

[72] Inventor **Paul Belokin, Jr.**
6919 W. 43rd St., Berwyn, Illinois 60402
[21] Appl. No. **818,257**
[22] Filed **April 22, 1969**
[45] Patented **Nov. 10, 1970**

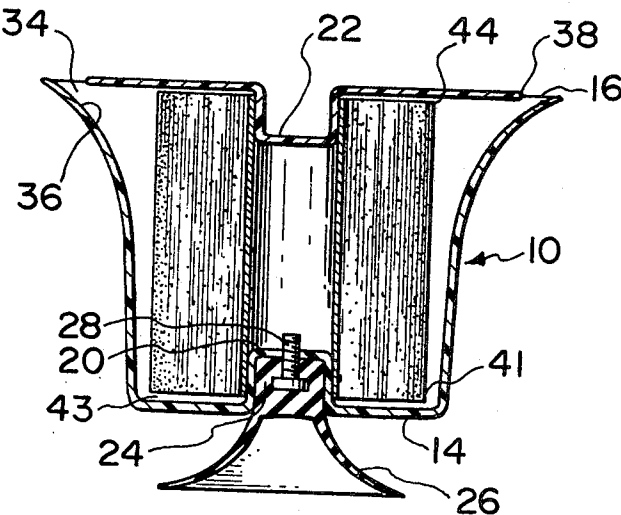
[56] References Cited			
UNITED STATES PATENTS			
901,520	10/1908	Burris.....	242/55.53
2,641,415	6/1953	Moriarty	242/55.2
3,235,196	2/1966	Platt.....	242/55.53
3,428,267	2/1969	Briles	242/55.53

Primary Examiner—Leonard D. Christian
Attorney—Harbaugh and Thomas

[54] **ROLL PAPER HOLDER**
12 Claims, 6 Drawing Figs.

[52] U.S. Cl..... 242/55.54,
242/138
[51] Int. Cl..... B65h 19/00
[50] Field of Search..... 242/55.2,
55.3, 55.53, 55.54, 134, 137, 138, 146

ABSTRACT: A paper roll is held at one end upon an internal boss within an open-ended housing and is covered at the open end by a retainer plate, the outer edge of which is spaced from the flared edge so that the paper can be readily removed in a spiral through the annular space so defined. The end plate is retained by means of a boss engaging the other or extended end of the paper roll.



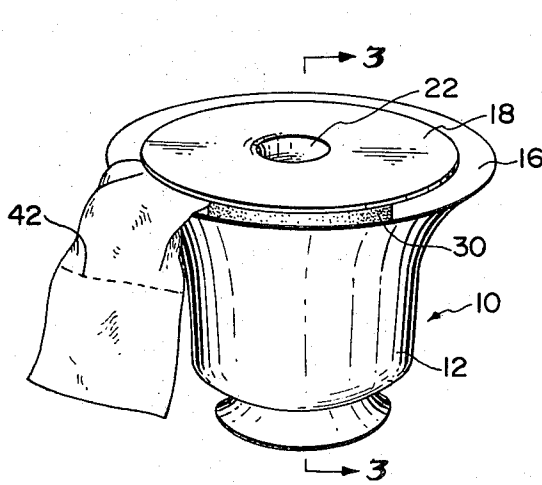


FIG. 1

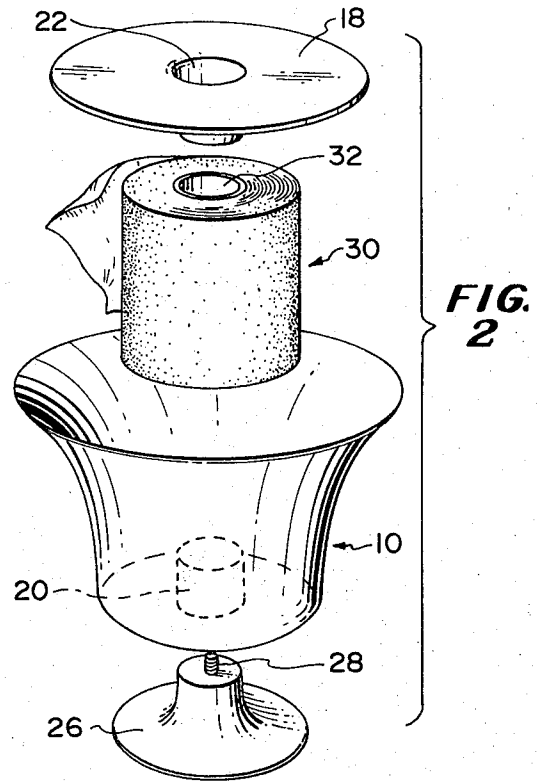


FIG. 2

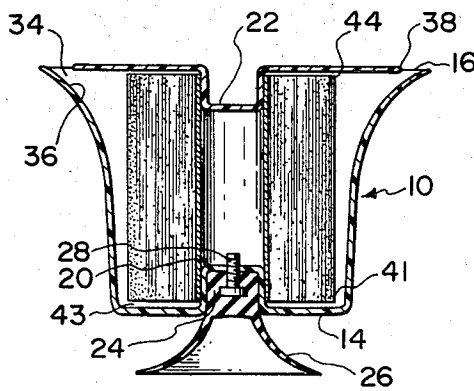


FIG. 3

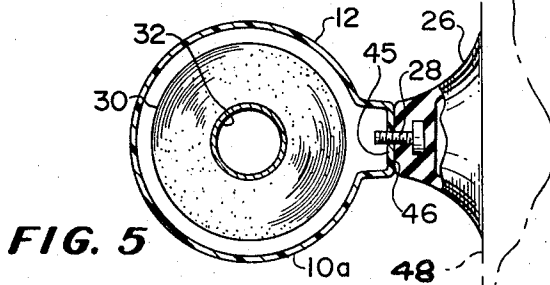


FIG. 5

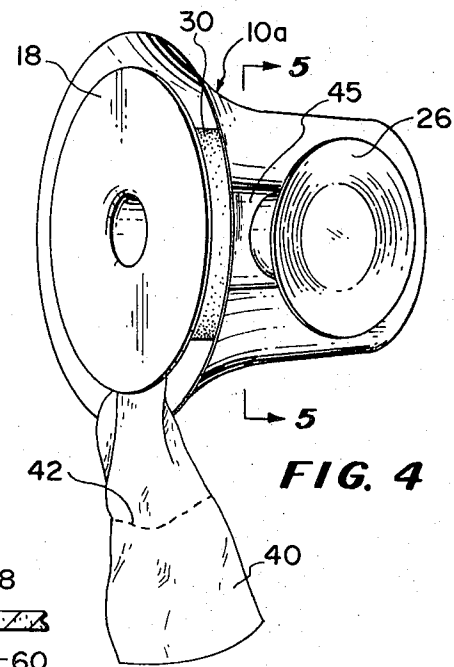


FIG. 4

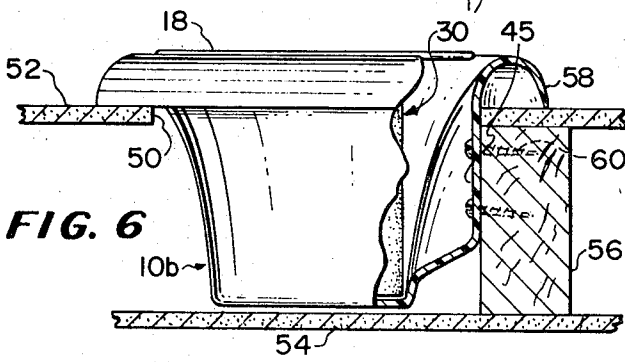


FIG. 6

INVENTOR
PAUL BELOKIN, JR.
By *Harbaugh & Thomas*
Attorneys

ROLL PAPER HOLDER

More particularly, a bell-shaped housing and a retainer plate are preferably formed of molded plastic having opposed central round bosses to non-rotatably and frictionally engage opposite ends of the center core of a paper roll and provide an annular space or opening between the peripheral edge of the retainer plate and the open mouth of the bell through which the paper is removable, as desired in spiral segments or continuously. The oppositely facing bosses mate with the central bore of the paper core in a snug fit relationship so that with the housing affixed to any surface the roll cannot rotate and the paper is conveniently removed through the annular space. The circumferential inner and outer edges of the retainer plate and housing respectively form a tearing edge for the paper thereby facilitating severance of the desired length of paper by either an inward or downward pull. Means are provided to mount the housing in any relationship or the holder can be recessed within a wall construction.

BACKGROUND OF THE INVENTION

A number of paper product roll dispensers are known in the art. It is also known to package rope, wire, paper and other elongated products on a core or spool for mounting on a rotatable spindle from which the product is unwound in desired lengths. Facial tissues are packaged in dispensers having an open end whereby the sheets are sequentially pulled out, one after the other, and torn off against the edge of the open side of the dispenser. Some of these devices depend on threaded engagement of parts and compression springs to retain the paper supply. Special burrs and abrasive surfaces are used to facilitate tearing of the paper. Other tissue containers have severable corner walls which, upon removal expose the corners of stacked sheets that can be sequentially removed by pulling through the aperture formed.

In all of these devices, the paper or similar product either itself rotates or if stationary does not unwind from the outside in, and accordingly are not adapted to accommodate the standard paper roll. Special forms of rolled paper must be fabricated to unwind internally, from the inside out, and this requires added expense. Furthermore, the prior art devices must provide special tearing edges and spring-loaded mountings or threaded parts which are expensive to form, more complicated to assemble and present more difficulty in use as in reloading the dispenser.

The instant invention is directed to a simple, inexpensive, two or three part roll paper holder which is easy and inexpensive to manufacture, simple to use, readily mounted on any plane surface or can be recessed and uses the tubular core of the paper roll as part of the structure.

SUMMARY OF THE INVENTION

The invention concerns a holder for paper rolls comprising an open-ended housing to contain a paper roll axially, having an internally projecting boss to engage the core of the roll and an end guide plate attachable to the other end of the core whereby the free end of the paper can be removed between the open edge of the housing and the edge of the plate. The holder includes an end mounting means or a side mounting means in the form of a suction cup for mounting in any attitude on a flat surface. In one form the holder has a back-turned flared edge and a side boss so that recessed mounting is facilitated. The holder is characterized by its simplicity in function and appearance as well as its adaptability to various attitudes of mounting in all of which the paper is concealed yet the unraveling of the paper is simple and convenient.

DESCRIPTION OF THE DRAWINGS

Illustrative embodiments of the invention are shown in the drawings wherein:

FIG. 1 is a perspective view of the holder, proportioned for a toilet paper roll, showing one relative position of the unraveled portion of the paper which can be pulled therefrom;

FIG. 2 is an exploded view of the parts shown in FIG. 1;

FIG. 3 is a cross-sectional view taken along the lines 3-3 of FIG. 1;

FIG. 4 is an alternate form of the paper holder adapted to mount from the side of the bell housing;

FIG. 5 is a cross-sectional view taken along the lines 5-5 of FIG. 4; and

FIG. 6 is a fragmentary partially sectioned view of a modified paper holder recess-mounted in a wall construction.

THE PREFERRED EMBODIMENT

Referring to the drawings, there is shown the toilet paper holder 10 comprising the housing 12 which is bell-shaped and has the bottom or inside wall 14 (FIG. 3) depending on how oriented, with the flared peripheral edge 16, and includes the detachable retainer disc 18. These parts are made of any type of material and preferably for both economy and lightness of weight are constructed of molded plastic or spun aluminum.

Referring to FIG. 3, the housing 12 is open-ended and has the central boss 20 extending inwardly from the wall 14. The retainer disc 18 has a corresponding boss 22 extending centrally from one side. The boss 20 serves several functions including that of being a seat for the base 24 of the rubber suction cup 26 which can be fastened therein by means of an adhesive at the interface of these parts or by means of the threaded bolt 28 molded into the base 24. The bosses 20 and 22 can have any desired internal and external shape as long as the functions herein described are retained.

FIG. 2 is an exploded view of these parts and shows by way of illustration, the roll of toilet paper 30 which is housed in the holder as assembled in the other figures. The paper roll 30 has the tubular cardboard core 32, the inside bore of which fits snugly over the outer surfaces of the bosses 22 and 24, as in FIG. 3. Thus, the paper roll 30 is held within the housing 12 in a non-rotatable manner upon the boss 20 while the disc retainer 18 is in turn held on the other end of the roll by its boss 22. The paper roll centers itself in the housing and also centers the disc 18 within the open end of the housing 12 and the latter, being of lesser diameter than the bell end of the housing defines the continuous circumferential space or slot 34 between the curved inner surface 36 of the housing and the round edge 38 of the retainer disc. The leading end 40 (FIG. 4) of the paper is free to extend from the space 34, in any attitude of the holder. The housing 12 and the disc 18 can be of any dimensions to accommodate different size, (i.e. diameter and length) rolls. For a standard size toilet paper roll 30 the vertical inside distance from the wall 14 to the plane of the lip 16 is slightly longer than the roll and the inside diameter at the wall 14 is slightly greater than the diameter of a new paper roll. This dimensional relationship provides the outer annular space 41 from which the free end 40 of the paper can unravel so that any desired length of paper can be grasped and torn at or near the serrations 42.

With the parts assembled as shown in FIG. 4, and the suction cup 26 affixed to a horizontal surface, the leading end 40 of the paper hangs in a position to be grasped and pulled upwardly or outwardly, thereby causing the paper to unravel from the space 41. As the leading end and subsequent lengths of the paper travel around the slot 34 in a direction the reverse of its coiled condition on the core 32, an easily grasped wad of looper paper is formed. When sufficient paper has been pulled from the slot it is readily torn free by pulling the paper at a sharp angle against the flange 16 or against the edge 38. This is readily done by giving the paper a jerk with or without the partly perforated joint 42 between sheets of the paper being contiguous to or against either of these edges. Actually, the mass of the roll and the twist imparted to the pulled out portion of the paper, aids in the severance of the desired amount of paper to be used. The suction cup 26 gives a resilient mounting for the holder and upon jerking the free end of the paper, the pulled out portion cooperates in the cutting action of the edges. The roll 30 is readily mounted on the holder by dropping it into the holder, centering the boss 22 on the core

32 and pressing the parts together by hand. Sufficient pressure is used to bring the parts together as shown in FIG. 3 leaving spaces 43 and 44 at the ends of the roll due to the natural resiliency of the paper roll. Even though these parts are pressed firmly together the paper is easily removed because of the tendency of the edges to fold inwardly as the spiral is formed.

In FIGS. 4 and 5 a modified form of roll paper holder 10a is shown wherein, the housing 12 has an additional elongated boss 45 molded into the side wall and presents a flat outer surface 46 against which the suction cup 26 is affixed by means of the bolt 28. Although the embodiment shown in FIGS. 1-5 can be used in any orientation, that is, with the suction cup 26 engaging any flat surfaces such as a table top, wall, the side of a cabinet or even on the underside of a horizontal surface, the embodiment shown in FIGS. 4 and 5 is peculiarly adapted to be used against a vertical wall, viz, the wall 48 (FIG. 5) with the axis of the paper roll substantially horizontal or in places where the length of the device or its use makes it more convenient than the holder shown in FIGS. 1-3.

In FIG. 6, another embodiment is shown wherein the holder 10b is mounted within the recessed opening 50 of a dry-wall construction having the spaced wall sections 52 and 54 carried by the wooden structural member 56. Here the lip 16 is modified by having the circumferential back-turned and rounded flange 58 which forms a cover for the opening and conceals the mounting. The boss 45 presents a flat mounting surface through which the screws 60 engage into the structural member. This arrangement may be necessary where the length of the holder 10 is greater than the depth of the spacing of the wall members 52 and 54 in a commercial or home construction. The edge 38 of the retainer disc 18 is the tearing edge for the paper in this embodiment. It is apparent that the embodiments shown in FIGS. 1-5 can be similarly mounted in a wall.

The retainer disc 18 is interchangeable and can be used with any of the holders 10 shown. The holders shown in FIGS. 1-5 can also be used without the suction cup.

Other means for mounting the paper roll holders of this invention can be used. The boss 20 in the end wall 14 can be used to affix the holder to any surface by using the bore hole, occupied by the bolt 28, to hold a wood screw, nail or the like fastening means. Also the outer surface of the end wall 14 can be glued to or nailed to a supporting surface.

The holder of this invention can comprise the housing 12 and the disc 18 used in any attitude or these parts with the suction cup or other mounting means. The bosses 20 and 22 can be any depth desired, though generally they need only be long enough to press-fit into the paper roll core to provide sufficient holding action for normal use. The outer surfaces of the bosses can be any tubular form and the housing 12 can also be tubular and not necessarily cylindrical. The housing 12 need not be bell-shaped and can have other shapes which function equivalently. The inner surface 36 is preferably smooth and uniform so that the paper will not snag, but the edge 38 of the cover plate or disc 18 can be castellated. In using the device, it has been found that, after tearing off a section or length of paper, the remaining unraveled portion still within the space 41 is retained, because of its twisted condition, and there is always a short tab exposed through the slot 34 to grasp for the removal of the next length of paper. This tendency does not diminish as the roll of paper becomes smaller, since the twisted paper, remaining, always clings within the space 41 between the outer part of the roll and the inner surface 36.

From the foregoing description it is apparent that the invention includes a housing having tubular side walls and an end wall with an opening opposite to the end wall, the end walls providing an extension or boss which is spaced from the side wall to form the main support for the paper roll. A separable cover plate, also having an extension or boss on one side and with a peripheral edge adapted to be spread from the opening of the housing completes the paper holder. It is only necessary that the extensions or bosses on the end wall of the cover plate be adapted to press-fit into the ends of a tubular core of a

paper roll placed therebetween. This arrangement provides for the nonrotatable support of the paper roll within the housing whereby the paper can be withdrawn past the peripheral edge of the cover plate. Preferably the open end of the housing has an outwardly flared edge and the end wall and the cover plate have diameters slightly greater than the diameter of a filled paper roll to be held therein. Any of the walls of the housing can be used to provide means to mount the holder on a supporting surface.

A wide variety of materials can be used to construct the housing and cover plate combinations in this invention. Preferably these members are constructed of plastics which lend themselves to such manufacture by injection molding, although other methods of molding known in the art can be used. For this purpose vinyl plastics generally and polystyrenes which have good stability and flow characteristics are particularly adapted for forming the components of the paper holder of this invention by injection molding. Such polystyrene moldings are characterized by impact-tensile compression and flexural-strengths which are basic requirements for lightweight structural members of this kind.

I claim:

1. A roll paper holder comprising:

- a. a housing having tubular side walls, an end wall and an opening opposite said end wall;
- b. a boss extending inwardly from said end wall and spaced from said side walls;
- c. a separable cover plate having a boss extending from one side, said plate having a peripheral edge;
- d. said bosses on said end wall and said cover plate being adapted to be press-fitted into the ends of a tubular core of a paper roll placed therebetween and non-rotatably supporting said roll within said housing whereby paper from said roll can be withdrawn past said circumferential edge of said cover plate.

2. A roll paper holder in accordance with claim 1 in which:

- a. said housing has a depth from said end wall to the plane of said open end substantially equal to the axial length of a paper roll whereby the circumferential edge of said cover plate is substantially co-planar with the open end of said housing and spaced therefrom.

3. A roll paper holder in accordance with claim 2 in which:

- a. the open end of said housing has an outwardly flared edge; and
- b. said end wall and said cover plate have diameters greater than the diameter of a paper roll to be held therein.

4. A roll paper holder in accordance with claim 1 including means to mount said holder on a supporting surface.

5. A roll paper holder in accordance with claim 4 in which said mounting means comprises a suction cup.

6. A roll paper holder in accordance with claim 4 in which said mounting means is affixed to the outside of said end wall;

7. A roll paper holder in accordance with claim 4 in which said mounting means is affixed to the outside of said side wall.

8. A roll paper holder in accordance with claim 1 in which:

- a. said boss in said end wall is recessed on the outer side; and
- b. means to mount said holder on a supporting surface is affixed from said recess.

9. A roll paper holder in accordance with claim 1 in which:

- a. a flattened surface is provided on an outer part of said housing; and
- b. said open end of said housing is flared and has a reverse flanged edge.

10. A roll paper holder in accordance with claim 9 adapted to be mounted in a wall recess in which:

- a. the depth of said end wall from said reverse flange is substantially the same as the depth of said wall recess; and
- b. the outer diameter of said flanged edge is greater than the opening of said wall recess.

11. A roll paper holder adapted to hold rolls of paper having a tubular core comprising:

5

- a. a bell-shaped housing having tubular side walls, a substantially flat end wall and an opening defined by the outwardly flared edge of said side wall;
- b. a central boss extending inwardly from said end wall and spaced from said side walls;
- c. a cover plate having a central boss extending from one side, said plate having a peripheral edge of lesser diameter than the flared edge of said side wall;
- d. said bosses on said end wall and said cover plate being adapted to fit within the opposite ends of the tubular core

5

10

15

20

25

30

35

40

45

50

55

60

65

70

75

6

of said paper roll whereby said housing holds said paper roll non-rotatably, said cover plate is held by said tubular core and the peripheral edge of said cover plate at the opposite end of said paper roll is spaced from the flared edge of said side wall of said housing to define an annular paper-withdrawal and tearing slot.

12. A roll paper holder in accordance with claim 11 in which a suction cup is mounted to the outer surface of a wall thereof.