Oct. 6, 1931. R. R. RUNDELL 1,825,822

PAPER ROLL HOLDER

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Fig. 3.

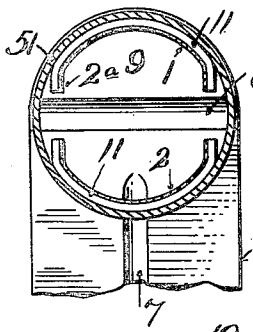


Fig. 1.

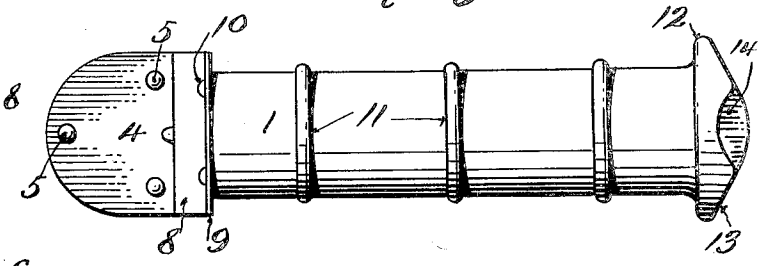


Fig. 2.

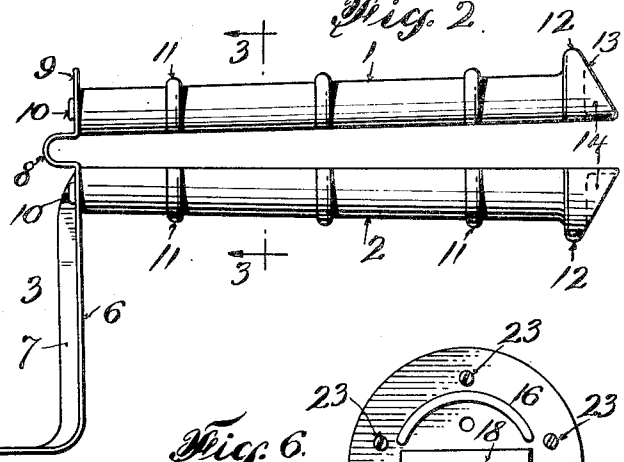


Fig. 4

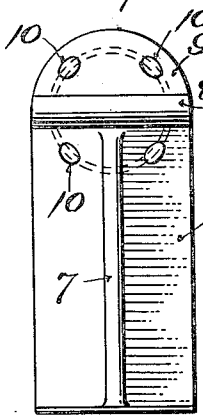


Fig. 6.

Fig. 5.

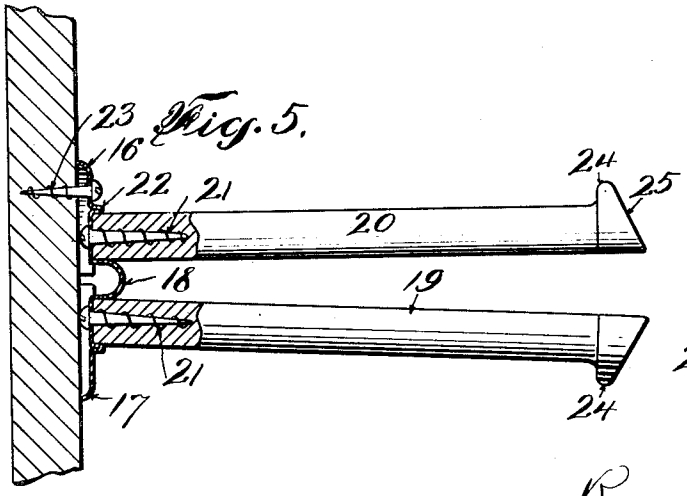
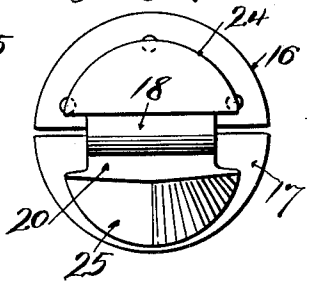


Fig. 7.



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Fig. 8.

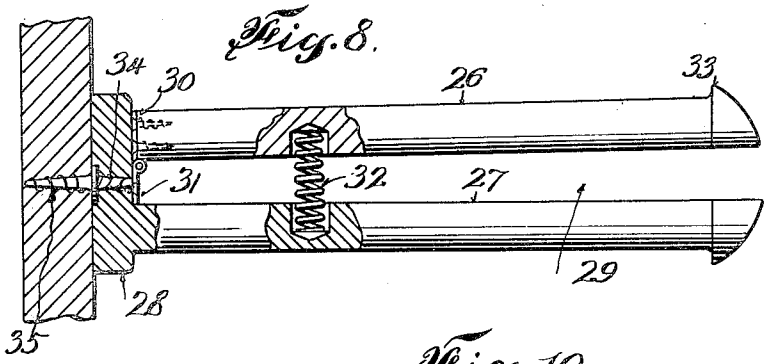


Fig. 9.

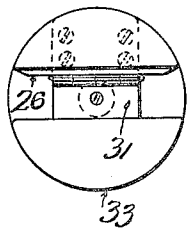


Fig. 10.

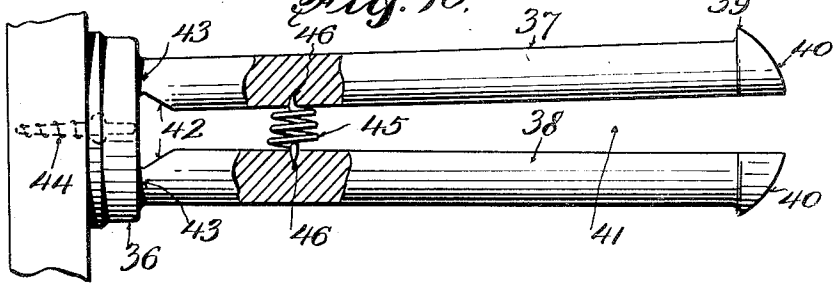


Fig. 11.

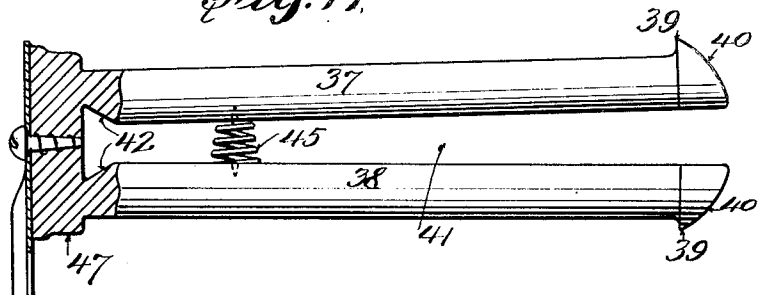
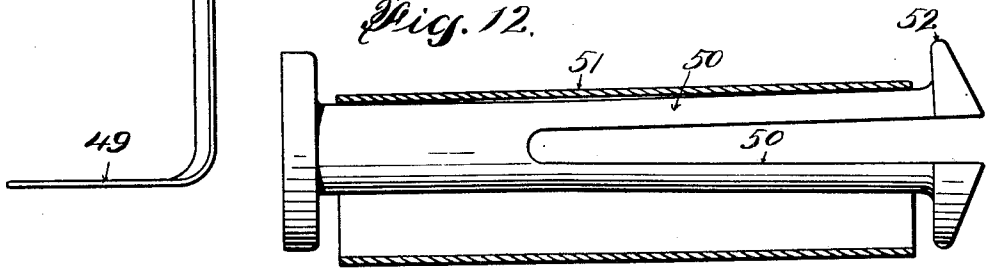


Fig. 12.



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Patented Oct. 6, 1931 1,825,822

UNITED STATES PATENT OFFICE

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PAPER ROLL HOLDER

Application filed November 4, 1929. Serial No. 404,798.

My invention relates to new and useful improvements in holders for holding rolls of toilet paper. One object is to provide a simple and efficient holder for paper rolls which permits the rolls of paper to be applied very quickly and conveniently with one hand and which permits the cardboard core of the roll to be removed readily after the paper has been exhausted. One advantage of the present device is that no parts need be removed or replaced in the operation of placing the paper roll on the device or in removing the core. Another advantage is that the roll of paper is automatically centered on the holder. Another advantage is that sufficient light friction is maintained on the interior of the core of the roll to prevent accidental turning of the roll and consequent waste. Another advantage is that the device automatically adjusts itself to accommodate various rolls notwithstanding the variations in diameter of the inner core of various rolls of paper. Another advantage is that the device is smooth and noiseless in operation and it is compact and neat in appearance. Another advantage is that the device is very simple, and inexpensive to manufacture and it is very easily applied in place for operation. The device may be made partly or wholly of wood or partly or wholly of metal, or other materials, and I have illustrated the invention in several modifications.

In the drawings forming part of this application,

Figure 1 is a plan view of a device embodying my invention in one form,

Figure 2 is an elevation thereof,

Figure 3 is a sectional view taken on the line 3—3 of Figure 2,

Figure 4 is an end elevation thereof,

Figure 5 is an elevation partly broken away, of the invention in another form,

Figure 6 is a face view of the base before the roll supports are mounted thereon,

Figure 7 is an end view of the device shown in Figure 5,

Figure 8 is an elevation, partly broken away, showing another form of the invention,

Figure 9 is an end view thereof,

Figure 10 is an elevation, partly broken away, of a still different modification of my invention,

Figure 11 is a view similar to Figure 10 but showing the holder mounted on a bracket, and

Figure 12 is an elevation of another modification of the invention.

I will first describe the form of the invention shown in Figures 1 to 4 inclusive. In this form of the invention the device is constructed of three separately formed metal parts which are permanently secured together. First there is a bracket 3 having a base 4 provided with apertures 5 through which screws may be placed to screw the bracket against a wall or other support.

The arm 6 of the bracket extending at right angles to the base 4 is preferably provided with a rib or bead 7 which is formed therein when the bracket is stamped and it serves to stiffen the arm 6. At one end of this arm there is a yoke shaped portion 8 which serves as a resilient spring to permit sufficient spring motion between the roll engaging members. The members for engaging and supporting the roll of paper in this form of the invention are shown as the two similar members 1 and 2 each consisting of a rounded or tubular member, each having one end abutting against portions of the arm 6, the member 2 having its end abutting against the arm 6 below the spring portion 8 in Figure 1 and the member 1 having one of its ends abutting against the portion 9 of the arm 6 on the opposite side of the spring 8.

These members 1 and 2 are permanently united to the respective portions of the arm 6 by means of the lugs 10 two of which are shown formed on each of the members 1 and 2, these lugs projecting through corresponding apertures in the arm 6, and being flattened or riveted against this arm to permanently secure the members 1 and 2.

The members 1 and 2 lie substantially parallel to each other, projecting at right angles to the bracket arm 6 and the opposite ends of these supporting members are free or unobstructed. I have shown small ribs or circumferential beads 11 on the members 1 and 2 to

form bearings for the inner core of the paper roll to rest against. On the outer free end of the members 1, 2 there is formed a flange 12, one-half on each member in line with each other to form an abutment for the end of the paper roll to lock the same in place. Beyond the flange 12 the members 1 and 2 have a tapered or angular end 13 and these angular ends are provided with depressions 14, one on each member 1 and 2 and in opposite positions.

The operation of this form of the invention is as follows: The base 4 of the bracket is screwed to a wall or any other support by means of screws inserted into the apertures 15 and screwed into the wall or support. The arm 6 will extend outwardly at right angles to the support and the members 1 and 2 will project at substantially right angles to the arm 6 or approximately parallel to the support. The right hand ends of the members 1 and 2 are unobstructed and in condition to receive the paper roll thereover. To apply the paper roll to the holder one end of the roll is placed against the inclined positions 13 at the right hand end of the members 1 and 2, and the roll is simply pressed to the left or toward the bracket 3.

By reason of the slanting surfaces 13, when the roll is thus pressed against them, the members 1, 2 will be pressed toward each other, there being sufficient resiliency in the spring portion 8 to permit the outer or free ends of the members 1, 2 to move toward each other while the core of the paper roll passes over the flange 12. When the entire roll has passed to the left of the flange 12 in Figure 1, the members 1, 2 will spring outwardly or away from each other under the action of the spring portion 8 until the beads or ribs 11 of both members 1 and 2 press lightly against the inner surface of the core of the paper roll. The flange 12 will lie outside of or beyond the roll of paper and it will serve to lock the paper roll against endwise movement to the right in Figure 1. As the roll is turned from time to time there will be a light tension or friction against the inner surface of the core of the roll, due to the pressure of the beads 11 and this light tension will be sufficient to prevent free running of the roll on the holder. When the roll has been consumed, the cardboard core may be removed from the holder by inserting the fingers into the depressions 14 to press the free ends of the members 1 and 2 toward each other until the core member is permitted to pass the flange 12, whereupon the core may be slid off the holder.

In Figures 5, 6 and 7 I have shown the device in a form which permits the same to be made partly of wood and partly of metal. In this construction there is a base consisting of the two semicircular portions 16, 17 connected by the U shaped spring member 18 which permits the two semi-circular members to bend in relation to each other.

The two members 19, 20 which form the means for engaging the paper roll may be turned as one piece out of wood, bakelite or other material in a lathe, and a portion of the turning may be cut out to separate the two halves and to provide the necessary space between the halves for the pivotal motion herein referred to. One member 19 formed by one-half of the turning is attached to the base portion 17 of the base by means of the screws 21 passing through apertures in the base member and extending lengthwise into the member 19. Likewise the member 20 is attached to the portion 16 of the base by means of screws 21 passing through apertures in this portion of the base and extending lengthwise into the member 20, so that both members are drawn endwise against the relatively movable halves of the base. The ends of the members 19, 20 lie close to the base at each side of the spring member 18 and I prefer to form semi-circular beads 22 on the base members 16, 17 which partially encircle the curved periphery of the members 19, 20. Thus the latter members are prevented from turning in relation to the base members 16, 17 so that they cannot work loose. The member 16 only is secured to the wall or support by means of the wood screws 23 which pass through suitable apertures in this base member. The base member 17 is not screwed to the wall or support, and therefore it can yield or bend in relation to the base member 16 to permit the supporting members 19, 20 to swing in relation to each other. In this form of the device the members 19, 20 are provided with the end flange 24 to permit the roll of paper to be locked in position and to correspond with the flange 12 in the previous construction.

The forward ends of the members 19, 20 are also inclined or conical, as shown at 25, so that the paper roll may be pressed onto the members 19. 20 in the same manner as in the first described form of the invention. The member 20 and the base member 16 remain stationary but the supporting member 19 tends to move away or diverge at the outer free end from the member 20 so that the member 19 is moved slightly toward the member 20 when a roll of paper is being placed on the supports; and when a roll has passed the flange 24 the lower member 19 is urged to move away from the member 20 by the spring portion 18 of the base, so that the free ends of the supports carrying the flange 24 are separated so that the flange will lock the paper roll on the holder.

In Figures 8 and 9 I have shown a further modification of the invention. In this construction the members 26, 27 may be made from a single turning of wood, bakelite or other material integral with the base mem-

ber 28. After the base members have been turned, the member 26 is cut off from the base, and the parts are slotted either before or after the member 26 has been cut from the base to provide the central space 29. The end of the member 26 which is severed from the base is slightly beveled, as shown at 30, in order that this member may swing to a position slightly divergent from the member 27. An ordinary hinge may be secured with one leaf 31 attached to the base member 28 and the other leaf of the hinge secured against the beveled edge of the member 26, so that the latter member may pivot in relation to the base and in relation to the supporting member 27.

There is a coiled spring 32 seated in suitable sockets in the opposed sides of the members 26, 27 which tends to move the supporting members apart, but as the member 26 is the only movable one, it causes this member to swing on its hinge to the position shown in Figure 8. The supporting members 26, 27 are provided with a locking flange 33 corresponding with the flanges in the other views and the device operates in the same manner as far as the application of the paper roll and the removal of the cardboard core is concerned. The device is shown provided with a screw which has a threaded portion 34 having say a left hand thread screwed into the base 28 and the projecting end of this screw is provided with, say, a right hand thread 35 which is adapted to be screwed into the wall or other support to attach the device in operative position.

In Figure 10 I have shown my invention in a form which permits the device to be made from wood, bakelite or other material of a single turning or moulding. In this construction a piece of stock is turned on a lathe to form the base member 36 from which project the integral supporting members 37, 38 and the outer ends of these are provided with a locking flange 39 serving the same purpose as the locking flanges heretofore described in connection with the other types. The outer ends of the supporting members 37, 38 are provided with the angular or tapered portions 40 for the same purpose as in the previous constructions. The turning is slotted as shown at 41 the full length of the supporting members, and I have cut the material at the points 42 on an angle to the inner sides of the members 37, 38 in order that these members will have sufficient resiliency at the lines 43 where they are connected with the base to permit the outer ends of these members to move in relation to each other.

If the base 36 is secured to the wall or other structure by the wing screw 44 arranged at the center of the base, the portions of the base from which the members 37, 38 extend can flex to some extent, and this, together with the flexing of the members 37, 38 at the lines 43 will permit sufficient movement at the outer ends of these members to permit the paper roll to be pressed over the flange 39 to lock the roll on the holder. To increase the tendency of the members 37, 38 to spring apart sufficiently to lock the paper roll, I have shown the coiled spring 45 disposed between the members 37, 38 and it is provided with pointed ends 46 which press into these members for the purpose of holding the spring in place.

Any of the forms of the invention shown herein may be mounted on a bracket, as shown in Figure 11. In this view I have shown the same form as that shown in Figure 10, but the base 47, instead of being attached directly to the wall, is mounted on one arm 48 of the bracket, the latter having a base portion 49 at right angles thereto, which is adapted to be bolted against the wall or support so that the arm 48 extends outwardly from the wall and the paper holder lies spaced from the wall and parallel to it.

In Figure 12 I have illustrated the device made in such proportions that the holder does not grip the inner core of the paper roll. In this construction the supporting members 50 are of smaller diameter than the core 51 of the paper roll, so that the roll may turn freely on the supporting member. In this form the locking flange 52 is preferably made much larger than the diameter of the supporting member in order to be larger than the core. In other respects the device operates similar to the other forms of the invention.

Having described my invention, what I claim is:

1. A holder for paper rolls, including a base, a supporting member fixed to said base and projecting therefrom, a cooperating supporting member and a hinge for pivotally connecting said last mentioned supporting member to said base, a spring tending to move said second supporting member away from said first supporting member, said supporting members being adapted to receive a roll of paper thereover and having a locking flange adjacent the free end to project at one end of the roll after the same has been placed on said supporting members.

2. In a holder for a paper roll, a base for attachment to a wall, a pair of straight horizontal rigid roll supporting arms extending from said base, each of said arms being semi-circular in cross-section and having an unsupported free end, a spring between said arms for pressing said arms apart, said arms being adapted to receive a paper roll at their free ends.

3. In a holder for a paper roll, a base for attachment to a wall, a pair of straight horizontal rigid roll supporting arms extending from said base, each of said arms having an unsupported free end, a spring between said

arms for pressing said arms apart, said arms being adapted to receive a paper roll at their free ends, one of said arms having a flange to retain the paper roll detachably in position.

4. In a holder for a paper roll, an angular plate having a base section for attachment to a wall and an outstanding section having a pair of straight horizontal roll supporting arms connected thereto, said outstanding section having an offset loop between said arms to provide a spring serving to press said arms apart.

5. In a holder for a paper roll, a base for attachment to a wall, a pair of rigid horizontal roll supporting arms extending from said base, each of said arms having an unsupported free end, a spring between said arms for pressing them apart, said arms being adapted to receive a paper roll at their free ends, each of said arms having a plurality of spaced ribs to form frictional bearings for the interior surface of said paper roll.

Signed at Waterville, county of New Haven and State of Connecticut, the 16th day of October, 1929.

R. R. RUNDELL.