

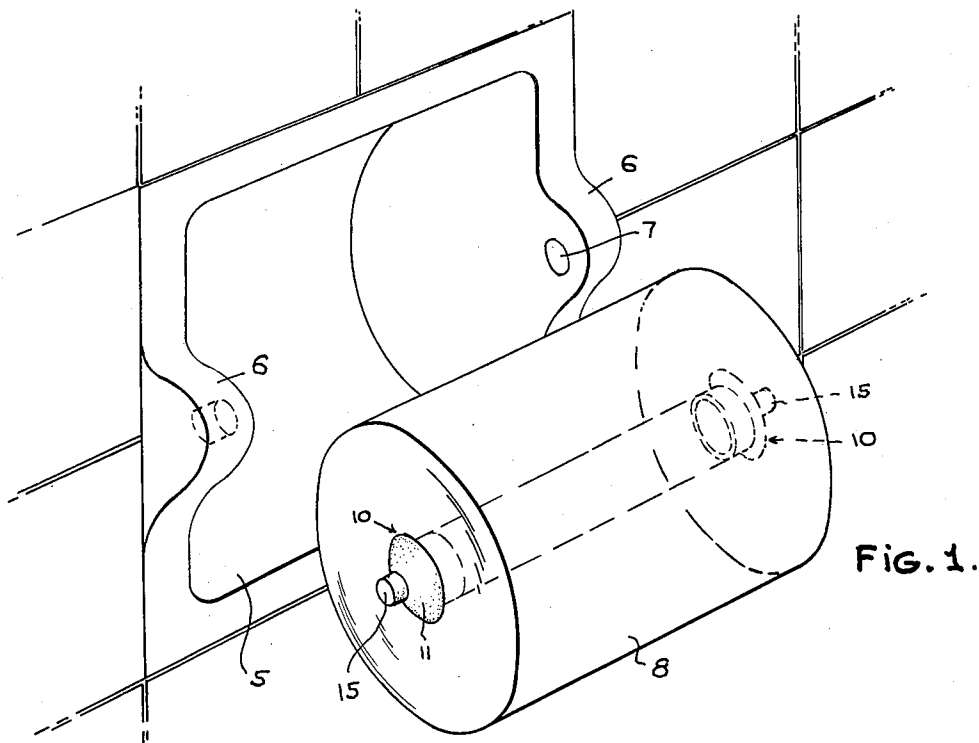
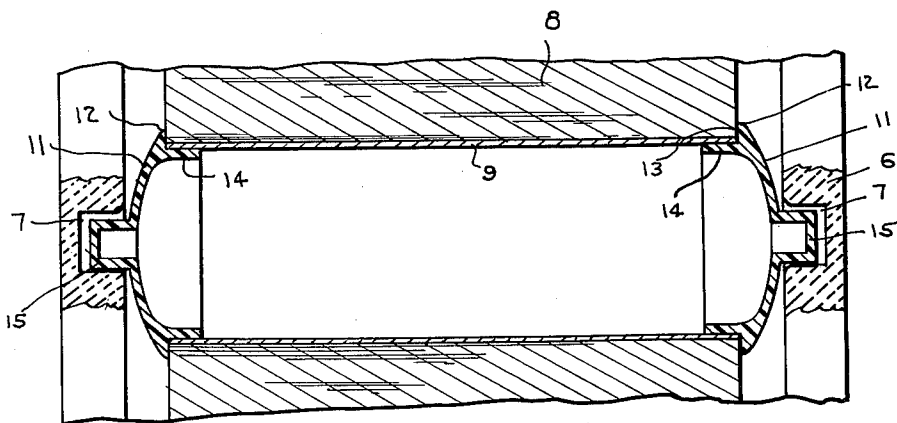
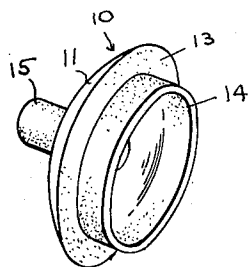
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TRUNNION FORMING PLUGS FOR SUPPORTING PAPER ROLLS

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TRUNNION FORMING PLUGS FOR SUPPORTING PAPER ROLLS

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1 Claim. (Cl. 242—68.4)

This invention relates in general to the mounting of rolls of paper, such as toilet paper, in a dispensing apparatus and relates particularly to the mounting of the roll of paper for manual dispensing.

Toilet paper heretofore has been provided in substantially identical rolls for mounting engagement into a wall or other receptacle through the medium of a rod having trunnion ends and with one trunnion being yieldable inwardly to permit the snapping engagement of the rod into the holder for the toilet paper.

Such toilet paper holders have been relatively expensive to manufacture and frequently are misplaced or dropped into an adjacent commode where they will function to stop up the commode with subsequent high cost for plumbing repairs.

The prime purpose of this invention is to combine relatively simple trunnion-forming plugs that engage within the opposite ends of the tubular core of the paper roll whereby they may have snapping engagement into the usual cylindrical recess formed in the holder and whereby to support the roll in a rotative manner. The plugs of this invention are molded of suitable plastic material having a cylindrical flange that engages the opposite ends of the roll and with the plugs having cylindrical trunnion-forming members that are received into the openings of the paper holder, such engaging means being yieldable axially to permit of the engagement of the trunnions into their respective openings.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIGURE 1 is a perspective view of a wall recessed toilet paper holder and a roll of toilet paper having the trunnion members engaged therewith preparatory to snapping engagement into the holder,

FIGURE 2 is a longitudinal section through a roll of toilet paper showing the invention applied thereto and with the trunnion members being engaged into the recesses of the toilet paper holder and,

FIGURE 3 is a perspective view of one trunnion-forming member.

Referring specifically to the drawings, the numeral 5 designates a conventional wall recess toilet paper holder, usually formed of ceramics or the like. The holder 5 is provided with forwardly projecting ears 6 that are axially cylindrically recessed at 7, such being a conventional construction.

The toilet paper has been indicated as a conventional roll 8, having the usual cardboard tubular core 9, that is open at its opposite ends. Adapted to be engaged within the opposite ends of the core 9, are plugs 10, formed of suitable plastics such as polyethylene. The plugs 10 at each end of the roll are identical in construction and embody an arcuate face 11 of relatively thin plastics and with the face 11 terminating in a circum-

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ferential edge 12, forming a shoulder 13. The shoulder 13 is relatively larger than the core 9 so as to partially overlie the end of the roll 8. The face 11 terminates in an inwardly directed cylindrical flange 14 that is dimensioned to freely engage into the ends of the core 9 to the point where the shoulder 13 has abutting engagement with the ends of the roll. Each of the plugs 10 are also provided axially of the face 11 with a hollow cylindrical trunnion-forming member 15 having a closed forward end. The trunnion member 15 is relatively smaller than the recesses 7 of the toilet paper holder so as to freely permit engagement of the trunnions into the recesses and to permit of a free rotary motion to the roll 8. The face member 11 of the plugs, being relatively thin are flexible or yieldable to permit the engagement of the trunnions into the recesses 7.

In the use of the device, the plugs 10 are engaged into the opposite ends of the roll 8 to the point where the shoulder 13 has abutting engagement with the ends of the roll. The roll is then bodily angled and shifted into the holder 5 to engage one trunnion 15 into its respective recess 7. The opposite plug is then pressed inwardly by engaging its respective trunnion 15 to the point where the trunnion will engage upon the inner side of the ears 6 and then with the roll being forced downwardly, the trunnion snaps into its respective opening under the reverse movement of the yieldable plug thus effectively mounting the roll into the holder 5 for free rotative movement against displacement. When the paper has been exhausted from the core 9, the operator then engages a projecting side of the face wall 11, pressing it inwardly to cause its respective trunnion 15 to shift outwardly of the recess 7 at which time, the entire device may be removed from the holder 5. It has been found that the use of the polyethylene provides a very desirable material for such use since it can be yieldable and when released, will assume its original contour.

It will be apparent from the foregoing that a very novel means has been provided to quickly and easily mount the conventional toilet paper roll into the toilet paper holder. The structure is simple, is cheap to manufacture and most effective as a trunnion-forming member for the mounting support of paper rolls. The over-all plug 10 each deposited within an adjacent commode will easily flush away and not interfere with the normal flushing action of the toilet. In such cases it only requires that the operator purchase another plug. The device is molded in a simple manner and is relatively cheaper than the conventional wood sticks that are customarily employed where the sticks as a reduced trunnion-forming member have a yieldable trunnion-forming end for the opposite end of the stick.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

Trunnion means for supporting a roll of toilet paper in a toilet paper holder having oppositely aligned recesses, comprising a pair of molded plastic end plugs, each of said plugs engaging opposite ends of a roll, each of said plugs having a relatively thin arcuate face plate with a concentric inwardly directed flange, the marginal portion of the face plate and the flange forming a circumferential shoulder whereby to limit the movement of the flange into

an open end of a core member carried by the roll, the face plate centrally and axially of the plug being provided with a forwardly extending hollow cylindrical trunnion that has rotative engagement into the recesses of the toilet paper holder, the face plates and the trunnions being 5 yieldable inwardly to permit the snapping engagement of the trunnions into the recesses of the toilet paper holder.

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