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N. L. JONES

3,304,034

PAPER ROLL HOLDER

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FIG. 1

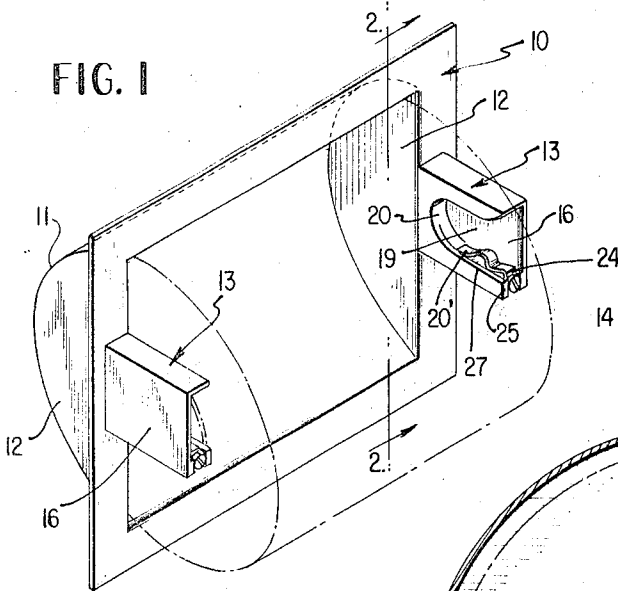


FIG. 2

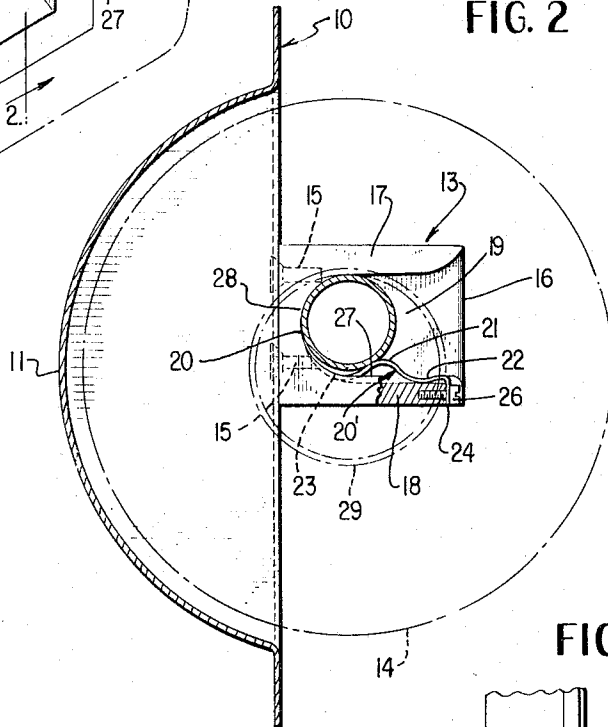


FIG. 3

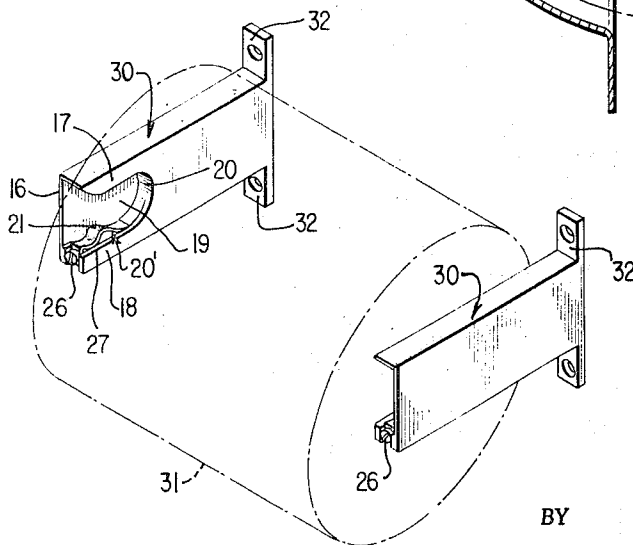
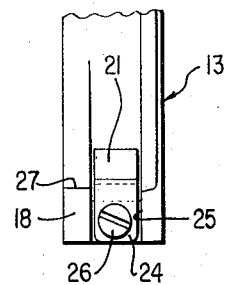


FIG. 4



INVENTOR
NED L. JONES

BY

B.P. Fishburn, Jr.
ATTORNEY

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PAPER ROLL HOLDER

Ned L. Jones, 3209 Butterfield Road,
Yakima, Wash. 98901

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This invention relates to a holder for paper rolls and the like.

An object of the invention is to provide a holder for paper rolls which is simplified and compact in construction, neat and attractive in appearance, and reliable and efficient in operation.

A further object is to provide a paper roll holder wherein the roll supporting tube or rod is held detachably on bracket arms by a novel spring arrangement enabling the paper roll to be inserted and removed from the holder laterally without difficulty. The construction eliminates the sometimes awkward manipulation of spring-loaded supporting tubes of the type which must be compressed axially for mounting in a bracket structure. The present construction enables the paper roll and its supporting tube to be quickly installed laterally within recessed bracket arms containing contoured leaf springs which yield to allow easy passage thereover of the ends of the roll supporting tube and easy removal thereof, the springs serving to firmly hold the supporting tube in the installed position.

Another object is to provide a holder for paper rolls in which the retaining springs are replaceable.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this application and in which like numerals are employed to designate like parts throughout the same,

FIGURE 1 is a perspective view of a paper roll holder embodying the invention;

FIGURE 2 is a vertical section on an enlarged scale taken on line 2-2 of FIGURE 1;

FIGURE 3 is a perspective view of a modification; and

FIGURE 4 is an enlarged fragmentary end elevation of a bracket arm, spring and associated elements.

In the drawings, wherein for the purpose of illustration are shown preferred embodiments of the invention, attention is directed first to FIGURES 1 and 2, wherein the numeral 10 designates a supporting frame adapted to be installed flush with a wall surface surrounding a recess for the paper roll. The frame 10 carries an integral arcuate forwardly open housing part 11 which enters the wall recess and serves as a lining for the recess. The housing part 11 has flat parallel end walls 12 as indicated.

Rigidly mounted upon the vertical sides of the frame 10 and projecting forwardly thereof at right angles thereto is a pair of bracket arms 13 adapted to support a paper roll 14. The bracket arms 13 may be integral with the frame 10 or may be detachably rigidly secured thereto by screws 15, as found preferable. The bracket arms 13 are in laterally opposed parallel spaced relation near the vertical center of the frame 10, as shown in the drawings.

Each bracket arm 13 is channel-like in transverse cross section and comprises an outer side wall 16 and top and bottom horizontal walls or flanges 17 and 18. A forwardly open horizontal recess or socket opening 19 is formed in the inner side of each bracket arm 13 and includes a circularly curved rear end wall 20 having a radius which defines the overall vertical depth of the recess 19, which recess opens through the forward end of the bracket arm 13.

Mounted within the lower part of each bracket arm 13 immediately inwardly of the side wall 16 is a longitudinally extending contoured leaf spring 20' having an upwardly crowned intermediate portion 21 which projects con-

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siderably above the lower wall 18 of the bracket arm but terminates well below the vertical center of the recess 19 and forwardly of the center for the radius which defines the curved rear end wall 20. The spring 20' further comprises a generally horizontal portion 22 contacting the lower wall 18 and a forward terminal part 23 which is reversely curved relative to the crowned portion 21. At its rear end, the spring has a depending transverse extension 24 received within a notch 25 in the end of the lower wall 18. The extension 24 is clamped firmly within the notch or recess 25 by a screw 26. The sides of the notch 25 engage the parallel edges of the spring extension 24 and prevent the latter from turning relative to the bracket arm. To further stabilize the leaf spring, there is a shallow ledge 27 formed along the outer side of the lower wall 18 and the spring engages inwardly of this ledge and between it and the outer wall 16. The crowned portion 21 of the spring projects well above the ledge 27, FIGURE 2. The construction of both bracket arms 13 is identical, and therefore the detailed description of one arm will serve to describe both. The two arms 13 are in opposed relation with their recesses 19 facing inwardly, as shown in FIGURE 1.

The holder further comprises a tube 28 formed of sheet metal or the like and having a length slightly less than the distance between the walls 16 of the two bracket arms 13 and an outside diameter slightly less than the vertical depth of each recess 19. The supporting tube 28 is adapted to have the core tube 29 of the paper roll 14 applied thereover so that the paper roll hangs freely from the tube 28. The tube 28 has its end portions projecting beyond the ends of the paper roll, as is usual. The exposed end portions of the supporting tube 28 are adapted to be introduced laterally through the recesses 19 until the ends of the tube 28 are seated against the curved back walls 20 of the recesses. The leaf springs 20' will yield to allow the tube 28 to pass laterally thereover and the crowned parts 21 of the springs will hold the ends of the tube 28 snugly against the curved wall 20 and the upper wall 17 of the bracket arms 13, as clearly shown in FIGURE 2. The arrangement allows free turning of the paper roll on the supporting tube 28 at all times. The entire paper roll and the tube 28 may be pulled laterally out of the bracket arms 13 at any time and the two springs 20' will yield to permit this. The installation or replacement of the roll along with the supporting tube 28 is rendered very simple without sacrifice of security of holding by means of the leaf springs. The awkward arrangement where axially compressible spring-loaded supporting tubes are employed is completely eliminated by the invention.

FIGURE 3 shows a slight modification of the invention where the companion bracket arms 30 embodying the invention are mounted upon a supporting wall which is not recessed to receive the paper roll 31. The bracket arms 30 are therefore longer than the previously described arms 13 and are equipped with rear apertured flanges 32 to facilitate attaching them to the supporting surface. The bracket arms 30 in all other respects are identical in construction and function to the arms 13 and all other features of the invention are identical to the corresponding features shown and described in the prior embodiment of the invention. All of the advantages of the invention enumerated above in connection with the prior embodiment are also present in the embodiment shown in FIGURE 3. The details of construction shown in FIGURE 4 are of course common to both forms of the invention.

It is to be understood that the forms of the invention herewith shown and described are to be taken as preferred examples of the same, and that various changes in the shape, size and arrangement of parts may be resorted to,

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without departing from the spirit of the invention or scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a holder for paper rolls and the like, a bracket arm, means connected with said bracket arm for mounting the same on a vertical supporting wall, said bracket arm comprising a generally rectangular body portion having a recess in one side thereof and opening through its forward end, said recess having vertically spaced substantially parallel horizontal walls and a rear curved wall whose radius establishes the distance between said top and bottom walls, said bottom wall having an elevated ledge extending therealong and having a notch in its end, a leaf spring mounted upon the bottom wall inwardly of said ledge and having a downturned extension in said notch, a fastener anchoring said extension in said notch, said leaf spring having a curved crowned part intermediate its ends projecting above said ledge and spaced forwardly of said curved wall and below and forwardly of the radial center of the curved wall, said crowned part adapted to yieldingly engage a supporting tube while an end portion thereof is within said recess and engaging the curved wall.

2. The invention as defined by claim 1, and wherein said means connected with said bracket arm includes a wall-engaging mounting frame, and a substantially duplicate bracket arm carried by the mounting frame in opposed spaced relation to said bracket arm.

3. In a holder for a paper roll, a bracket arm, means connected with the bracket arm for mounting the same

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upon a wall, said bracket arm comprising a one-piece generally rectangular body portion having a recess in one side thereof and opening through its forward end, said recess having vertically spaced substantially parallel horizontal top and bottom walls and a rear curved wall interconnecting said top and bottom walls, said bottom wall having an elevated longitudinal ledge extending along the outer margin thereof, said ledge blending into the rear curved wall, a leaf spring mounted upon the bottom wall inwardly of said ledge and having a free end slidably contacting the bottom wall and held by said ledge against lateral displacement, said leaf spring having a curved crowned part intermediate its ends projecting above said ledge and spaced forwardly of the rear curved wall and below and forwardly of the radial center of the curved wall, and means anchoring one end of the leaf spring remote from the rear curved wall to said bottom wall.

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CLAUDE A. LE ROY, *Primary Examiner.*

JOHN PETO, *Examiner.*