June 21, 1949. E. O. BULMAN 2,473,744

PAPER ROLL HOLDER

Filed April 7, 1947 2 Sheets-Sheet 1

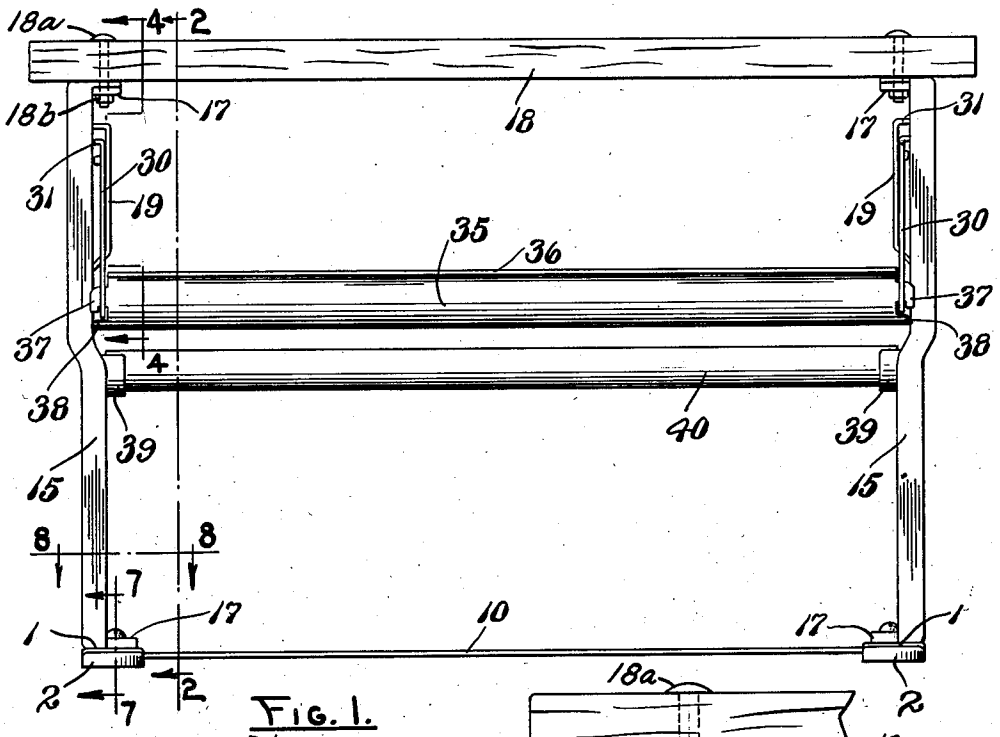


FIG. 1.

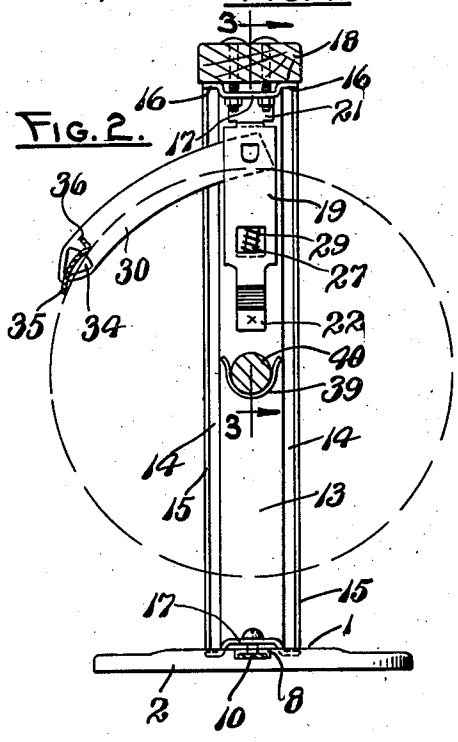


FIG. 2.

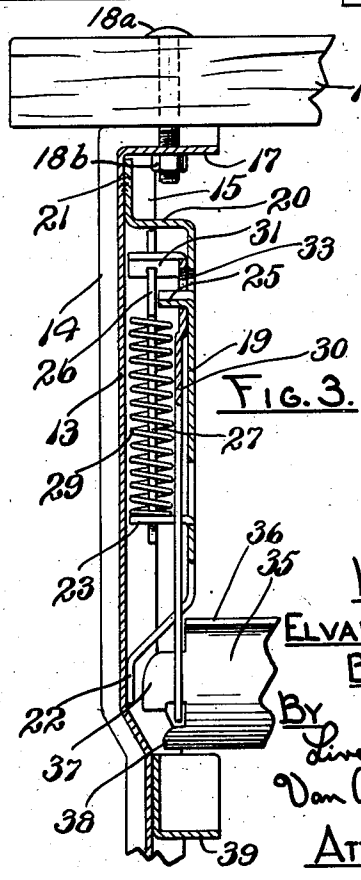


FIG. 3.

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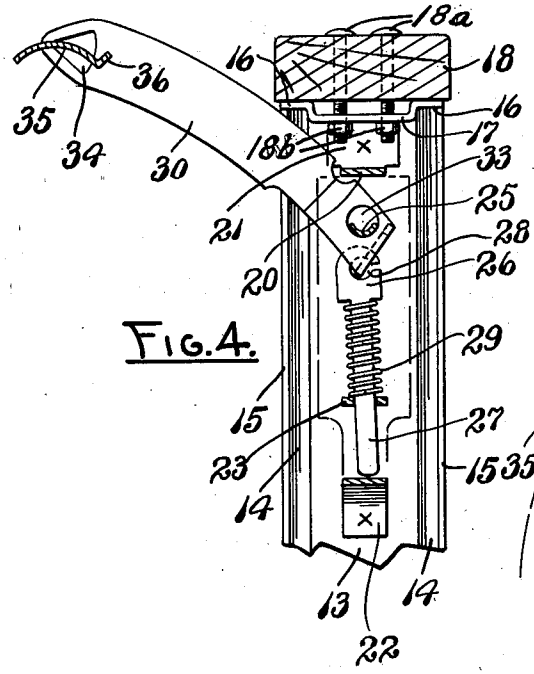


FIG. 4.

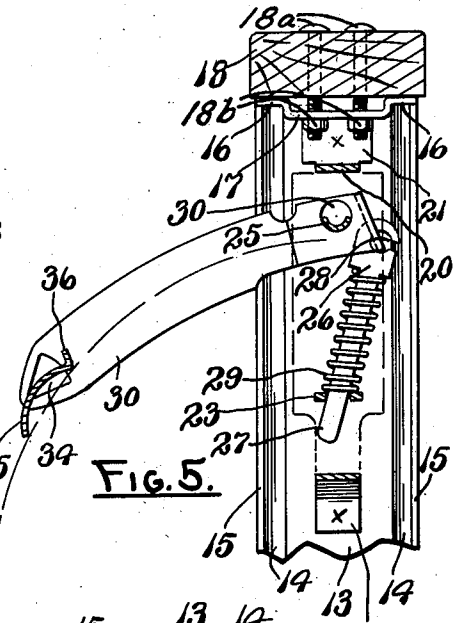


FIG. 5.

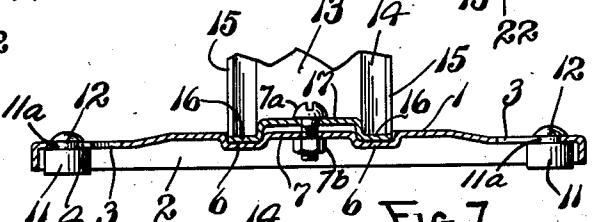


FIG. 7.

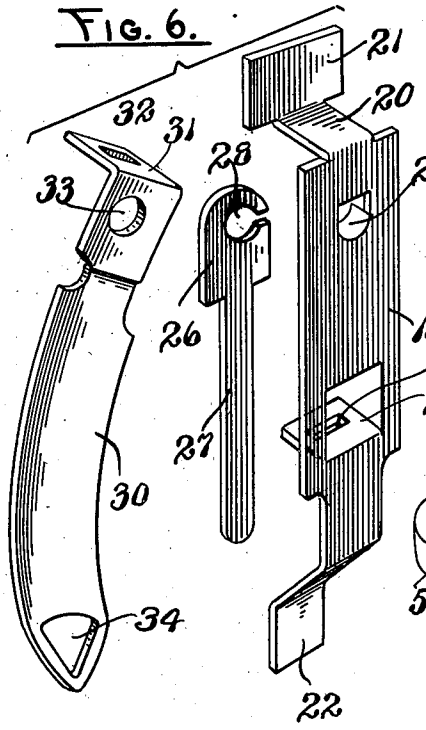


FIG. 6.

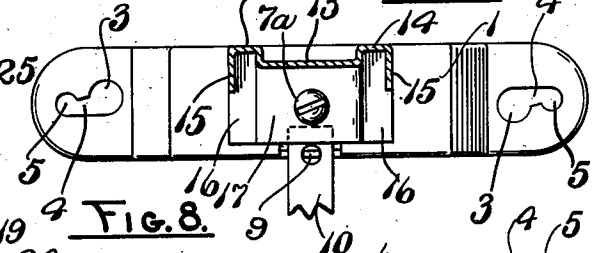


FIG. 8.

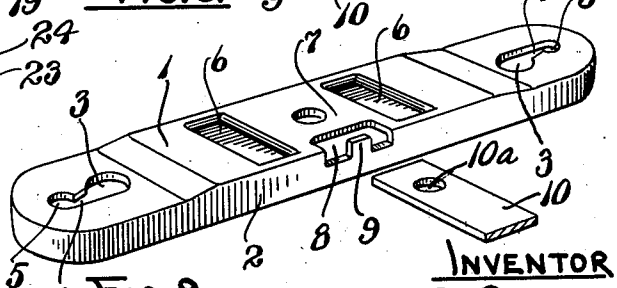


FIG. 9.

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PAPER ROLL HOLDER

Elvah O. Bulman, Grand Rapids, Mich.

Application April 7, 1947, Serial No. 739,776

3 Claims. (Cl. 242—55.5)

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The present invention relates to a very practical, economically constructed and assembled holder for rolls of wrapping paper of the type which is used in retail stores for wrapping merchandise.

In my invention the structure is of a light yet very strong and sturdy construction, may be shipped disassembled, being very quickly assembled at the place of use by connecting and associating the parts together and securing them by a number of short bolts, and when thus secured, none of the parts which make up the paper roll holder may be either accidentally or otherwise disconnected from each other in service, and the nuts on the bolts are held against unturning by reason of a tension upon the bolt shanks due to the novel construction used, the force of said tension acting against the inner sides of the bolt heads and nuts so that neither can be turned with respect to the other, except by the application of a greater force than will normally be developed in the regular use of the paper holder. The major portion of the structure of the paper holder is of sheet metal, which is readily shaped and formed by punch press operations, resulting in greatest economy in manufacture.

An understanding of the invention may be had from the following description, taken in connection with the accompanying drawings, in which,

Fig. 1 is an elevation of the paper roll holder of my invention.

Fig. 2 is a transverse vertical section on the plane of line 2—2 of Fig. 1.

Fig. 3 is a fragmentary enlarged longitudinal vertical section on the plane of line 3—3 of Fig. 2.

Fig. 4 is a fragmentary enlarged vertical transverse section on the plane of line 4—4 of Fig. 1, showing the cutter elevated relative to Fig. 1.

Fig. 5 is a like view with the cutter for the paper in its down operative position, different from Fig. 4 where it is elevated and in inoperative position.

Fig. 6 shows in perspective, separate from each other, the immediate sheet metal parts comprising the cutter bar mounting arms and the members used and associated therewith for pivotally mounting them.

Fig. 7 is an enlarged vertical section through the base support of one of the standards on the plane of line 7—7 of Fig. 1.

Fig. 8 is a fragmentary horizontal section and plan on the plane of line 8—8 of Fig. 1 and

Fig. 9 is a perspective view of a base support, one for each of the standards, and of one end of the connecting bar between them.

Like reference characters refer to like parts in the different figures of the drawings.

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In the construction, two spaced apart vertical standards are assembled with and connected each to a base support (Figs. 7 and 9), which is formed from sheet metal, having an upper web 1 with a downwardly extending continuous flange 2 around it, the end portions of the support being at a slightly lower plane than the center portion, and in the web at each end a slot is cut, having a relatively large size at 3 at its inner end, a narrow slot 4, the sides of which are at an acute angle to each other, connecting said larger end opening 3 with a smaller opening 5. The intermediate raised portion of the web is formed with two spaced depressions 6 of rectangular form disposed symmetrical to the transverse center plane of the base support, leaving between them a horizontal section 7 which, while resistant to deformation, has a degree of flexibility so that it may be sprung or strained to one side of its normal plane. At the inner upper corner, and midway between the ends of each base support, an opening 8 is cut, leaving a vertical tongue 9 integrally connected with the adjacent flange 2. In the roll holder a flat bar 10, having an opening 10a as shown (Fig. 9) adjacent each end thereof, has the end portions thereof inserted underneath the adjacent portions of the center sections 7 of the base supports, with the tongues 9 extending upwardly through the openings in the bar 10.

The two base supports and the bar 10 are first connected together in the assembly of the roll holder parts, and it is obvious from the described structure that the bar 10 is inseparably connected with each of the base supports and can not be disconnected from either as long as said two base supports are in a common plane. The openings in the end portions of the upper web 1 will serve to pass screws for the securing of said base supports to a counter top or other horizontal member above which the roll holder is to be located, or rubber foot members having relatively large under portions 11 (Fig. 8) and relatively small diameter shanks 11a terminating in larger heads 12 may be attached, the heads of the shanks going upwardly through the larger area portions 3 of the slots, and then by moving the shanks to the smaller ends 5 and forcing and squeezing them by the edges bounding the slots 4, they will be held in position against accidental disconnection.

Two standards each made of a single length of flat metal are connected at their lower ends, each to a described base support. Each has a longitudinal web 13 reinforced at its longitudinal edges by outwardly pressed ribs 14 which terminate in inwardly extending flanges 15, as shown in Fig.

8. At each end the metal is turned laterally inward at right angles and formed with two flanges 16 lying in the same plane, connected by an intermediate channel portion 17. An upper bar 18 generally of wood, paralleling the lower bar 10, lies adjacent its ends and at its under side against the upper flanges 16, with the webs 17 of the intermediate channel sections spaced from the under side of said bar 18 (Figs. 4 and 5). At the lower end of each standard the webs 16 are received in the rectangular depressions 6 and the intermediate channel portions are spaced a short distance above the central sections 7 of the webs of the base support. Bolts 18a pass through the upper bar 18 and through the webs of the upper channel sections 17, receiving nuts 18b at their lower ends, and shorter bolts 7a pass through the webs of the lower channels 17 and through said sections 7, also receiving nuts 7b at their lower ends, securely connecting the parts together. When the nuts are tightened the parts 7 and 17 are strained toward each other at the lower ends of the standards and the parts 17 at the upper ends of such standards are strained and forced toward the upper bar 18. A heavy tension is imparted to the bolts with resultant pressure against the nuts thereon, which serves to frictionally hold the nuts from aimless or accidental unturning under all conditions of service of the paper roll holder.

Toward the upper end and at the inner side of each of the standards a bracket is permanently secured. Each of said brackets is made from a single length of flat metal with an intermediate rectangular section 19 (Fig. 6) from the upper end of which a leg 20 is turned outwardly at right angles terminating in a flat base 21, which lies against the inner side of the web 13 of its associated standard and is preferably spot-welded thereto. At the other end the intermediate section is continued and turned outwardly terminating in a foot 22 in the same plane with the foot 21 located against the web 13 and spot-welded thereto. At the lower portion of the section 19, the metal is struck outwardly in a horizonal shelf 23 which has a rectangular guided slot 24 through it, as shown. Near the upper end of each section 19 the metal is struck outwardly to form a generally semi-cylindrical bearing 25 the purpose of which will hereinafter be described.

A flat bar having a widened upper end section 26 from which a narrower flat and longer section 27 extends is used with each of the shelves 23, the narrower portions 27 passing through the slots 24. The upper wider part 26 has a circular opening 28 therethrough, connected by a narrow slot to the outside as shown in Fig. 6, and a coiled compression spring 29 is located around the part 27 bearing at its upper end against the lower edges of the wider section 26 and at its lower end against the shelf 23 (Fig. 3). Two arms 30 of flat metal each, at its inner end, having a laterally turned leg 31 with an opening therethrough are connected one with each of the wider end portions 26 by inserting an edge of the leg 31 opposite an end of the opening through the slot leading to the circular opening 28. Each of said arms 30, near its inner end, has a circular opening 33 through which a bearing 25 extends. Each of said arms 30, at its outer end portion, has a generally triangular opening 34 cut therethrough. Between the outer ends of the arms 30 a presser and paper cutter bar extends, made from a length of flat metal of convex form as shown at 35 (Figs. 4 and 5), and at its inner edge longitudinally

flanged at 36 for reinforcement. The ends of the cutter bar, each has a narrowed hook 37 integral therewith and projecting therefrom, to pass through an opening 34 and below each of the hooks 37 is an upwardly extending finger 38 which is disposed outwardly a short distance from the extreme outer end of the adjacent arm 30. The projecting hook 37 is of a width that the cutter bar may swing back and forth between one side of the opening 34 to the other the edge of the hook 37 lying closely adjacent the inner arc shaped side of said opening.

Substantially midway between the upper and lower ends of each standard and at the inner side thereof a holding socket 39 of sheet metal is permanently secured by welding, both of said socket members being in the same horizontal plane and adapted to receive the ends of a rod 40 upon which a roll of paper is wound.

With a construction as described, the arms 30 may be lifted to upper position as in Fig. 4, lifting the paper cutter 35 away from the paper roll, the cutline of which is shown in dash lines in Figs. 2 and 5 with the edge of the cutter 35 against it. In the down position as in Figs. 2 and 5 the outer edge of the cutter bar 35 presses against the paper and is held snugly by the force of the spring 29 which tends to turn the arms 30 in a counterclockwise direction when in the position shown in Fig. 5. When turned to upper position the lines of force of the springs 29 pass in front of the axis of the bearings 25 so that the spring tends to turn said arms 30 and the bar 35 clockwise or in an opposite direction until said arms are stopped against the bar 18. Paper may be unrolled and then cut against the outer lower edge of the cutter bar 35 in the usual manner after the desired length has been withdrawn. After a roll of paper is exhausted a new roll may be put in place with the cutter bar occupying the position in Fig. 4.

The construction as described is very sturdy, dependable, efficient and economical to manufacture. After the assembly is completed there are no parts which can work loose and become disconnected under the service to which the roll holder is subjected.

The assembly is simple and easy, the structure has proven particularly satisfactory.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within its scope.

I claim:

1. In a paper roll holder, a supporting frame including two spaced apart standards, a base supporting member at the lower end of each standard, said standards and base supporting members having parts slightly spaced from each other, means for connecting such standard to its base support including bolts and nuts, the bolts passing through said spaced parts of said standards and supporting members, said parts being yieldingly resistant and sprung towards each other and exerting pressure upon the bolt heads and nuts to prevent relative movement of the bolts and nuts with respect to each other, a transverse bar across the upper ends of the standards, bolts passing through said standards and the upper ends of the bar, said upper ends of the standards having yieldingly resistant portions spaced from the bar deformed by the bolt connections and nuts on the bolts to exert deforming pressure on said yielding portions.

2. In a paper roll holder and cutter, a supporting frame comprising vertical standards spaced

from each other, a top cross bar between the upper ends of the standards, bolts connecting the bar to said standards, said standards at their upper ends having spaced flanges bearing against the lower side of the bar at each end thereof and an integral downwardly extending channel portion between said flanges spaced from the under side of the bar and through which the bolts pass, nuts at the lower ends of the bolts bearing against and pressing said channel portions toward the bar, a supporting base connected to the lower end of each standard and a bar extending between the supporting bases and paralleling the upper bar.

3. The elements of claim 2 in which said supporting bases near each end are provided with openings each comprising spaced larger and

smaller openings connected by a slot and a resilient foot member having a large base portion, a small neck and a larger head inserted through said larger opening and the neck moved through said slot into said smaller opening.

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