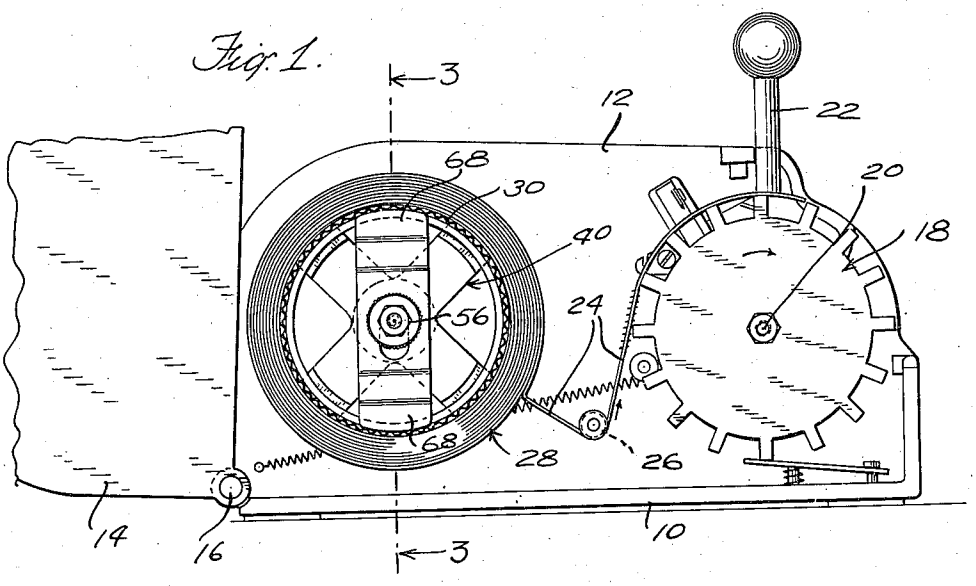
April 12, 1949. H. H. HILLMER 2,466,950

ROLL HOLDER FOR TAPE DISPENSERS

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Fig. 1.



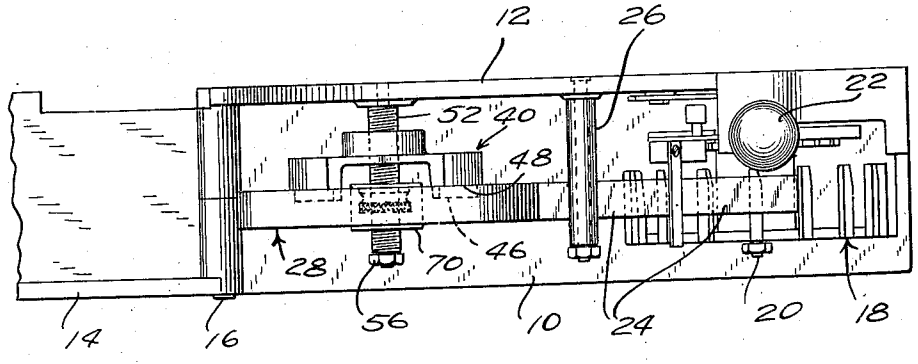


Fig. 2.

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Fig. 6.

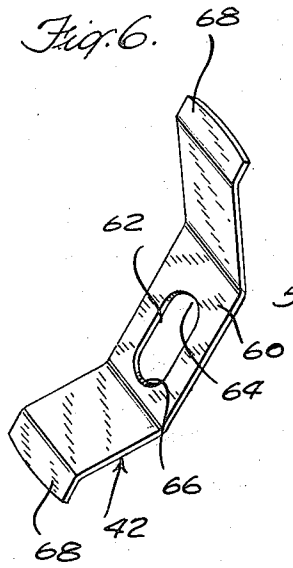
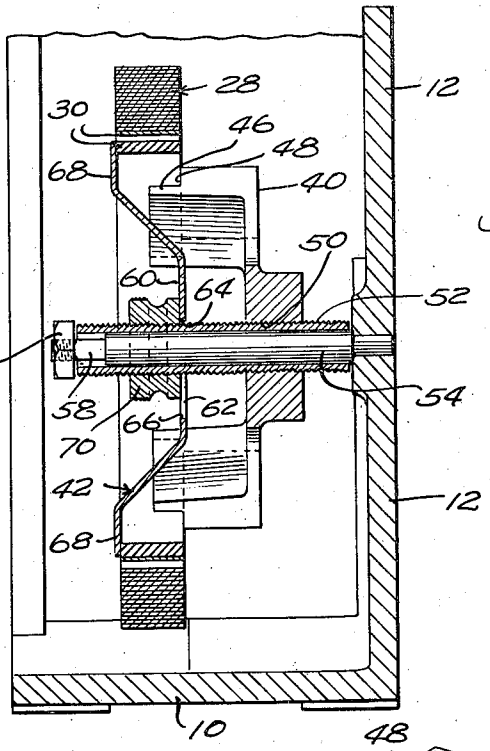


Fig. 3.



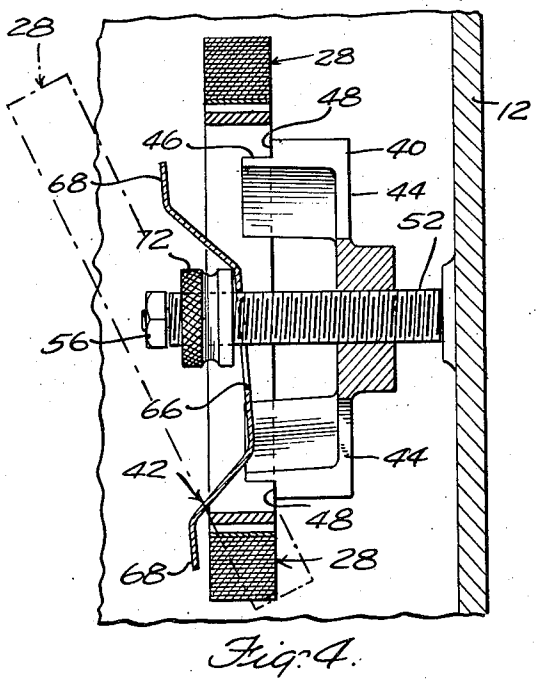


Fig. 4.

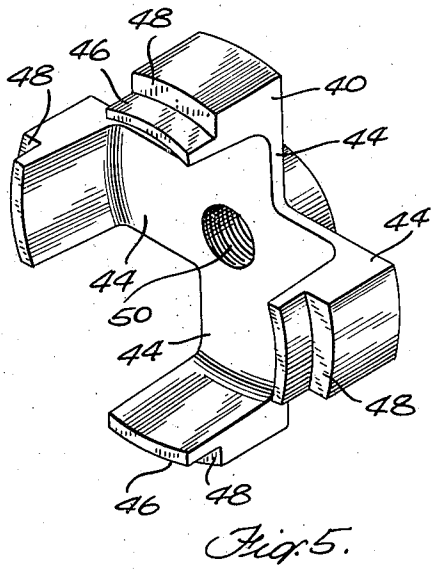


Fig. 5.

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UNITED STATES PATENT OFFICE

2,466,950

ROLL HOLDER FOR TAPE DISPENSERS

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Application September 7, 1946, Serial No. 695,363

3 Claims. (Cl. 242—55.2)

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This invention relates to roll holders or spindles for supporting a roll of tape or strip material in such manner that the material may be readily unwound therefrom for dispensing. It is particularly applicable to the holding of rolls of adhesive tape in tape dispensing machines and finds special utility in dispensers for tacky tape in which the tape is rolled upon itself, and each layer of tape adheres to the tape underneath so that some force is required to strip the tape from the roll. With tape of this character it is important to have the roll firmly held in place so that it will not be displaced by the force required to strip the tape from the roll. In tape dispensing machines and the like it is also desirable to have a roll holder which will permit the roll to be positioned laterally of the machine with accuracy so that the tape will be properly aligned with respect to the dispensing devices. It is also desirable to have a roll holder which may be properly adjusted to receive rolls of tape of different width and properly locate such rolls with respect to the dispensing devices. In the case of machines for dispensing pressure sensitive adhesive tape of the character described, difficulty is sometimes experienced from the roll of tape "coning," particularly if it has been stored for some time. In such case it may require lateral adjustment to one side or the other in order to align it more correctly with respect to the dispensing devices. The present invention provides a means whereby this may be accomplished.

A primary object of the present invention is to provide a holder for a roll of tape in which the position of the tape roll can be varied laterally with respect to the longitudinal axis of the machine.

Another object of the invention is to provide a roll holder which can be adjusted to receive rolls of tape of different widths and can be adjusted with respect to the axis of the machine so as to properly locate such rolls with respect to the dispensing devices.

It is another object of the invention to provide a roll holder having a retaining member which firmly clamps the core of the supply roll of tape to a backing spool so as to firmly hold the roll of tape in position.

Another object of the invention is to provide a roll holder having a retaining member for the roll of tape which can be moved so as to permit the application of the new roll of tape to the holder without completely detaching the retaining member from the holder, thus avoiding

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the possibility of the retaining member becoming misplaced.

Other objects and advantages of the invention will appear in the course of the following detailed description, wherein one preferred embodiment has been chosen to illustrate the principles of the invention.

In the drawings:

Fig. 1 is a side elevation of a tape dispenser having the improved roll holder therein, the cover of the dispenser being turned back to expose the interior mechanism and being shown partly broken away;

Fig. 2 is a plan view of the machine shown in Fig. 1;

Fig. 3 is a transverse section of the machine shown in Fig. 1 taken on line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 3 showing the retaining member displaced so as to permit the application of a new roll of tape to the roll holder;

Fig. 5 is a perspective view of the backing spool of the roll holder; and

Fig. 6 is a perspective view of the tape roll retaining member.

Referring to the drawings in detail, the roll holder of the present invention is shown in Figs. 1 and 2 as mounted in a dispenser for pressure sensitive adhesive tape of the type disclosed in my application for United States Letters Patent, Serial Number 612,258, filed August 23, 1945, for Adhesive tape dispenser. It will be understood, however, that the roll holder of the present invention is not limited to use with this type of dispenser but may be employed in any other mechanism where it may be found of utility. Briefly, the machine shown in Figs. 1 and 2 comprises a base 10 having a fixed sidewall 12 and a movable cover member 14 hinged to the base 10 by the pivot 16. The dispensing devices shown comprise a dispensing reel 18 pivoted to the back plate 12 by pivot 20 and arranged to be rotated by a handle 22. The end of the tape 24 is caused to adhere to the reel, passing around the guide roller 26 and being stripped from the supply roll of tape 28 when the reel is turned. Other features of the dispensing mechanism need not be here described. The roll of tape 28 is wound on a core 30 which may be of any suitable form, such as of the corrugated paper construction well known in the art.

The roll holder of the form shown comprises a backing spool 40 (shown in detail in Fig. 5) and the retaining member 42 (shown in detail in Fig. 6). The backing spool has a plurality of arms 44 carrying seats 46 adapted to fit inside of the core

30 of the tape roll and having shoulders 48 against which the edge of the tape roll core is adapted to be pressed. The backing spool has a hole therethrough which is internally threaded as indicated at 50 and which screws on a threaded sleeve 52 mounted to rotate freely on a pivot stud 54 fixed in the back plate 12. The sleeve 52 is retained on the stud by a nut 56 which screws on a reduced end 58 of the stud. The retaining member 42 comprises a piece of metal thin enough to have resiliency, which has a central portion 60 in which is an elongated hole 62. The hole is eccentrically placed so that when the retaining member is centered with respect to the backing spool, the end 64 of the hole will fit closely to the threaded sleeve 52 (as shown in Fig. 3); whereas when the retaining member is slid laterally so that the end 66 of the hole is adjacent to the threaded sleeve as shown in Fig. 4, the retaining member will be eccentrically located with respect to the backing spool. The retaining member has a pair of offset end flanges 68 which are adapted to overlie the core 30 of the tape roll and clamp the core and tape roll firmly to the backing spool as shown in Fig. 3. When the retaining member is moved to the position in Fig. 4, however, then the core of the used tape roll may be taken off and a new roll of tape slipped into position. For clamping the retaining member against the tape roll, a threaded nut 70 is provided which may be grasped in any suitable manner as by means of knurling 72 and screwed in and out upon the threaded sleeve 52. Owing to the use of the eccentric hole 62, it is unnecessary to entirely remove the nut and retaining member in order to permit a new roll to be applied. The threaded sleeve may be readily reached by the fingers and held from turning while the nut 70 is being adjusted.

The position of the roll to the right or left to the longitudinal axis of the machine may be adjusted by loosening the nut 70, holding the sleeve 52 against rotation and then turning the backing spool so as to screw the same either to the right or left along the sleeve 52. When the proper adjustment has been reached, the nut 70 can be tightened to clamp the core of the tape roll against the backing spool and this will hold the backing spool against further rotation relative to the sleeve 52. The roll of tape is thus held in its proper lateral adjustment. At the same time, the tape roll, backing spool and retaining member, nut 70 and sleeve 52 will rotate freely about the pivot 54 so as to permit the tape to be stripped from the roll.

The roll holder described is particularly useful for the holding of rolls of tape of different widths. For instance, if a roll of tape somewhat wider than that shown is to be put into the dispenser, the backing spool is adjusted towards the right

to such an extent as to support the wider roll of tape in proper axial alignment with the dispensing reel. Likewise, if a narrower roll of tape is to be used, the backing spool is adjusted further to the left (Fig. 3).

While I have illustrated and described in detail a preferred form of my invention, it is to be understood that changes may be made therein and the invention embodied in other structures. I do not therefore desire to limit myself to the specific construction illustrated, but instead to cover the invention broadly in whatever form its principles may be utilized.

Having described my invention, what I claim is:

1. A roll holder for a roll of tape comprising a support, a pivot stud mounted thereon, a threaded sleeve rotatably mounted on said pivot stud, a backing spool having a threaded axial bore therethrough screwing on said threaded sleeve, tape roll supporting formations on said backing spool, and means carried by said threaded sleeve for clamping the roll of tape against said backing spool.

2. A roll holder for a roll of tape comprising a support, a pivot stud mounted thereon, a threaded sleeve rotatably mounted on said pivot stud, a backing spool having a threaded axial bore therethrough screwing on said threaded sleeve, tape roll supporting formations on said backing spool, and means carried by said threaded sleeve for clamping the roll of tape against said backing spool, said clamping means comprising a resilient metal member having a hole through which said screw threaded sleeve passes and having end portions for engagement with the tape roll and a nut screwing on said threaded sleeve for retaining said resilient metal member in position.

3. A roll holder for a roll of tape comprising a rotatable screw threaded member, a backing spool mounted thereon having roll engaging formations and a roll engaging clamp mounted on said rotatable screw threaded member, said clamp having an elongated hole therethrough permitting it to be displaced to an eccentric position permitting application of a roll of tape to the backing spool, and adjustable means for clamping the said roll clamping member in position.

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