Nov. 8, 1932. R. H. KNITTLE 1,887,269

SUPPORT AND DISPLAY RACK FOR ROLL MATERIAL

Filed Oct. 16, 1930 3 Sheets-Sheet 1

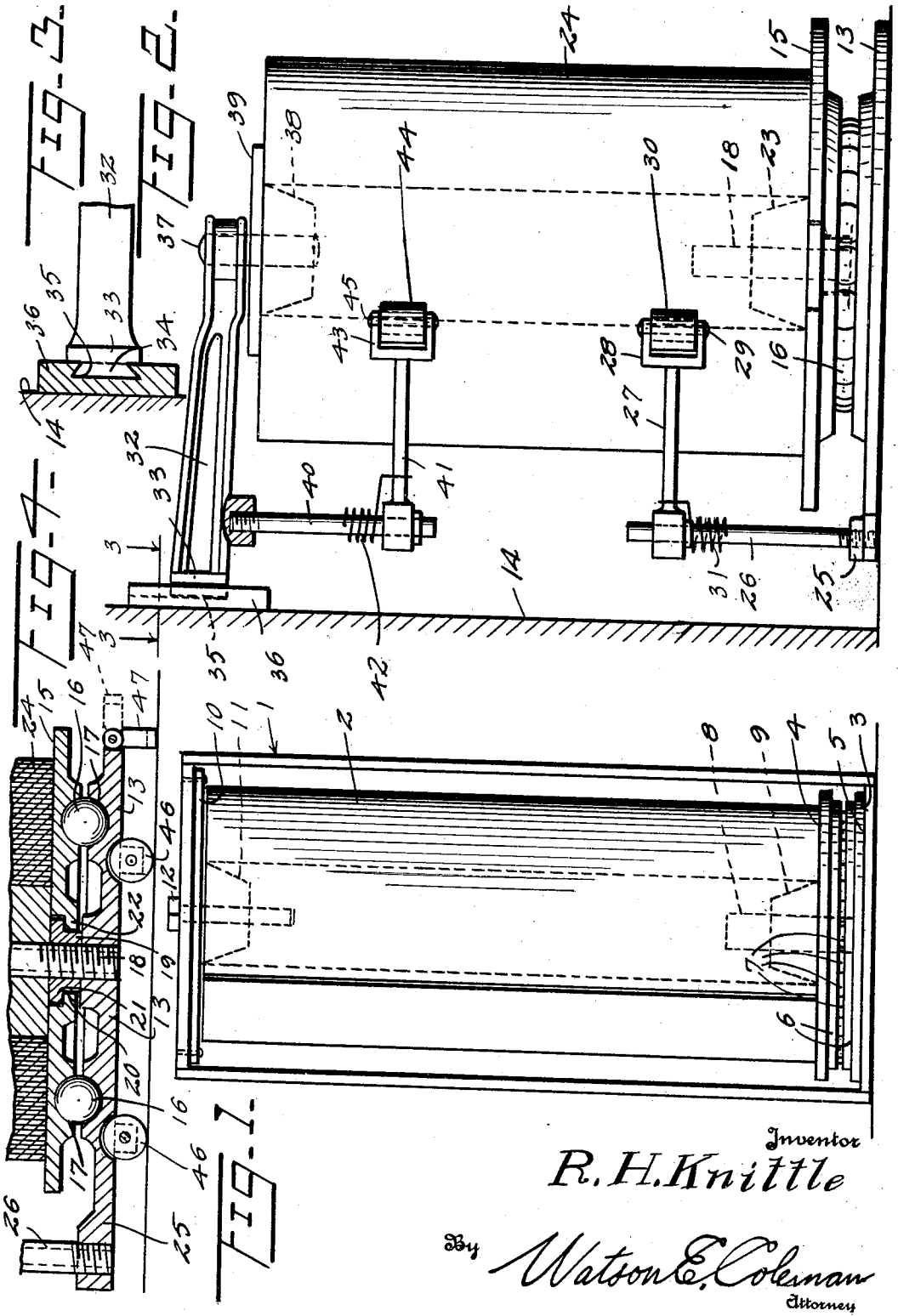


FIG. 3.

FIG. 2.

FIG. 4.

FIG. 1.

Inventor
R. H. Knittle

By Watson E. Coleman
Attorney

Nov. 8, 1932. R. H. KNITTLE 1,887,269

SUPPORT AND DISPLAY RACK FOR ROLL MATERIAL

Filed Oct. 16, 1930 3 Sheets-Sheet 2

Fig. 5.

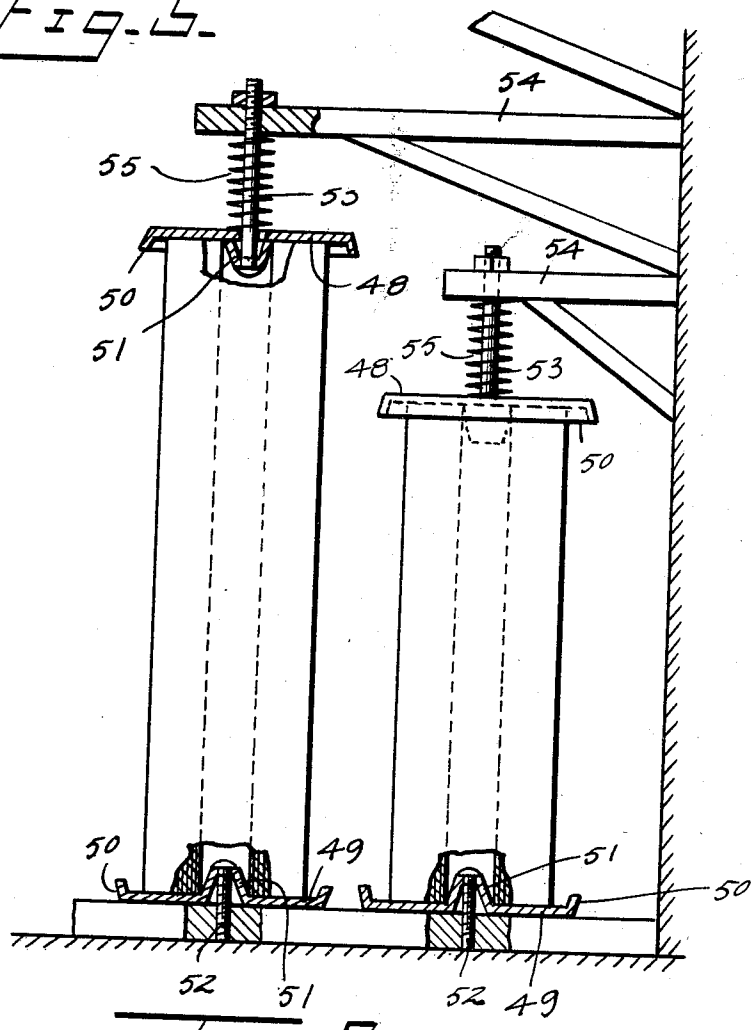



Fig. 7.

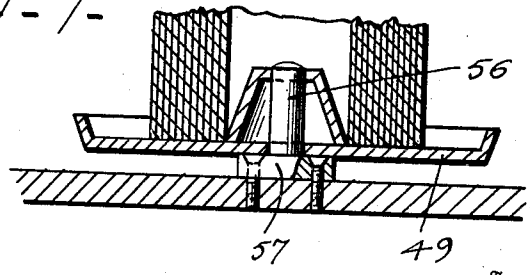
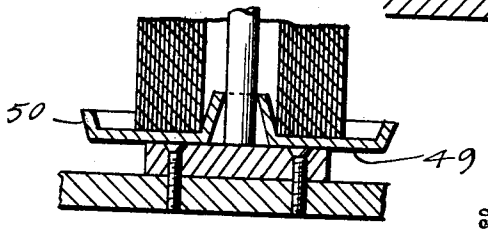



Fig. 6.




Inventor

R. H. Knittle

By Watson E. Coleman

Attorney

Nov. 8, 1932. R. H. KNITTLE 1,887,269

SUPPORT AND DISPLAY RACK FOR ROLL MATERIAL

Filed Oct. 16, 1930 3 Sheets-Sheet 3

FIG. 1.

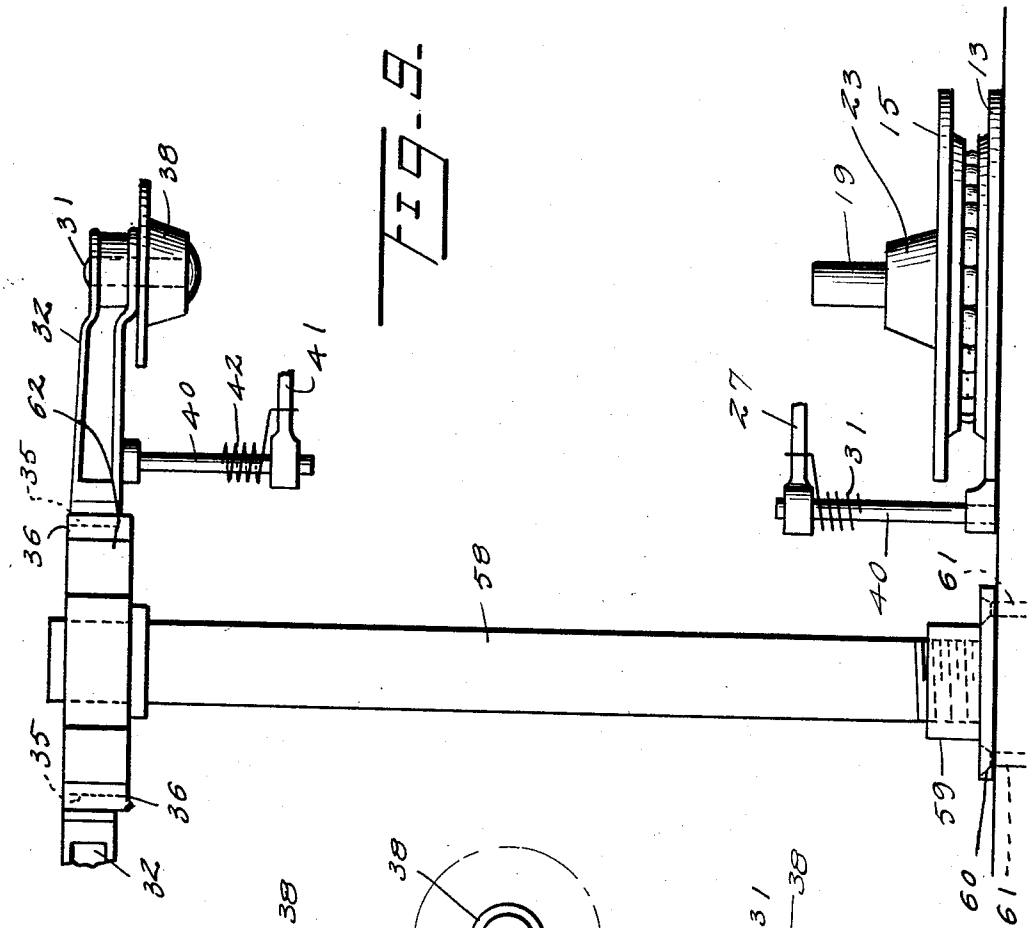
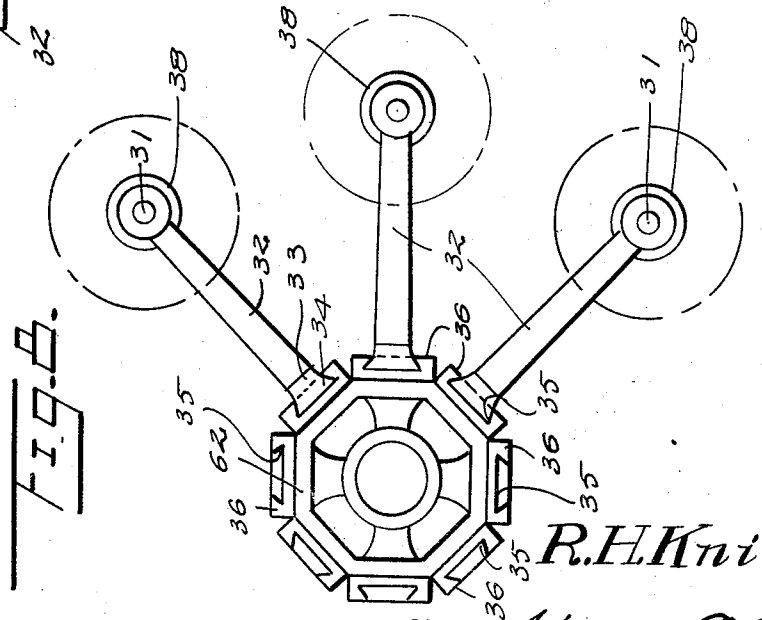



FIG. 2.




Inventor
R. H. Knittle
By Watson E. Coleman
Attorney

Patented Nov. 8, 1932 1,887,269

# UNITED STATES PATENT OFFICE

ROBERT H. KNITTLE, OF PORT CARBON, PENNSYLVANIA

## SUPPORT AND DISPLAY RACK FOR ROLL MATERIAL

Application filed October 16, 1930. Serial No. 489,154.

This invention relates to display devices and pertains particularly to a device for supporting rolled material such, for example, as linoleum or rugs.

The primary object of the present invention is to provide a supporting and display rack for linoleum, rugs or any other similar material, by means of which the rolls thereof may be maintained in upright position so that the article or a part thereof may be unrolled as necessary, either for the display of the article or, if the supported article be a roll of linoleum, so that a portion thereof may be cut off.

Another object of the invention is to provide a display rack for roll material upon which the material may be easily set up and shifted about.

A still further object of the invention is to provide a supporting display rack for roll material having associated therewith means whereby the edge of the material will be held firmly against the body of the roll so that the roll will not become loose or unwind and the free edge will not sag and get out of shape.

Other objects and advantages of the present invention will become apparent as the description of the same proceeds and the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a view showing the use of one form of the device embodying the present invention for supporting a linoleum roll in its crate.

Figure 2 is a view in side elevation of a modified form of the device shown supporting a linoleum roll on end.

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

Figure 4 is a vertical sectional view through a modified form of the base structure shown in Figure 2.

Figure 5 is a view partly in section and partly in side elevation of a further modified form of the present invention showing the same in use.

Figure 6 illustrates a modified form of the base structure shown in Figure 5 to permit rotation thereof.

Figure 7 shows a further modification of the base structure shown in Figure 5 to permit of its being rotated.

Figure 8 is a view in top plan of a support for a series of roll holders of the character illustrated in Figure 2.

Figure 9 illustrates in side elevation the support shown in Figure 8.

Referring more particularly to the drawings wherein like numerals of reference indicate corresponding parts throughout the several views, Figure 1 illustrates the manner in which the structure embodying the present invention may be employed for supporting rolls of linoleum or similar floor covering or other roll material in the crate in which it is shipped to the retailer. The box or crate in which roll of material is shipped is indicated by the numeral 1 while the roll therein is indicated by the numeral 2. For supporting the roll in upright position in the shipping crate so that it may be readily unrolled in order to sell a part thereof, there is provided a supporting structure which is indicated generally by the numeral 3 and which comprises upper and lower plates 4 and 5, the opposed faces of which are provided with ball races 6 in which are placed bearing balls 7. The lower one of these plates carries a post 8 upon its center which extends upwardly through the upper plate in the manner shown and the upper plate has mounted thereon concentric with the post a cone 9.

In the upper end of the box or crate there is secured in any suitable manner a plate 10 which carries a cone 11. In mounting the roll 2 in the crate upon the supporting structure one side of the crate is removed and the

roll of linoleum is taken out. The cone 11 is then placed in the upper end of the roll while the lower cone 9 with the post 8 is inserted in the lower end of the roll and the plates 4 and 5 held against the end of the roll in the position which they will assume when in the crate. The crate is then placed back over the roll and there is then inserted through the top end of the crate, through a suitable hole which may be made therein, a pin or bolt 12 which is extended through a passage formed through the plate 10 and the cone 11. The crate containing the linoleum roll may then be raised to the upright position shown so that the plate 4 will support it upon the bearing balls 7 and the bottom plate 5 in such a manner that it may be readily rotated to remove a part of the linoleum as desired.

An improved form of the structure shown in Figure 1 may be provided for supporting a roll exteriorly of the packing case, as illustrated in Figures 2 to 4. In this modified form of the structure the lower one of the two roll supporting plates, which is here indicated by the numeral 13, is placed directly upon the floor adjacent a wall, the wall being indicated by the numeral 14. The upper plate 15 is disposed over the lower plate and supported by bearing balls 16 interposed between it and the lower plate and lying in suitable raceways 17.

As in the previously described construction the plate 13 carries a central upright post 18 which passes upwardly therefrom through a flanged collar 19. This collar 19 extends through a central aperture 20 in the upper plate 15 and the flange 21 thereof overlies a retaining flange 22 forming an integral part of the plate 15. This flanged collar 19 is secured in any suitable manner to the plate 13 so that, as will be readily seen, while the upper plate 15 is permitted to rotate freely it cannot be lifted away from the lower plate.

Carried by the upper plate 15 and concentric therewith is a centrally apertured centering cone 23 through which the post 18 extends. This cone serves to center the roll of material 24 upon the rotating supporting platform.

The lower platform 13 has an integral rearward extension 25 in which is mounted an upright arm or post 26. At the upper end of the post 26 there is mounted thereon an arm 27, the free end of which is formed to provide the spaced parallel arms 28 between which is mounted upon a pivot pin 29, a roller 30 which is preferably formed of rubber.

Surrounding the post 26 beneath the arm 27 is a spring 31, one end of which is secured to the post while the other end is attached to the arm so that the arm will be normally urged thereby to swing toward the roll 24 mounted on the revolving platform to bring the rubber roller 30 into contact therewith. For use in association with the rotating roll carrying platform which is mounted upon the floor, there is provided an upper arm 32 which, at one end, is formed to provide the plate 33 upon the face of which the dove-tail rib 34 is formed. This rib is designed for engagement in a similarly formed groove 35 in a supporting plate 36 which is secured to the wall 14.

The other end of the arm 32 carries a pivot pin or bolt 37 which supports a cone 38 and a plate 39 which overlies the upper end or base of the cone 38, the cone being inverted as shown.

Adjacent its inner end the arm 32 has suspended therefrom the post 40 which, at its lower end, carries a right angularly directed roller carrying arm 41, the latter being mounted for rotation about the post 40 and normally urged to swing inwardly toward the adjacent roll 24 by the spring 42 which surrounds the post and has one end secured thereto and the other end secured to the arm, the same as the spring 31. This arm 41, like the arm 27, has its free end formed to provide the spaced parallel members 43 between which is mounted a rubber roll 44 upon a pivot pin 45.

From the description given it will be readily seen that with the structure just described rolls of linoleum or other material may be securely held in upright position and in such a manner that they may be readily rotated to permit removal of a part thereof. The rollers 30 and 44, being pressed firmly against the body of the roll of material, act to hold the edge thereof so that it will not sag and become misshapen.

In some instances it is desirable that the supporting plates 13 and 15 be mounted so that they can be readily moved about after the roll of material has been placed thereon. For this purpose I provide a structure, such as is shown in Figure 4, wherein the lower one of the plates is mounted upon suitable rollers 46 and this plate is also provided with a pivotally attached handle 47 which may be employed as a means for holding the device against movement as well as for facilitating the shifting of the device.

In order to use the handle 47 as a holding element it is made of such a size or length that it may be swung down into firm engagement with the underlying floor surface so that it will wedge between the floor and the plate 13 to which it is attached and thus hold the plate against movement.

In Figure 5 there is illustrated a still further modification of my invention devised for use as a battery of supports for rugs or similar articles which do not have to be rotated as in the case of the linoleum roll where frequent rotation thereof is necessary for the removal of portions for sale. In this third modification there are provided upper

and lower plates 48 and 49 respectively, each of which is surrounded by a flange 50 and each has formed integral therewith at the central portion thereof a cone 51. The lower plate 49 may be attached to the floor surface by means of a suitable screw or bolt 52 passed through the center thereof, while the upper plate is suspended from a bolt 53 which passes through the cone portion and is attached at its upper end to a suitable bracket 54 mounted upon the adjacent wall. A spring 55 surrounds the bolt 53 and normally urges the plate 48 downwardly. In order to place a roll of material or a rolled rug in position on this modified form of holder the upper end of the roll is placed against the upper plate 48 and is lifted so as to force the plate upwardly against the spring 55. The lower end of the roll is then swung in until it is in position where the cone 51 will enter the lower end thereof whereupon it may be lowered and the top plate will be forced down firmly thereagainst to hold it in position.

It will, of course, be readily understood that the lower plate 49 of the modified structure just described may be rotatably mounted if it is found desirable. However, this type of structure is designed primarily for the use described. As shown the brackets 54 may be positioned at different elevations so that a series of roll holders may be set up to support on display rolls of rugs of different lengths.

In Figure 7 there is shown a detail illustrating the manner in which the plate 49 may be mounted for rotation if desired. For this purpose there is provided a pin 56 which passes upwardly through the plate and through the cone 51 formed in the center thereof, the lower part of this pin having a base 57 which may be secured to the floor and upon which the plate may rest. While it has not been shown it will of course be readily understood that suitable bearing balls may be interposed between the plate and the base 57 so as to make rotation thereof easier.

In Figure 8 there is illustrated a method of mounting a series of the roll holding devices about a central supporting post. The devices carried by this post may be of the character illustrated in Figure 2 and indicated by the numeral 32, with the floor portion thereof illustrated in combination therewith or they may be of the character illustrated in Figure 5 and indicated by the numeral 48 with the associate floor portions shown. In this structure there is provided a main support post 58 secured in a suitable collar 59 which in turn is secured by means of the integral base flange 60 and screws 61 to the floor.

The upper end of this post 58 carries a head plate 62 which may be of any desired polygonal contour as, for example, it may be square, hexagonal or octagonal, and each of the faces thereof may have secured thereto an arm such, for example, as the arm 32 or an arm for the support of a pin and plate such, for example, as the pin and plate 56 and 48, as previously described. For the purpose of illustration there has been shown attached to the head piece one of the arms 32.

From the foregoing description it will be readily seen that with a number of the structures herein described a store may mount in a convenient manner any number of rolls of linoleum or rolled rugs and, in the case of linoleum, the rolls may be readily rotated so that portions thereof may be cut off for sale or may be drawn out to afford display.

Having thus described my invention, what I claim is:

1. A material roll support comprising a base unit having a top and a bottom plate, a vertical pin member carried by said bottom plate, a vertically disposed centrally apertured cone body arranged centrally upon the upper plate and having said pin extended therethrough, anti-friction elements interposed between said plates, said bottom plate having a portion extended beyond the upper plate, a post supported by and vertically disposed on said extended portion, a roller carrying arm oscillatably mounted in horizontal position upon said post for the engagement of a body on said upper plate, a top unit comprising an arm, means for securing one end of said arm to a fixed support, a pivot pin carried at the other end of said last arm in vertical alignment with said first mentioned pin, a post secured at one end to said last arm for extension downwardly therefrom when the said arm is in operative position, and a spring pressed roller carrying arm oscillatably supported in horizontal position upon said last post for engaging a body disposed between said pins.

2. A structure for supporting rolls of material on end, comprising an upper and a lower unit, said lower unit consisting of two plates, one disposed over the other and having anti-friction means interposed therebetween, a central pin carried by the lower of said plates and extending upwardly through the upper plate, a centering cone carried by the upper plate and having the pin passing therethrough, a relatively short post disposed vertically beside the said upper plate, an arm oscillatably attached at one end to said post and substantially horizontally disposed, the other end of said arm carrying a roller, spring means normally urging the roller end of the arm toward the vertical center of said pin, a main supporting post having an element upon its upper end provided with a dove-tail recess, said upper unit comprising an arm formed at one end for engagement in said recess, a pin at the other end of the last arm adapted to be vertically arranged over said first pin, a downwardly directed cone carried by said second pin and rotatable about

the axial center thereof, a second short post secured at one end to said last arm and adapted to extend downwardly therefrom, a second roller carrying arm oscillatably attached at one end to said last post, a roller carried at the other end of said last arm, and spring means normally urging the roller end of said last arm in a direction to engage a material roll positioned between the pins.

3. In a roll material supporting structure, a pair of plate members disposed one over the other, anti-friction means interposed between said plate, a vertically disposed central pin fixed in said lower plate and extending through a central aperture in the upper plate, said central aperture being in two concentric portions, the lower portion being of less diameter than the upper portion, a nut member threaded onto said pin and having a laterally projecting surrounding flange at its top adapted to fit into the upper larger portion of said aperture, the part of the nut below the flange being extended through the smaller portion of the aperture, and a cone surrounding the upper end of said pin for extension into the lower end of the material roll.

4. A material roll support, comprising a base unit having an upper and lower plate, means for rotatably supporting the upper plate upon the lower plate, a centering pin carried by the lower plate and extending upwardly through the upper plate for extension into a roll of material disposed on end on the upper plate, and a top unit comprising a body having a recess in one face thereof and adapted to be secured to a fixed support, an arm formed at one end for detachable engagement in said recess to be maintained in horizontally extended position from said body, a pin member carried at the other end of said arm to extend downwardly toward said first mentioned pin for coaction therewith in maintaining a roll of material in upright position upon the upper plate of said base unit, a post secured at one end to said arm to extend downwardly therefrom when the same is mounted in position, a spring pressed arm oscillatably mounted upon said post and adapted to engage a roll of material adjacent thereto, a second post disposed vertically upon said base plate, and a second spring pressed arm oscillatably mounted at one end upon said second post and adapted to engage the roll of material with its other end.

In testimony whereof I hereunto affix my signature.

ROBERT H. KNITTLE.