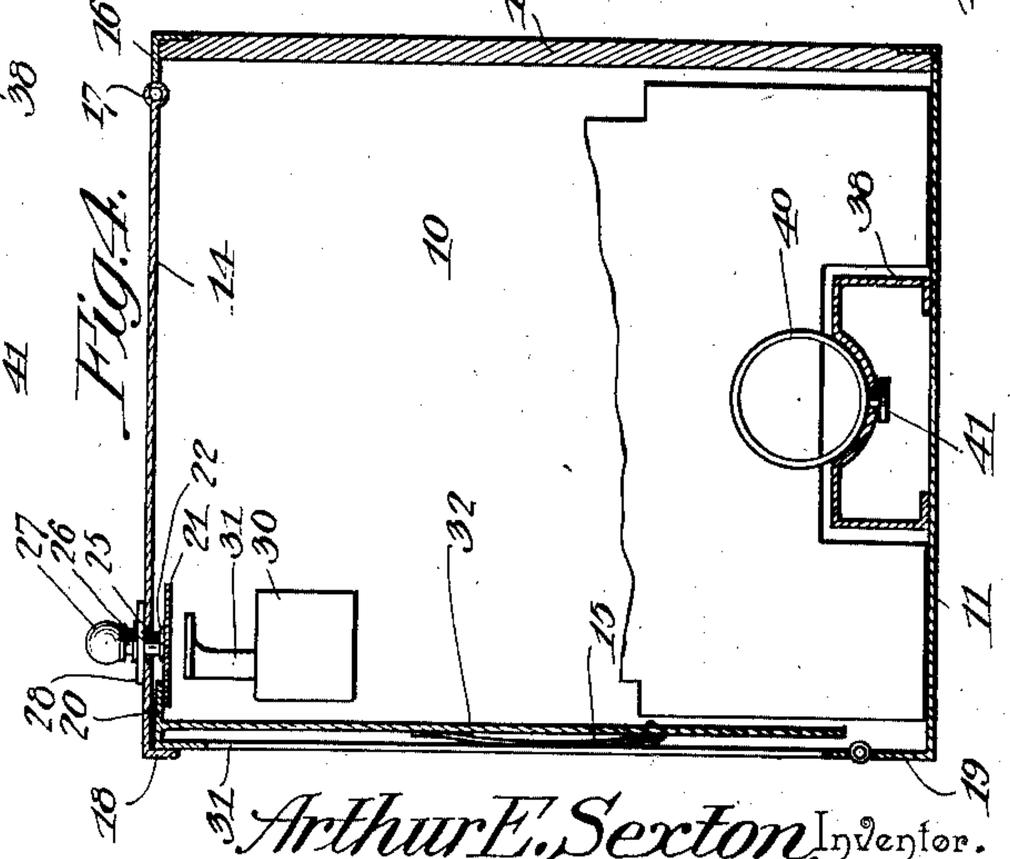


Fig. 4.



Witnesses
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No. 756,804. Patented April 5, 1904.

UNITED STATES PATENT OFFICE.

ARTHUR E. SEXTON, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO SINGLE-SHEET PAPER COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

TOILET-PAPER HOLDER.

SPECIFICATION forming part of Letters Patent No. 756,804, dated April 5, 1904.

Application filed March 7, 1903. Serial No. 146,732. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. SEXTON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Toilet-Paper Holder, of which the following is a specification.

This invention relates to certain improvements in holders for containing and dispensing toilet-paper and the like, and has for its principal object to provide an improved device of this character for containing toilet-paper, in which the sheets are interfolded, each sheet being centrally folded to form two leaves and each leaf being interlaced with the corresponding leaves of the sheets both above and below it.

A further object of the invention is to provide a holder capable of containing a very large quantity of paper, and in which the supply may be replenished without the necessity of removal of any remaining portion of a previous supply.

A still further object of the invention is to provide an improved paper-feeding means for constantly forcing the sheets in the direction of the discharge-slot, the feeding means being applicable to holders wherein the bottom or lower supporting-plate is arranged in either a horizontal or an inclined plane, and, further, in this connection, to so arrange and construct the lower paper-support as to materially lessen the frictional resistance to the feed.

A still further object of the invention is to so construct the paper-holder as to permit the ready opening of the casing whenever it becomes necessary to replenish the supply and to provide suitable means for securely locking the casing.

A still further object of the invention is to provide a paper-holder of this class with suitable spaces or compartments for the reception of advertising-cards or similar matter, the spaces or compartments being so arranged as to be accessible only when the casing is unlocked.

A further and important object of the invention is to so construct the front or delivery end of the holder as to insure the withdrawal of a portion of a succeeding sheet or group of sheets, as the case may be, each time a sheet or group of sheets is withdrawn from the holder and at the same time to avoid the accidental withdrawal of more than a single sheet or other predetermined quantity at a single operation.

With these and other objects in view the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a front elevation of a paper-holder constructed in accordance with the invention. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a sectional plan view of a portion of the holder on the line 3 3 of Fig. 2. Fig. 4 is a transverse sectional elevation of the holder on the line 4 4 of Fig. 2. Fig. 5 is a detail view of a portion of the locking mechanism. Figs. 6 and 7 are views illustrating slight modifications of the invention. Fig. 8 is a detail view illustrating a modification more particularly referred to hereinafter.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The holder forming the subject of the present invention is designed to contain sheets of toilet-paper or the like, in which each sheet is folded in half to form two leaves, the fold-lines of alternate sheets being disposed in opposite directions and the two leaves of each sheet being interlaced with the similar leaves of the sheets on each side. The paper is maintained in a horizontal or slightly-inclined column, the sheets standing vertically on one edge and being fed forward to a discharge-slot either by gravity or by a suitable forwarding device, and in order to permit the

employment of a large holder without occupying an undue amount of space in the toilet-room the longer side of the holder is attached to a wall or other support in such manner that the sheets are arranged at a right angle to the wall, the casing projecting from the wall for a distance but little greater than the width of one-half of a folded sheet.

Referring to the drawings, 10 indicates a holder which may be placed in a horizontal or in a slightly-inclined position and may be formed of metal or any other suitable material.

The holder is formed of a bottom 11, a rear wall 12, end pieces 13 and 13′, a top 14, and a front piece 15. The bottom, rear wall, and end pieces are rigidly secured together, and the upper end of the rear wall is preferably bent over the top to form a small flange 16, which acts to strengthen and brace the structure, although this flange may be formed of a separate piece soldered, riveted, or otherwise secured in position. The top 14 and the small flange 16 are hinged together, as at 17, and the front edge of the top 14 is provided with a depending flange 18, which fits over the upper edge of the front piece 15. The forward edge of the bottom 11 is bent upwardly to form a small flange 19, which may be integral with the bottom or formed of a separate piece of material, and to the upper edge of this flange is hinged the front piece 15, which is provided at the top with an inwardly-bent flange 20, extending under the top piece 14, the overlapping flanges of the two strengthening and bracing the structure, while the flange of the top prevents any outward movement of the front member 15.

In order to lock the casing, I employ a longitudinally-movable locking-strip 21, carried by the bar or strip 22, secured to the under side of the top piece 14, or this bar may be in the form of a plurality of spaced lugs. The locking-strip 21 is provided with a plurality of slightly-inclined slots 23, through which extend headed pins 24, depending from the bar or strip 22, and the relative arrangement of the parts is such that if the locking-strip receives longitudinal movement in one direction it will be projected laterally to a point under the edge of the flange 20, and thus lock the top 14, or by movement in the opposite direction the strip may be moved from engagement with the flange to permit the ready opening of the top. In the top piece 14 is formed an elongated slot 25 for the passage of a pin or bolt 26, secured at its lower end to the locking-strip 21 and provided with a knob 27 for convenience in manipulating the strip, and while not strictly necessary it is preferred to conceal the slot 25 by means of a small strip 28, carried by the lower part of the knob. This provides a convenient means for moving the strip longitudinally to either locking or unlocking positions.

In order to maintain the strip in the locked position, the end piece 13 of the holder is provided with an ordinary form of lock 30, having a bolt 31, which may be projected upwardly to engage with the end of the strip and prevent longitudinal movement thereof to unlocking position. This form of casing permits the ready introduction of a fresh supply of paper whenever necessary and affords sufficient room to accomplish the necessary interlacing of the first leaf of the fresh supply with the last leaf of any paper which may still remain in the holder. This structure may be modified to some extent, as shown in Fig. 6, by hinging the top piece 14′ to the front piece 15′ and providing means for locking the rear edge of the top to the flange 16′ or the back, as the case may be, or it may be further modified, as shown in Fig. 7, by forming the front and top of a single piece of metal or of rigidly-connected sheets of metal and hinging the lower portion of the front to the bottom piece, the upper rear portion having a flange fitted within a recess in the back of the casing.

The holder is preferably so constructed as to permit its use for the display of advertising-cards and the like, and for this purpose the front 15 is provided with a number of openings 31, through which the cards may be displayed, the cards being received within a small compartment formed by placing a longitudinally-disposed partition 32 at a point slightly to the rear of the front piece. One of the edges of the partition 32, preferably the upper edge, is rigidly secured to the front piece 15, while the lower edge is entirely disconnected and forms a mouth for entrance to the compartment, so that when the front is swung down to open the casing the mouth of the compartment is exposed and the cards may be readily inserted therein. When the casing is locked, the cards are not accessible and cannot be removed by an unauthorized person without destroying the same, or, if necessary, the cards may be protected by transparent panels of glass, celluloid, or similar material.

In devices of the class forming the subject of this invention it is desirable to provide at each withdrawal of a sheet or of a group of sheets for the partial withdrawal of the succeeding sheet, the exposed portion of said sheet being presented through the discharge-slot in convenient position to be grasped by the user. In some cases the sheets are folded singly and are to be delivered in succession, and in other cases two or three or more sheets are interfolded in the same manner as the single sheets, so that the sheets may be withdrawn in successive groups. In some cases it is found that where the inner face of the delivery side or end of the casing is very smooth the withdrawal of a sheet will sometimes draw a succeeding sheet entirely out of the holder, and this also occurs where the weight of the pa-

per or the pressure of the forwarding means is excessive. To overcome this difficulty, the inner face of the delivery side or end of the casing is preferably roughened in order to offer some slight resistance to the withdrawal of the sheet and while not interfering with the projection of a portion of the subsequent sheet will prevent the same from being drawn entirely from the holder. This roughening is preferably accomplished by placing within the holder a sheet of fine sandpaper, emery-cloth, or similar material which will offer frictional resistance to the movement of the sheet, and this material may be placed in position in the manner shown in Fig. 3. In this case the delivery end 13′ of the holder is formed of thin sheet metal provided with an approximately centrally disposed delivery-slot 34, which may be formed by making an incision in the sheet of metal which forms the end of the holder and then bending the metal outwardly to form two walls 35 of the delivery-slot, forming, in effect, a slot having thickened or widened walls, so that a sheet of paper projecting through the slot will be held at an angle to the plane of the delivery-wall and presented in convenient position to be grasped and withdrawn. The sandpaper 36 or equivalent material is preferably folded and placed within the holder, being held in position by plates 37, extending between two leaves formed by folding the paper, the edges of the plates being bent outwardly, following the lines of the slot, and after projecting for some distance beyond the outer edges of said walls are bent rearwardly to embrace the outer edge of the wall, and thus confined in position. These plates not only serve to hold the sandpaper in place, but by projecting beyond the outer edges of the slot-walls serve to thicken or widen the walls of the slot, and thus increase the angle of projection of the paper.

The surface presented to the paper within the holder at the delivery end is perfectly flat and parallel with the sheets, offering an extensive surface against which the sheets may bear, the object being to secure an even pressure or resistance at all points on each side of the delivery-slot, so that as the sheets are successively withdrawn from the holder the pulling strain will cause the fold of the sheet and the inclosed leaf of the succeeding sheet to slide sidewise toward the slot, the last or inner leaf of the outer sheet and the outer leaf of the following sheet being forced by this movement to curve or bulge out at the delivery-slot until the fold and the inclosed edge of the leaf reaches the delivery-slot, when they together spring out from the slot by the straightening of this curve or bulge.

Where the holders employed are very large and adapted to contain large quantities of paper, the extensive surface contact of the bottom of the holder with the entire length of the edges of the sheets offers considerable frictional resistance to the feeding movement of said sheets, and to lessen this and provide for the more ready feed of the paper toward the delivery-slot I employ in the bottom of the casing a number of comparatively narrow strips of metal 38, on which the lower edges of the sheets rest, the reduction in the surface area effecting a corresponding reduction of the resistance to the movement of the paper. This is of especial value where the forwarding of a column of paper depends entirely on gravity or where a comparatively light forwarding spring or weight is employed for the purpose. It is true that from a strictly theoretical standpoint there will be no reduction in the friction between the paper and the strips by mere reduction in the area of the supporting-surface, the angle of friction remaining practically the same; but in actual practice it is found that by reducing the area of the supports there will at least be a gain in the presentation of the paper at the discharge-point, inasmuch as there is a tendency of the interfolded sheets to lag and slightly turn at the fold-line when in contact with an extended surface, and when so turned the paper cannot be so readily withdrawn as where the frictional contact and consequent slight distortion of the shape of the paper sheets occurs only at widely-separated points. These strips of metal may be flat or may be of the general contour shown in Fig. 4, or in some cases a plurality of spaced rods or bars 38′ may be placed in the bottom of the holder, as shown in Figs. 6 and 7, the number of the strips, rods, or bars being dependent on the size of the sheets as well as the size of the holder and the character of the forwarding device.

In some cases a helical spring is employed to forward the paper to the delivery-slot, and where the holder is of considerable length there is always a tendency of the spring to buckle or bend. To prevent this, the spring 40 is provided at intervals with a number of depending shoes or stay-bars 41, which project underneath the edges of the guiding-strips which may be formed by the paper-supporting strips 38, a small pin or rod connecting the stay-bars to the spring and extending down between the two plates. In this manner the spring is maintained in a perfectly straight line and allowed to slide freely along its course.

In place of using sandpaper to increase the friction on the interfolded sheets I may make the slotted wall of metal or other material serrated or roughened in any desired manner, or the auxiliary plates 35 may be of the character indicated at 35′ in Fig. 8, wherein that portion of the plate on which the interfolded sheets bear is roughened, as a substitute for the sandpaper.

Having thus described the invention, what is claimed is—

1. A holder for containing and dispensing

interfolded sheets of paper, the slotted wall at the delivery end of the holder being roughened to increase the frictional resistance offered in the withdrawal of the sheets.

2. In a paper-holder, a slotted delivery-wall, and an auxiliary sheet of roughened material arranged on each side of the delivery-slot for frictional contact with the paper.

3. In a paper-holder having one wall provided with a delivery-slot and in which the material forming the wall is bent outwardly to increase the apparent thickness of the walls of the slot, a pair of auxiliary plates bent to partly embrace the walls of the slot, and auxiliary sheets of roughened material held in position within the holder for contact with the paper.

4. In a paper-holder, a slotted delivery-wall in which the material forming the wall is bent outwardly to increase the apparent thickness of the walls of the slot, a pair of auxiliary angular plates partly embracing the edges of the slot-walls and extending out beyond the same to further increase the thickness of the walls of the slot, and auxiliary sheets of roughened material held in place by said plates at points adjacent to the inner surface of the slotted wall on both sides of the slot.

5. The combination with a paper-holder for containing and dispensing sheets of paper arranged in a column and supported in a substantially vertical position on their lower edges, of a plurality of parallel longitudinally disposed and spaced strips arranged above the bottom of the holder and forming a support for the paper.

6. The combination in a paper-holder, of the containing-casing designed to receive a column of paper in which the sheets are arranged in substantially vertical position and supported on their lowermost edges, and a pair of narrow spaced strips extending lengthwise of the casing and arranged parallel with each other above the bottom of the holder and extending from end to end thereof to form a support for the column of paper.

7. The combination with a paper-holder, having a delivery-slot, of a helical forwarding-spring, a plurality of guiding-shoes secured at intervals to the coils of the spring, and a guiding means for said shoes.

8. The combination with a paper-holder having a delivery-slot, of a helical forwarding-spring, a pair of strips spaced from each other to form a paper-support, and a plurality of shoes secured at intervals to the coils of the spring and extending under the edges of the strips.

9. The combination in a paper-holder, of the hinged front and top walls each provided with a flange, and a longitudinally and laterally movable locking-strip carried by one wall and adapted to engage the flange of the opposite wall.

10. The combination in a paper-holder, of the hinged front and top walls each provided with a flange at its free edge, a longitudinally-movable locking-strip carried by one wall and provided with inclined slots, headed pins extending through said slots and serving when the strip is moved longitudinally to deflect the same laterally into engagement with the flange of the opposite wall.

11. The combination in a paper-holder having hinged front and top walls, of a longitudinally-movable locking-strip carried by one wall and adapted to engage the flange of the opposite wall, and means for locking said strip in position.

12. The combination in a paper-holder having hinged front and top walls each provided with a flange at its free edge, a longitudinally-movable locking-strip having inclined slots, headed pins carried by one of the walls and extending through said slots, an operating-knob arranged outside of the strip-carrying wall and operatively connected to said strip, and a lock having a bolt adjustable into and out of the path of movement of said locking-strip.

13. A holder for interfolded paper sheets, having a delivery-slot and a sheet-guiding device extending into and forming a reinforcement of the walls of the delivery-slot.

14. A holder for interfolded paper sheets, having a delivery-slot, and reinforcing means for the edges of the slot, and a sheet-retarding device supported by said reinforcing means, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ARTHUR E. SEXTON.

Witnesses:
J. ROSS COLHOUN,
C. E. DOYLE.