July 15, 1952 J. S. HOLMES 2,603,427

TOILET PAPER DISPENSING DEVICE

Filed April 7, 1951 2 SHEETS—SHEET 1

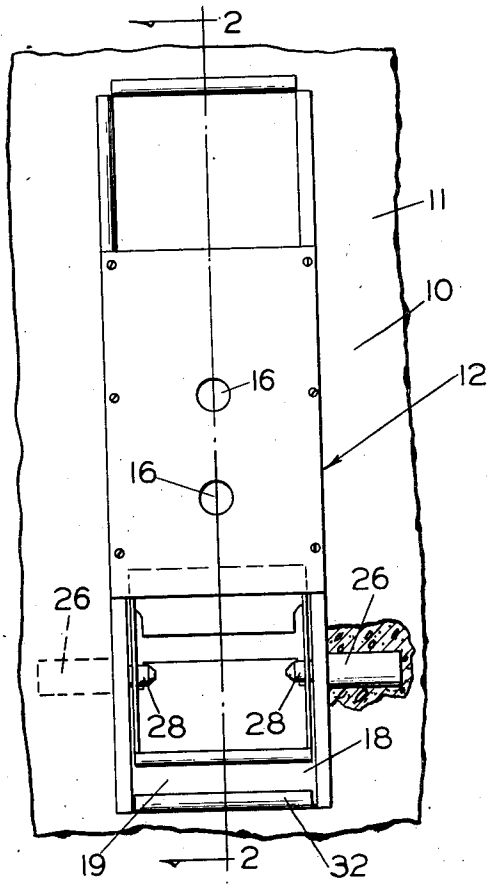

FIG1.

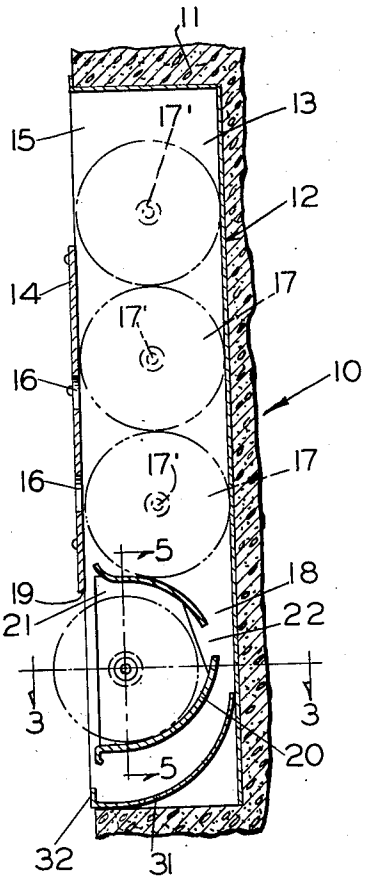

FIG.2.

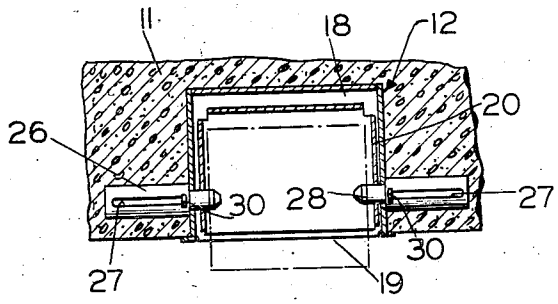

FIG.3.

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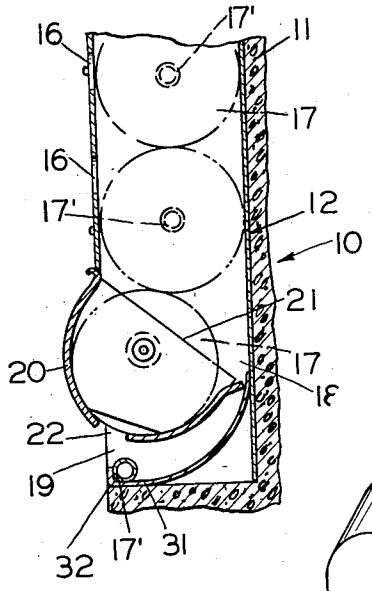
FIG.4.



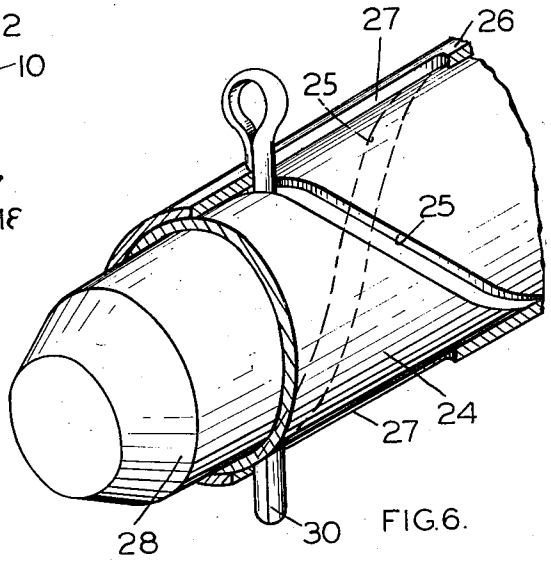


FIG.6.

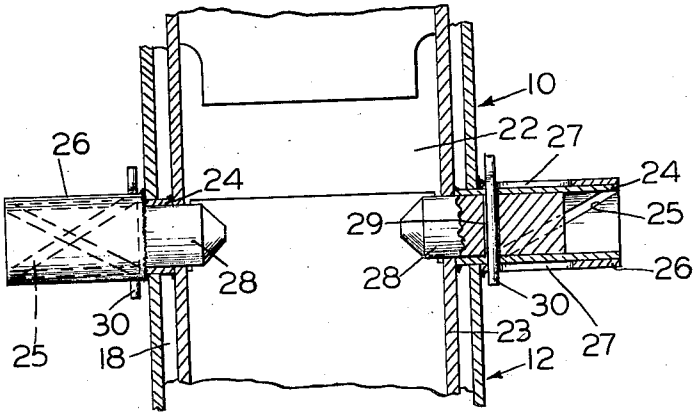


FIG.5.

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2,603,427

TOILET PAPER DISPENSING DEVICE

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6 Claims. (Cl. 242—55.3)

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This invention relates to a toilet paper dispensing device. More specifically, this invention relates to a device for storing a plurality of rolls of toilet paper including an improvement for dispensing the paper.

It is a prime object of this invention to provide an improved dispensing device for toilet paper rolls.

It is another object of this invention to provide a dispensing device including a magazine for storing a plurality of rolls of paper, the magazine being adapted to feed a new roll of paper to a dispensing chamber.

A more specific object of the invention is to provide a dispensing device including a cup-shaped dispensing member which is adapted to be moved into position for receiving a roll of paper to be dispensed, the cup-shaped member then being movable into position whereby access may be had to the same.

A still further specific object is the provision of a dispensing device having a storage magazine, the storage magazine being in communication with a dispensing chamber, the dispensing chamber including a cup-shaped dispensing member adapted to receive a roll of paper from the magazine, the dispensing member also including stub shafts which are movable into position for rotatably supporting a roll of paper, the stub shafts being retractable from the cup-shaped member during the movement of the cup-shaped member into position for receiving a new roll of paper from the magazine.

These and further objects will become more readily apparent from a reading of the specification when examined in connection with the accompanying sheets of drawings.

In the drawings:

Figure 1 is a front view in elevation showing a dispensing device recessed in position in a wall structure.

Figure 2 is a sectional view in elevation of a dispensing device, the view being taken substantially along the line 2—2 of Figure 1.

Figure 3 is a sectional view through a dispensing chamber, the view being taken substantially along the line 3—3 of Figure 2.

Figure 4 is a sectional view of a portion of the dispensing device, the view being similar to Figure 2 showing a dispensing member positioned in a position for receiving a roll of paper.

Figure 5 is an enlarged sectional view in elevation, the view being taken substantially along the line 5—5 of Figure 2.

Figure 6 is a perspective view partially in section showing a detail of a stub shaft and pivoting means for a cup-shaped dispensing member.

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Referring now particularly to Figures 1, 2, and 3, a dispensing device is generally referred to by the reference character 10. The dispensing device 10 is adapted to be recessed in a wall structure 11 as best shown in Figure 2. The dispensing device 10 includes an upright container 12, having an upper magazine compartment 13. The container 12 includes a front wall 14 which is provided at its upper end with a feed opening 15 through which rolls of paper can be delivered to the magazine compartment 13. The front wall 14 also includes a plurality of vertically spaced observation openings 16, these observation openings 16 permitting one to examine the magazine compartment in order to determine the number of rolls remaining therein. As best shown in Figures 2 and 4, rolls of toilet paper are stored within the magazine compartment 13, these rolls being designated by the reference character 17. In the conventional wrapping and packing of the toilet paper, tubular cardboard supports 17' are disposed centrally within the rolls.

A dispensing chamber is designated by the reference character 18. The dispensing chamber 18 is positioned below the magazine compartment 13 and is in communication therewith. The dispensing chamber 18 includes an access opening 19 which as indicated best in Figures 1 and 2 is provided in the front wall 14.

A cup-shaped member 20 is disposed within the dispensing chamber 18. The cup-shaped member 20 is semi-circularly shaped and includes an opening 21 which is adapted to register with the access opening 19. An opening 22 of lesser size than the opening 21 is disposed in the cup-shaped member 20 opposite the opening 21. The purpose of the opening 22 will presently appear. The cup-shaped member 20 is provided with side walls 23 from which tubular members 24 project outwardly. The tubular members 24 are provided with helical slots 25. The tubular members 24 are adapted to be journalled on sleeves 26 which are rigidly connected to opposite sides of the container 12. The sleeves 26 are provided with oppositely disposed longitudinally extending slots 27. Each of the tubular members 24 is provided with a stub shaft 28. The stub shafts 28 are reciprocally mounted with respect to the tubular members 24, the said stub shafts 28 including transversely extending bores 29. A pin 30 is securely positioned within each bore 29. The pin 30 also extends through the helical slots 25 and the slot 27.

The container 12 is provided at its lower end with an arcuate bottom portion 31 which terminates in an upwardly extending flange 32 which is adjacent the access opening 19. During use the dispensing device 10 is recessed in a wall structure 11 as shown. It is of course understood that such a recessed construction is not necessary but that the dispensing device may be hung in an upright position against a wall in any manner desired. The magazine compartment is filled with rolls of paper 17. In order to feed a roll of paper 17 to the cup-shaped member 20 the cup-shaped member 20 is rotated into the position shown in Figure 4 whereupon the opening 21 is in direct registry with the magazine compartment 13. When the cup-shaped member is rotated from the position shown in Figures 1, 3 and 5, the stub shafts 28 are retracted from the cup-shaped member.

As the cup-shaped member 20 is rotated on the sleeves 26 the pins 30 are moved longitudinally in the slots 25 in a direction away from the container whereby the stub shafts 28 are retracted in the tubular members 24. The pins 30 are held in an upright position by reason of the slots 27 and thus as the pins 30 are held in this position, rotation of the tubular members 24 effectuates outward longitudinal movements of the pins 30 and the stub shafts 28. It can thus be seen that upon rotation of the cup-shaped member to the position shown in Figure 4, the stub shafts 28 are retracted from said member.

In the position shown in Figure 4 a roll of paper 17 falls into the cup-shaped member. The cup-shaped member 20 is now rotated in a counter-clockwise direction, this rotation of the cup-shaped member causes rotation of the members 24 which in turn provide for movement of the pins 30 which thereupon move the stub shafts 28 toward each other into the cup-shaped member. As the stub shafts 28 are thus moved they engage the tubular supports 17' of the rolls of paper in mating relation thereby pivotally or rotatably mounting the roll of paper on the said stub shaft.

The cup-shaped member is now again positioned whereby access to the roll of paper may be had through the access opening 19. When the roll is exhausted the tubular support 17' of course still remains rotatably supported on the stud shafts 28. As the cup-shaped member 20 is now rotated again in a clockwise direction, the stub shafts 28 of course again will be withdrawn. The tubular support 17' thereupon as shown in Figure 4 falls through the opening 22 against the lower arcuate bottom 31 whereupon it is retained in position by means of the flange 32. The tubular supports 17' can now be easily removed through the access opening 19.

It can now be seen that an improved dispensing device has been disclosed. The magazine compartment may be arranged to hold a number of rolls of paper in position and in order to secure a new roll it is a simple matter to merely rotate the cup-shaped member 20 into the positions disclosed. In this manner a great time saving is effective since it is unnecessary to provide separate storage places for the paper but a number of rolls may thus be stored and these rolls are in a position for immediate use as the necessity arrives. The retraction of the stub shafts 28 and their subsequent movement to effectuate mating engagement with the tubular support is accomplished automatically by merely rotating the cup-shaped member.

It must be understood that changes and modifications may be made which do not depart from the spirit of the invention as disclosed nor from the scope thereof as defined in the appended claims.

What is claimed is:

1. A rolled paper dispensing device comprising a container adapted to be supported in an upright position, said container including an upper magazine compartment for containing rolls of paper stored therein, a dispensing compartment positioned below said upper compartment, said dispensing compartment having an access opening in a wall thereof, a cup-shaped member pivotally mounted in said dispensing compartment, said cup-shaped member having an open end adapted to register with said upper compartment for receiving a roll of paper therefrom and for registering with said access opening, means associated with said cup-shaped member for rotatably supporting a roll of paper, said means including a pair of stub shafts projecting toward each other into the cup-shaped member, the shafts being adapted to mate with the tubular member of a paper roll for rotatably supporting said roll, and means for withdrawing said stub shafts relative to each other and to the roll during rotation of the cup-shaped member into position for receiving a new roll from said feeding compartment, whereby the tubular member of the roll is discharged from the cup-shaped member, said means being arranged to move the stub shafts into mating engagement with a new roll of paper during pivotal movement of the cup-shaped member to its starting position.

2. A rolled paper dispensing device comprising a container adapted to be supported in an upright position, said container including an upper magazine compartment for storing rolls of paper, a dispensing compartment positioned below said upper compartment and in communication therewith, said dispensing compartment having an access opening, a cup-shaped member pivotally mounted in said dispensing compartment, said cup-shaped member having a first opening adapted to register with the access opening in one position and with the upper compartment in a second position, said cup-shaped member having a second opening disposed substantially in opposed relation with respect to said first opening, means for rotatably supporting a roll of paper in said cup-shaped member, said means including a pair of tubular members connected to said cup-shaped member and projecting outwardly from opposite sides thereof, means rotatably supporting said tubular member on said container including sleeves connected to opposite sides of said container, said tubular member having helical slots formed therein, stub shafts reciprocally mounted in said tubular members, said sleeves having longitudinal extending slots formed therein, and pins supported on said stub shafts, said pins extending through said helical slots and through the longitudinal slots of said sleeves, said stub shafts being disposed within the cup-shaped member for engaging the tubular support of a roll of paper in mating relation, said stub shafts being substantially withdrawn from the cup-shaped member during pivotal movement of the same into the second position whereby the tubular support is discharged through the second opening and said cup-shaped member receives a

new roll from the magazine compartment, the cup-shaped member being movable toward the first position whereby the stub shafts are moved toward each other and into mating engagement with the tubular support of said new roll.

3. A rolled paper dispensing device in accordance with claim 2, including means for receiving and retaining the discharged tubular support, said means being positioned below and adjacent said access opening.

4. A rolled paper dispensing device comprising a container adapted to be supported in an upright position, said container including an upper magazine compartment for containing rolls of paper stored therein, a dispensing compartment positioned below said upper compartment, said dispensing compartment having an access opening in a wall thereof, a cup-shaped member pivotally mounted in said dispensing compartment, said cup-shaped member having an open end adapted to register with said upper compartment for receiving a roll of paper therefrom and for registering with said access opening, means associated with said cup-shaped member for rotatably supporting a roll of paper, said means including a pair of stub shafts projecting toward each other into the cup-shaped member, the shafts being adapted to mate with the cylindrical opening of a paper roll for rotatably supporting said roll, and means for withdrawing said stub shafts relative to each other and to the roll during rotation of the cup-shaped member into position for receiving a new roll from said feeding compartment, said means being arranged to move the stub shafts into mating engagement with a new roll of paper during pivotal movement of the cup-shaped member to its starting position.

5. A rolled paper dispensing device comprising a container adapted to be supported in an upright position, said container including an upper magazine compartment for storing rolls of paper, a dispensing compartment positioned below said upper compartment and in communication therewith, said dispensing compartment having an access opening, a cup-shaped member pivotally mounted in said dispensing compartment, said cup-shaped member having a first opening adapted to register with the access opening in one position and with the upper compartment in a second position, means for rotatably supporting a roll of paper in said cup-shaped member, said means including a pair of tubular members connected to said cup-shaped member and projecting outwardly from opposite sides thereof, means rotatably supporting said tubular members on said container including sleeves connected to opposite sides of said container, said tubular members having helical slots formed therein, stub shafts reciprocally mounted in said tubular members, said sleeves having longitudinally extending slots formed therein, and pins supported on said stub shafts, said pins extending through said helical slots and through the longitudinal slots of said sleeves, said stub shafts being disposed within the cup-shaped member for engaging the cylindrical opening of a roll of paper in mating relation, said stub shafts being substantially withdrawn from the cup-shaped member during pivotal movement of the same into the second position and said cup-shaped member receives a new roll from the magazine compartment, the cup-shaped member being movable toward the first position whereby the stub shafts are moved toward each other and into mating engagement with the cylindrical opening of said new roll.

6. A rolled paper dispensing device comprising a container adapted to be supported in an upright position, said container including an upper magazine for containing rolls of paper stored therein, a dispensing compartment positioned below said upper compartment, said dispensing compartment having an upper access opening, a cup-shaped member within said dispensing compartment, said cup-shaped member having an opening adapted to register with said access opening during one position, means pivotally supporting said cup-shaped member in said dispensing compartment, said cup-shaped member being pivotally movable to a second position whereby the opening of said cup-shaped member registers with the magazine compartment, a pair of stub shafts projecting inwardly into said cup-shaped member, said stub shafts being adapted to engage the cylindrical opening of a roll of paper in mating relation, means reciprocally supporting said stub shafts on said container for movement toward and away from each other, and means connected to said cup-shaped member for engaging said stub shafts whereby said stub shafts are substantially retracted from the cup-shaped member in response to pivotal movement of the same to the second position, said stub shafts being movable into the cup-shaped member and into mating engagement with a roll of paper during movement of the cup-shaped member into said first position.

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