Nov. 20, 1934. F. T. SMITH 1,981,673

PAPER ROLL HOLDER

Filed April 3, 1934

Fig. 1

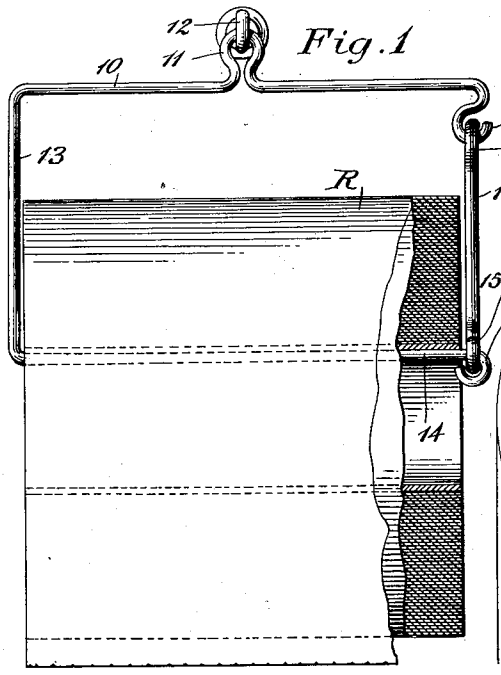


Fig. 7.

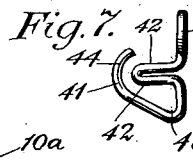


Fig. 2

Fig. 3.

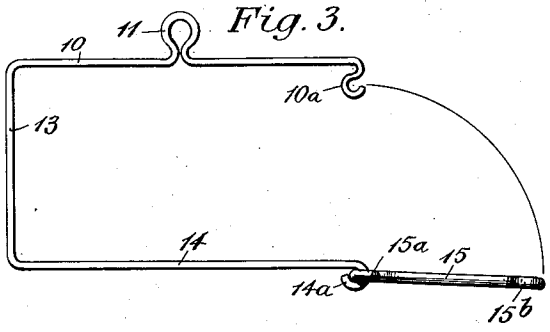


Fig. 4

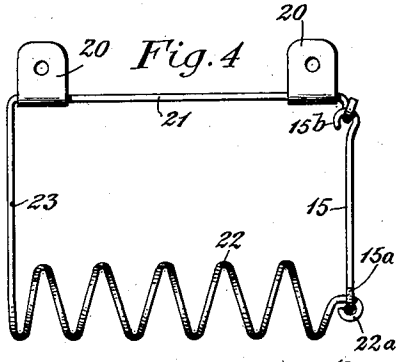


Fig. 6

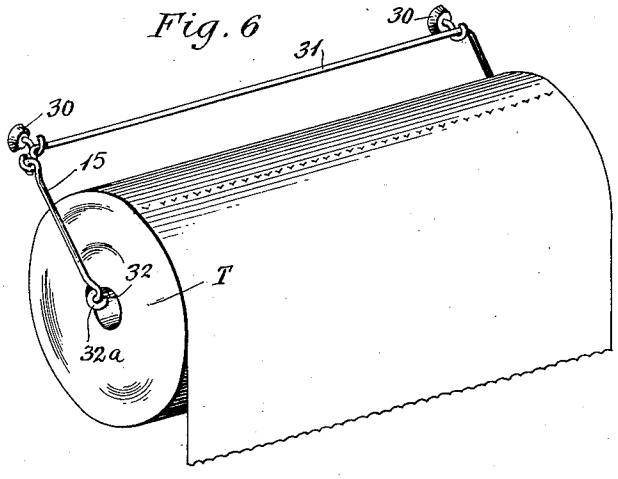
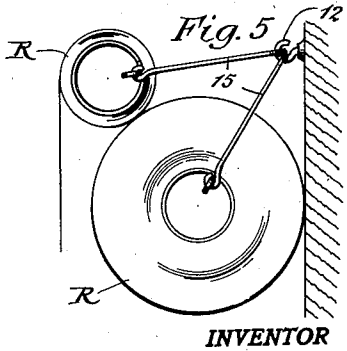


Fig. 5



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PAPER ROLL HOLDER

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Application April 3, 1934, Serial No. 718,794

7 Claims. (Cl. 242—55.2)

This invention relates to holders for rolls of toilet paper, towels, and the like, and it has for one of its objects the provision of an extremely simple device which permits such rolls to be rapidly and easily inserted, without in any way springing or distorting any part of the same.

A feature of the invention is the formation of the device in such a way that it cannot only be manufactured at a very low cost, but also so that it can be packed with the paper-rolls which are to be held by it, without sacrificing any appreciable space in the shipping carton or package.

Another feature of the invention is to provide a roll-holder which can be readily attached to or removed from a wall without requiring any tools, such as hammers, screwdrivers, etc.

Other features and advantages will hereinafter appear.

In the accompanying drawing—

Figure 1 is a front view of a roll of toilet paper held in the holder made in accordance with my invention.

Fig. 2 is a side view thereof.

Fig. 3 shows the holder in its opened or roll-receiving condition.

Fig. 4 illustrates a modification in which the actual roll-supporting member of the device is formed so as to practically fill the core of the paper roll and therefore form a spindle on which the roll may rotate smoothly when the paper web is pulled.

Fig. 5 shows the manner in which a full roll may be provided to succeed the last part of a partly-used roll, and thus insure an adequate supply being at hand at the time when the old roll is used up.

Fig. 6 shows the present invention applied to the wide web paper-towel roll.

Fig. 7 illustrates a support-hook which is especially effective for my improved roll-holder.

Many attempts have been made to produce roll-holders for toilet paper and the like by bending or by forming wire strands, in order to effect economy in material and labor, and experience has demonstrated the fact that, in all cases where the wire had to be sprung in order to load or unload the holder, a small-diameter wire which had to be bent or sprung during the loading operation was apt to "let go" when the roll was in place and in use. To remedy this fault, it became necessary to employ a heavy-gauge wire which, while having the required staying-strength, yet rendered the loading operation vastly more difficult, a child being generally unable to cope with the loading operation.

Futhermore, in most cases, the necessary distortion or bending of the wire from normal to permit the application of a new roll is so great that, even when released, the wire will not always go back to its original form and the roll will, consequently, be only loosely held.

My present invention aims to obviate these objections, and yet use a comparatively small gauge wire which, however, will permit its loading and unloading without requiring any substantial deflection from its original form.

Briefly stated, my improved holder comprises a U-shaped frame, the legs of which are integral with the U-base and are spaced sufficiently to permit a full-diameter roll of paper to be freely slid onto one of the legs without requiring any springing or distortion of any portion of the frame.

In order to lock the paper-roll in place within the frame, my improved holder comprises also a gate which may be pivoted at the end of one of the frame-legs so as to swing toward the end of the other leg at which point the gate becomes locked and closes the open gap between the frame-legs. Thus: when a roll is in the holder and the gate is closed, the roll is supported for rotation and, at the same time, confined against sidewise movement between the base-part of the U-frame and the gate.

In the drawing, the holder comprises a frame having a horizontal main wire 10 bent to form a suspension-loop 11 which may be attached to a wall hook 12 or similar device. This frame-wire is bent into U-shape to form a vertical leg or base 13, at the lower end of which is a substantially right angle bend to provide a horizontal leg 14 which constitutes a shaft or spindle for supporting the roll, and which has at its free end an eye 14*a* to which is articulated a gate 15, preferably made of wire, and having an eye 15*a* pivoted on the leg-eye 14*a*, and whose upper end may be secured to the free corresponding end of the leg 10, as, for instance, by an eye-loop 15*b* adapted to be placed on the hook-end 10*a* of the main wire 10, in which situation the two legs 10 and 14 are substantially parallel, while the leg 13 and gate 15 have become also parallel and distanced to receive between them the paper-roll R, either in free-running or frictional engagement, as may be desired.

Inasmuch as the main wire 10 and the roll-supporting leg 14 are normally parallel, it is evi-

dent that, in order to slip the gate-eye 15b over the hook-end 10a, the ends of the legs 10 and 14 will have to be slightly contracted, but the amount of this contraction is so infinitesimal that a child can easily accomplish it. Of course, after the gate-eye 15a is on the hook 10a, the parts will again be in normal condition, and the weight of the roll, as well as the act of pulling paper from the roll will further tend to keep the gate locked, as shown in Figs. 1 and 2.

In Fig. 3, the gate 15 has been shown swung open, affording ample room so as to form practically an extension of the leg to which it is attached, for passing a roll unobstructedly into position on the leg 14.

While the holder thus far described is not in a fixed position but may swing sidewise on the wall-hook 12, it may be deemed desirable to secure the holder on the wall in a fixed relation, and in Fig. 4 I have shown a modification which dispenses with the loop 11 and employs in its stead a pair of clips 20 in which the main wire 21 may be supported at both of its ends. Furthermore, the roll-carrying wire-leg 14 above described is here constructed in the shape of a coil 22 formed on the lower end of the vertical leg 23 and is of a size commensurate with the inside diameter of the usual cardboard roll-core. In other respects, the hook and eye connections are the same as before.

In Fig. 6, my improved holder is made wider and proportionate to receive a roll of paper towels T, a pair of wall-hooks 30 being used to directly support the holder at the ends of the top leg 31, just the same as the roll is supported by and at the ends of the core-leg 32, viz: without any weight-strain between those points, the several portions of the frame being integral, as before.

It should be noted that a comparatively small-gauge wire, or thin strip metal, may be employed in the manufacture of my improved holder, because, when a roll is in place, its parallel end faces fit closely between the strand 13 and the gate 15, which are also parallel, so that any sidewise deflection or distortion is practically prevented.

The present invention also includes a special form of hook for supporting the roll holder. This is illustrated in Fig. 7. It has an eye 40 by means of which it may be fastened to a support by a suitable screw. It is preferably made of wire and has a loop-receiving portion 41, entrance to which is partially closed by an extension 42 overlying the bottom 43 of the hook-receiving portion. When the loop is applied, it is slipped between the end 44 of the extension 42 and slides down the incline to the lower portion 43. Should the loop or eye held by the hook 41 move upwardly, it will engage the extension 42, the end 44 of which is slightly lower than the back portion, and become locked in place. To remove the hook or eye from the hook, it is necessary that it be slid forwardly along the hook 41 past the end 44 of the guard 42. The guard 42 may be formed by producing a double-bend or fold in the wire.

In recapitulation be it said: that my improved holder, in its simplified form, is a valuable and yet inexpensive adjunct in the sale of the paper-rolls, because it is very inexpensive, can be very quickly manufactured, and may also be packed with the roll it is intended for, therefore making the entire outfit complete without having to look for screws, nails, tools, etc., an obvious convenience.

Variations and modifications may be made within the scope of this invention, and portions of the improvements may be used without others.

Having thus described the invention, what is claimed as new and for which it s desired to obtain Letters-Patent, is:—

1. A roll holder consisting of a frame made of a continuous piece of rod bent to form a U-shaped frame and comprising upper and lower horizontal substantially parallel legs, and a side member connecting the same, the other side of the frame being open so that a roll of paper may be slid over the lower horizontal leg without spreading the legs to be rotatably supported thereon; another piece of rod articulated to the end of one of the legs of said frame and connected to the end of the leg of the frame by a hook and eye connection to form a gate to open and close the gap between the free ends of the frame and to support the roll-supporting leg against sagging under the weight of the roll; and means independent of said gate and engaging said upper horizontal rod for supporting said frame.

2. A roll-holder for toilet-paper and the like, comprising a horizontal portion for attachment to a support; a parallel portion over which the hollow core of a paper-roll is slid and on which the roll is rotatably supported; a side arm integrally connecting said horizontal portions and forming with the latter a frame open at one side to receive the roll; and a gate pivotally carried at the open side of the frame on one of said horizontal portions so as in open position to form a straight extension thereof and detachably engaging the other horizontal portion to close the open side of the frame after a roll has been applied thereto and support the free end of the horizontal portion on which the roll is rotatably carried.

3. A roll-holder for toilet-paper and the like, comprising a U-shaped frame having a horizontal leg for attachment to a support; a parallel leg over which the hollow core of a paper-roll is slid and on which the roll is rotatably supported and a side arm having stiff connections with said horizontal legs; and a gate pivotally carried at the open side of said frame on one of said legs so as in open position to form a straight extension thereof and detachably connected to the other leg to close the open side of the frame after a roll has been applied thereto and to support the free end of the roll-carrying leg.

4. A roll-holder for toilet-paper and the like, comprising a U-shaped frame having a horizontal leg for attachment to a support; a substantially parallel leg over which the hollow core of a paper-roll may be slid and on which it is rotatably supported and a side arm rigidly connecting the corresponding ends of said horizontal legs; a gate pivoted on the free end of the roll-supporting leg so as in open position to form a straight extension thereof and adapted to be swung toward the end of the main support leg, to close the gap between the leg-ends and support the free end of the rod carrying leg; and means for detachably holding the free gate-end on the end of said support leg.

5. A roll holder for toilet paper and the like consisting of a continuous piece of rod bent U-shape to form an upper horizontal leg to be

attached to a wall, a lower horizontal leg to receive a roll of paper, and a side arm rigidly connecting said horizontal legs; and another piece of material constituting a link articulately carried by the free end of one leg and releasably connected to the free end of the other leg to close the space between said leg-ends and support the lower leg against sagging under the weight of the roll of paper, the open side of the U being sufficiently wide to permit a full roll of paper to be slid onto the lower horizontal leg without spreading said leg when the link is swung to a position parallel with the leg which carries it, and the link being retained in place by the weight of the roll tending to cause the lower horizontal leg to sag.

6. A roll holder consisting of a frame made of a continuous piece of rod bent to form a U-shape frame having upper and lower horizontal substantially parallel legs, and a side member connecting the same, the other side of the frame being open so that a roll of paper may be slid over the lower horizontal leg without spreading the legs to be rotatably supported thereon, the thickness of the rod and the points of the connection between the horizontal legs and the side member being such that the lower horizontal member would sag under the weight of a paper roll supported thereby when the upper horizontal member is suspended from a support; and a link articulated to one of said horizontal legs and connected to the other horizontal leg by a hook and eye connection to form a gate to open and close the gap between the free ends of the frame and to support the roll-supporting leg against sagging under the weight of the roll.

7. A roll holder for toilet paper and the like comprising a U-shaped wire frame providing an upper horizontal rod, said wire having a portion at right angles to said rod to form a side arm, and having another portion at right angles to said side arm to form a lower horizontal rod coextensive and parallel with and in spaced relation to the upper horizontal rod to receive over its free end and support a roll of paper, said lower horizontal rod having at its free end an eye and said upper horizontal rod having at its free end a depending portion providing a hook; another wire substantially coextensive with the said side arm and having its lower end coupled with the eye at the free end of said lower horizontal member and at its upper end provided with a loop to releasably engage the hook on the depending portion of the upper horizontal rod, said wire closing the gap between said U-shaped wire frame and to support the lower horizontal rod in spaced parallel relation to the upper horizontal rod against sagging under the weight of a paper roll carried thereby; and means for detachably connecting said upper horizontal rod to a support.

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