

Feb. 6, 1951

G. E. STAPLES
TAPE DISPENSER

2,540,697

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2 Sheets-Sheet 1

Fig. 1.

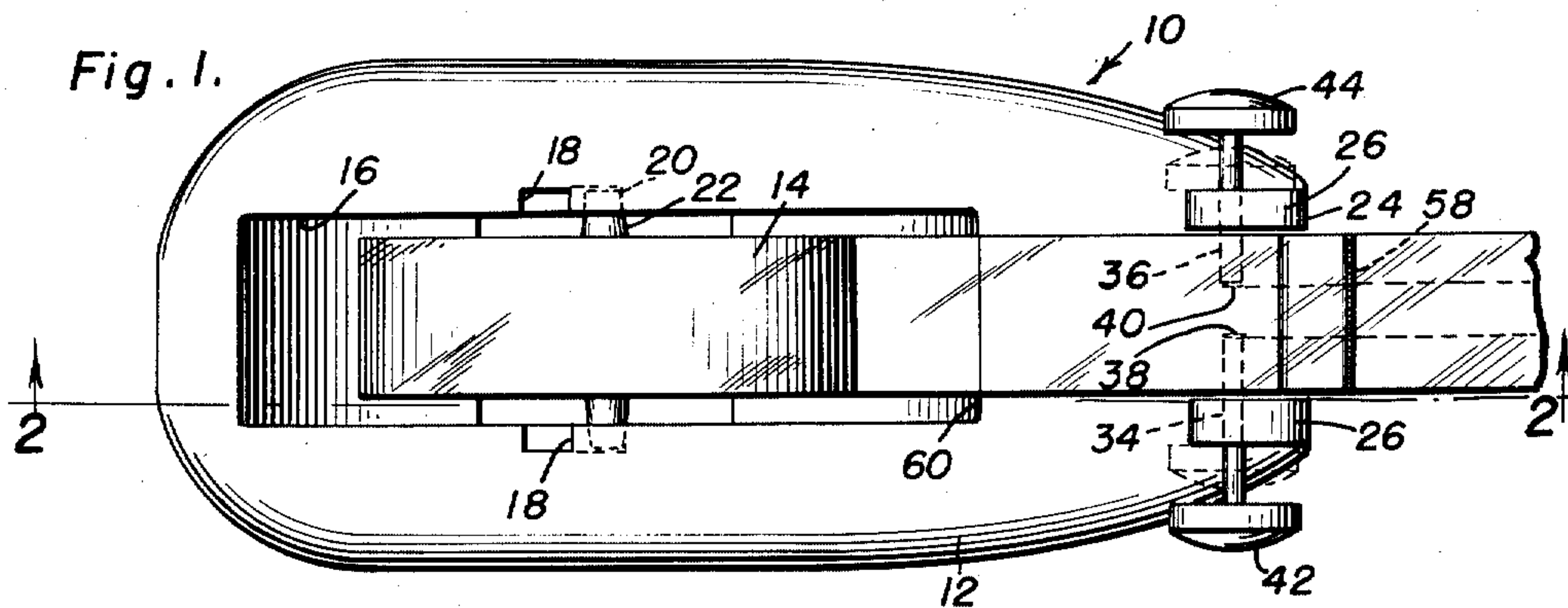


Fig. 2.

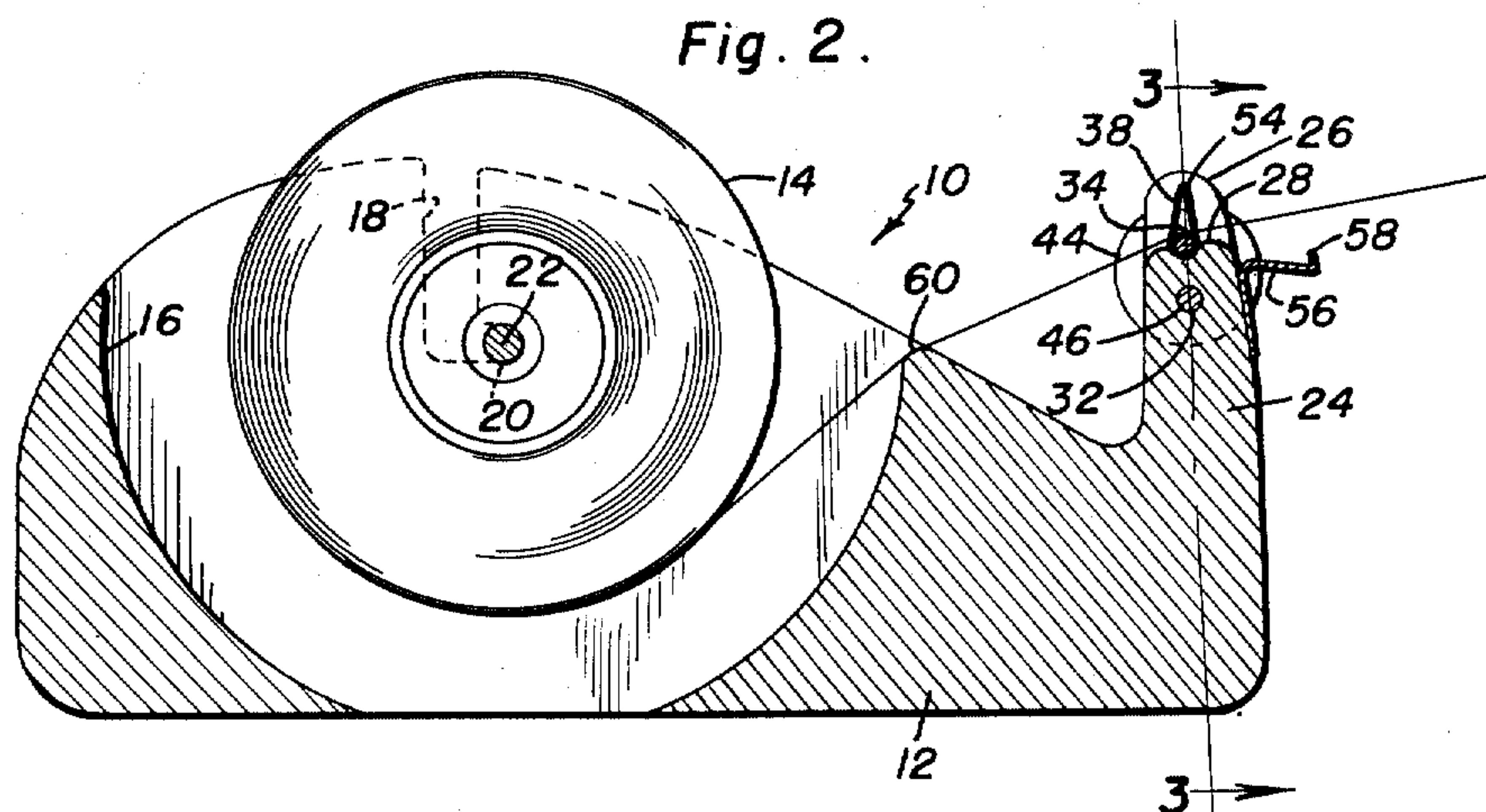


Fig. 3.

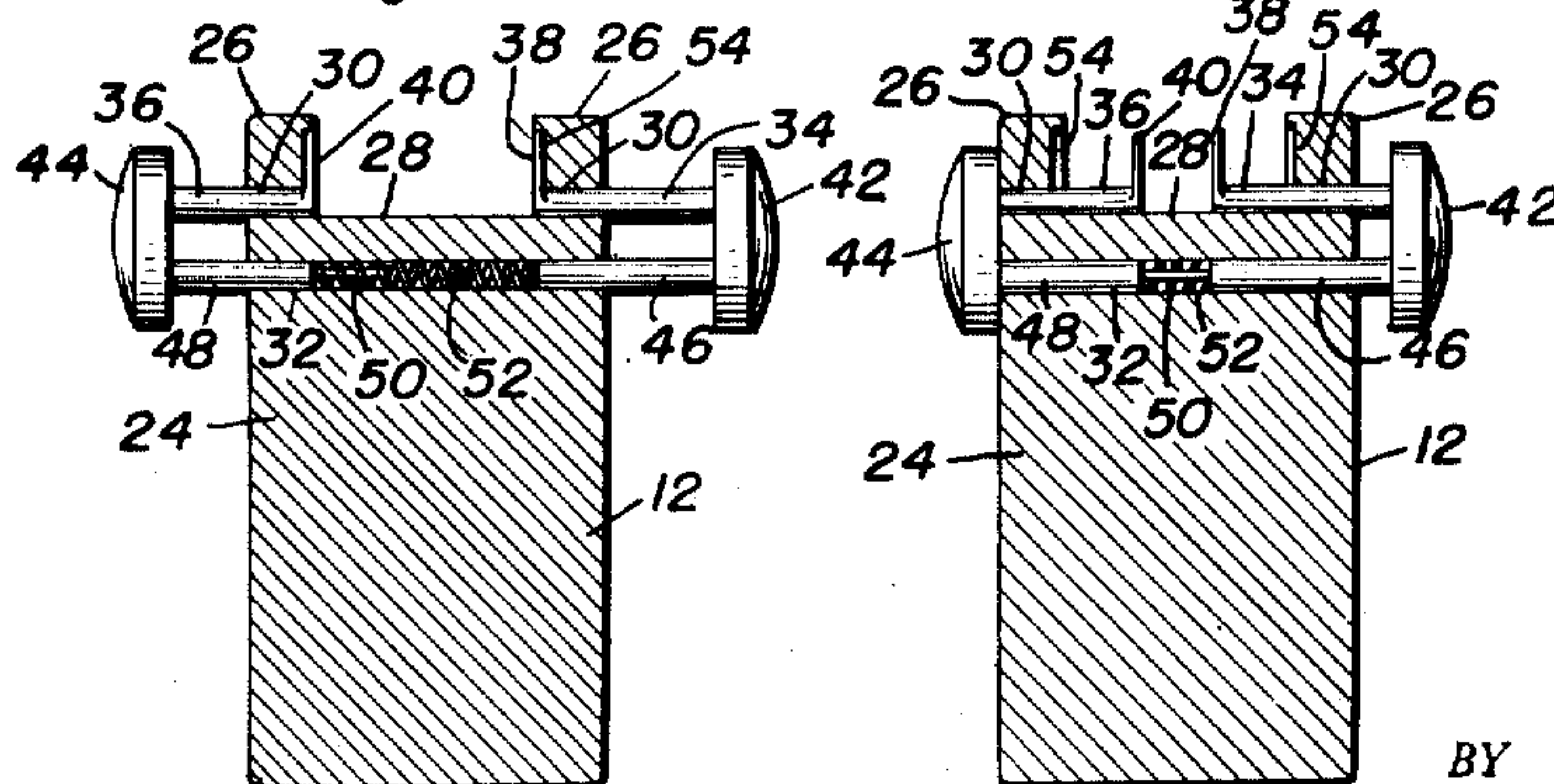


Fig. 4.

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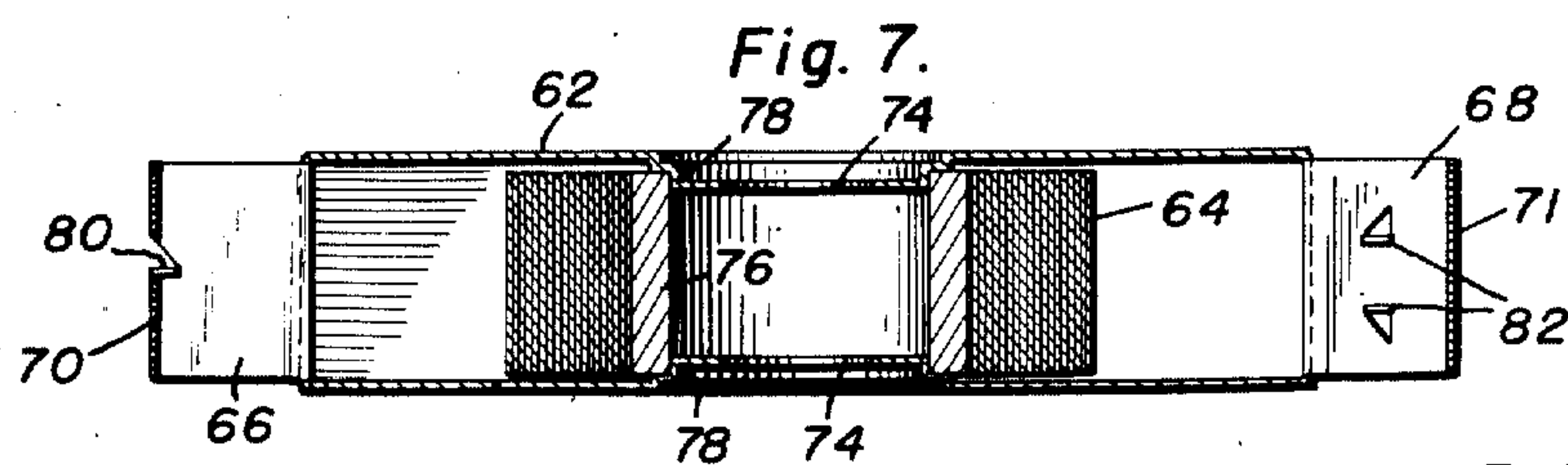
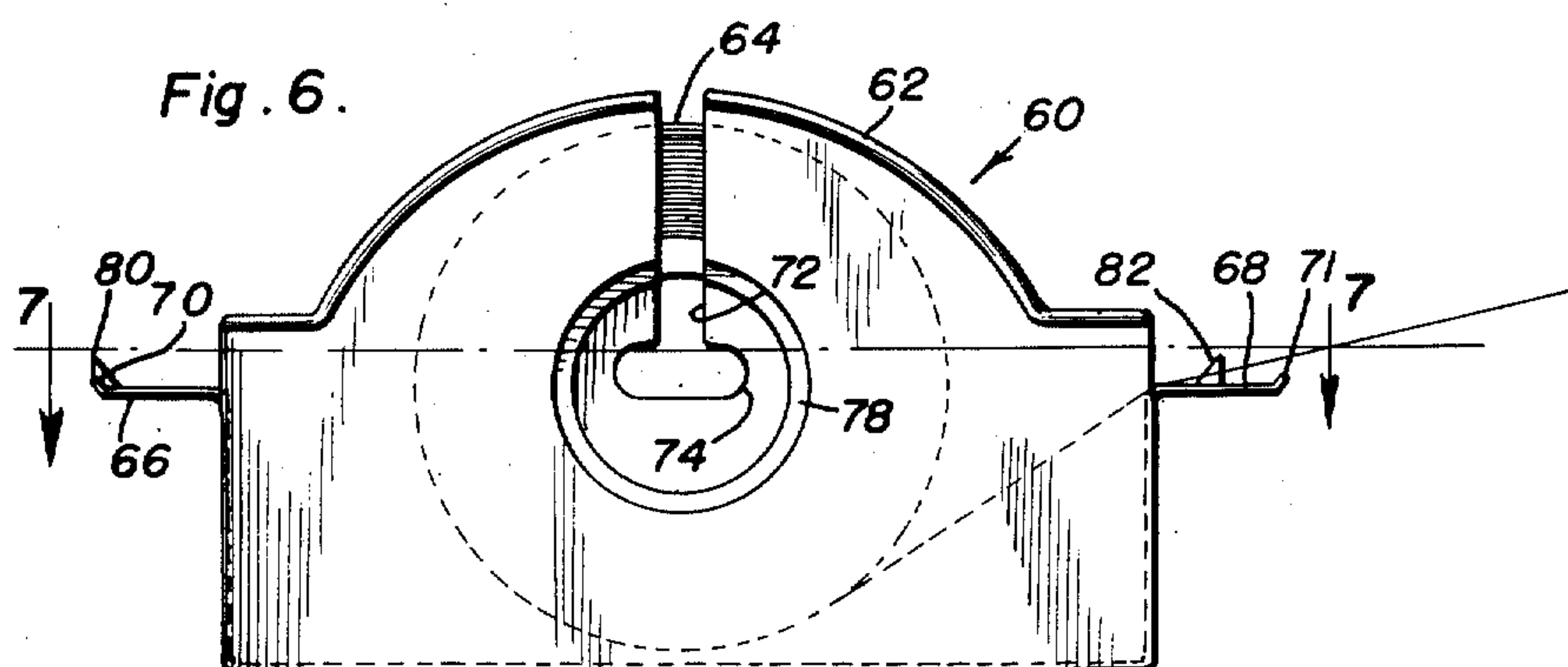
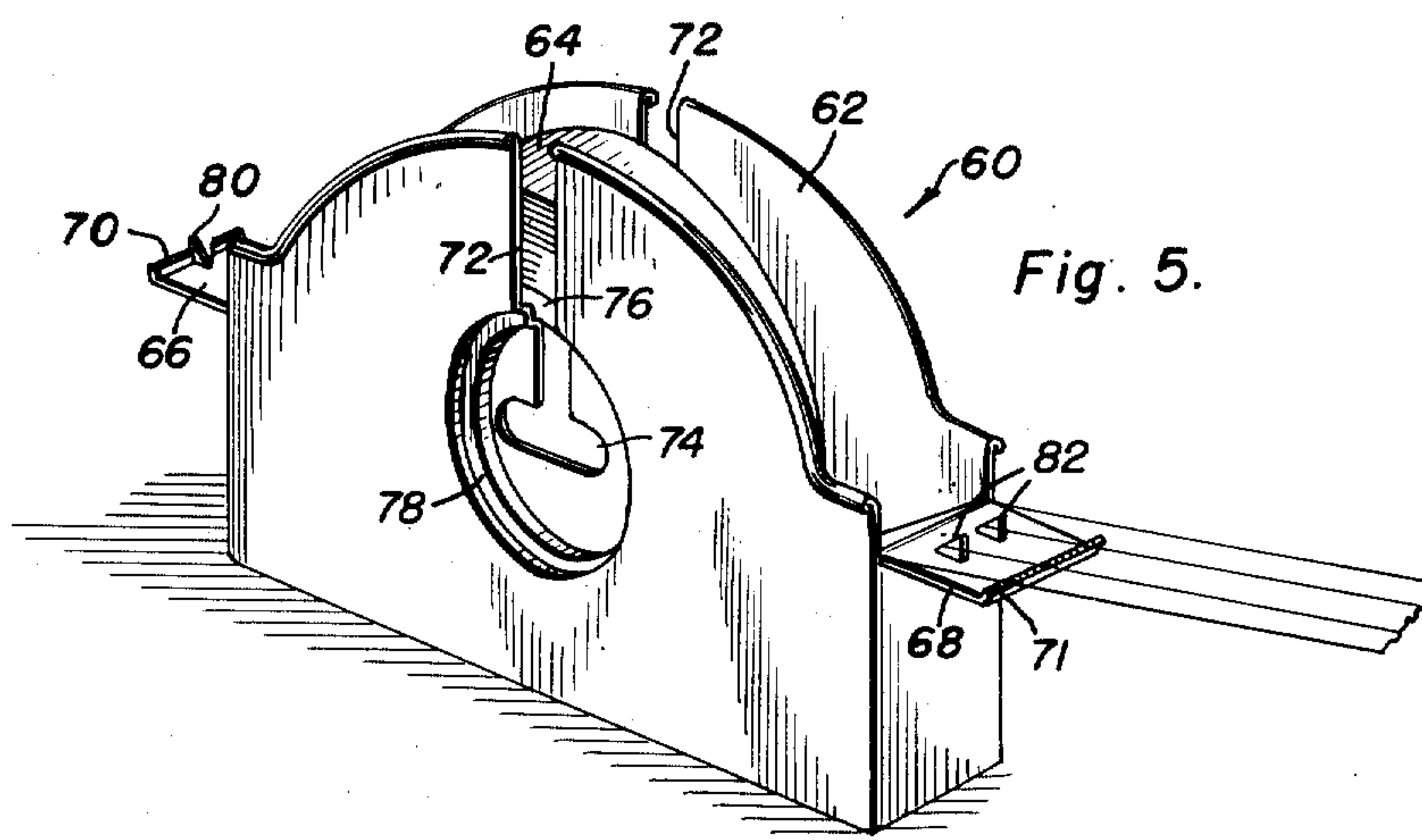
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2 Sheets-Sheet 2



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TAPE DISPENSER

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2 Claims. (Cl. 164—36)

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This invention relates to new and useful improvements and structural refinements in dispensers for tape, such as for example, tape "with pressure-sensitive" adhesive of the so-called transparent or "Scotch" variety, or the like, and the principal object of the invention is to facilitate longitudinal separation of the tape into a plurality of strips of predetermined widths, while the tape is being drawn from its roll.

This object is achieved by the provision of the instant dispenser which includes a holder for a roll of tape and an extension on the holder provided with a prong or prongs with which the tape may be engaged and separated into strips while it is being drawn from the roll.

An important feature of the invention resides in the provision of means for separating the tape selectively into a predetermined number of strips of predetermined width, and dispensing the tape in its full width, without longitudinal separation.

An additional feature of the invention resides in the provision of means for expeditiously pre-setting the separating prongs so as to produce the required number of strips of the required width.

A still further feature of the invention lies in the provision of a tearing edge on the holder, whereby the separated strips may be simultaneously torn away from the tape in the roll.

An important advantage of the invention lies in its simplicity of construction, convenience in operation, and its adaptability to economical manufacture.

With the above more important objects and features in view and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a top plan view of the invention;

Figure 2 is a cross sectional view, taken substantially on the plane of the line 2—2 in Figure 1;

Figure 3 is a cross sectional view, taken substantially on the plane of the line 3—3 of Figure 2, and illustrating the separating prongs in their retracted position so as to facilitate drawing of the tape from the roll without separating the same into strips;

Figure 4 is a cross sectional view, similar to that shown in Figure 3, but illustrating the prongs in position for separating the tape;

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Figure 5 is a perspective view of a modified embodiment of the invention;

Figure 6 is a side elevational view of the embodiment shown in Figure 5, and

Figure 7 is a cross sectional view, taken substantially on the plane of the line 7—7 in Figure 6.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, more particularly to Figures 1—4 inclusively, the invention consists of a tape dispenser designated generally by the reference character 10 and embodying in its construction an elongated body 12 constituting what may be referred to as a holder for a roll of tape 14 which is releasably and replaceably positioned in a suitable recess 16 with which the body 12 is provided.

To this end, the opposite side walls of the recess 16 in the body 12 may be formed with mutually opposed, downwardly extending slots 18 terminating in lateral bays 20 which, in turn, constitute seats for the end portions of a shaft or pin 22 by which the roll of tape 14 is carried.

One end portion of the body 12 constitutes what may be referred to as an upward extension 24 which terminates at the upper end thereof in a pair of spaced guides 26 defining therebetween a passage for the tape, indicated at 28 in Figures 2, 3 and 4.

The guides 26 are provided substantially at the level of the passage 28 with a pair of axially aligned openings or apertures 30, while the extension 24 itself is provided with a transverse bore 32 extending parallel to the axis of the openings 30, as will be clearly apparent.

A pair of rods 34, 36 are slidably positioned in the openings 30 and the inner, and the mutually opposed ends of the rods are provided with sharp, upwardly extending prongs 38, 40 respectively. The outer end portions of the rods 34, 36 are secured to suitable actuating knobs 42, 44 carrying respective shanks 46, 48. These two shanks are slidably receivable in the aforementioned bore 32, and the shank 48 is provided at the inner end thereof with a diametrically reduced extension or stem 50 which may abut the inner end of the shank 46 and thus limit the extent to which the two shanks may be brought together in the bore 32. Moreover, it is to be noted that the compression spring 52, provided on the stem 50, is interposed between the inner ends of the shanks 46, 48, the purpose of this spring being

to normally urge the shanks outwardly whereby, through the medium of the knobs 42, 44 and rods 34, 36 the prongs 38, 40 are urged into suitable recesses or receptacles 54 provided in the opposing surfaces of the aforementioned guides 26, as is best shown in Figure 4.

Finally, it is to be noted that an angle shaped member 56 is secured to the extension 24 adjacent the passage 28, this member terminating in a sharp tearing edge 58 which may, if desired, be provided with a row of sharp tearing teeth.

When the invention is placed in use, the roll of tape 14 is simply applied to the holder 12 as has already been described, the free end portion of the roll being passed over one edge 60 of the recess 16 and through the passage 28, assuming that the prongs 38, 40 are disposed in their recesses 46 by the action of the spring 52. Under such circumstances, the tape may be simply drawn from the roll in a conventional manner, the full width of the tape passing through the passage 28, as will be clearly apparent.

After the required amount of tape has been drawn from the dispenser, the required portion may be severed from the portion on the roll by bringing the tape in engagement with the tearing edge 58, in accordance with more-or-less conventional practice.

However, if it is desired to separate the tape longitudinally into two strips of equal width while it is being drawn from the roll, it is only necessary to depress the knob 42 so as to slide the associated shank 46 and the rod 34 inwardly in the extension 24, matters being so arranged that when the depressed knob 42 engages the adjacent of the guides 26, the prong 38 is disposed centrally in the passage 28. Thereupon, the tape may be drawn from the roll, and at the same time, engage with the centrally disposed prong 38 whereby the tape will be longitudinally separated by the prong into two strips of equal width.

When it is desired to separate the tape into two strips of unequal width, namely, a strip one-third as wide and a strip two-thirds as wide as the tape on the roll, the knob 44 is depressed so that it contacts the adjacent of the guides 26. The rod 36 is shorter than the rod 34, and matters are so arranged that upon full depression of the knob 44, the prong 40 will separate the passage 28 into two "lanes" one twice as wide as the other, so that the tape drawn from the roll will be separated accordingly.

When it is desired to separate the tape into three strips of equal width, it is only necessary to depress both knobs 42, 44 so that the knob 44 engages the adjacent guide 26 but the inner end of the shank 46 abuts the end of the stem 50 as indicated in Figure 4 and prevents the knob 42 from being depressed fully into engagement with the guide 26 adjacent thereto. Under such circumstances, the prongs 38, 40 will divide the passage 28 into three lanes of equal width, and as a result, the tape will be separated into three strips of equal width, as will be clearly apparent.

In any event, after the tape has been separated into strips of the required length, the several strips may be torn or severed from the portion of the tape on the roll by means of the tearing edge 58, as has already been explained. It is to be noted, however, that inasmuch as the tearing edge 58 is disposed exteriorly with respect to the passage 28, the several strips of tape may be severed simultaneously in one operation.

Referring now to the modified embodiment of

the invention illustrated in the accompanying Figures 5, 6 and 7, this embodiment is designated generally by the reference character 60 and is of a substantially simple construction consisting of an elongated holder 62 for a roll of tape 64, the end portions of the holder being provided with outwardly angulated extensions or brackets 66, 68 terminating in tearing edges 70, 71.

The sides of the holder 62 are formed with inwardly extending slots 72 terminating at their inner ends in transverse portions 74 constituting seats for a pin or shaft (not shown) by which the roll of tape 64 may be rotatably mounted in the holder.

Alternatively, if the roll 64 is carried by a spool such as is indicated at 76, this spool may be rotatably supported by means of concentric depressions or steps 78 with which the sides of the housing 62 are provided, as is best shown in Figure 7. It should, of course, be understood that the housing 62 is formed from bendable, resilient material, such as will permit the sides thereof to be spread apart in order to facilitate insertion and removal of the spool and roll of tape.

The extension 66 is provided with an upstanding prong 80, while two similar prongs 82 are provided on the extension 68. These prongs are preferably struck out from the respective extensions, and it is to be noted that the prong 80 is disposed centrally on the extension 66, separating the passage over this extension into two lanes of equal width. Similarly, the prongs 82 separate the passage over the extension 68 into three equal lanes.

When the invention is placed in use, the tape may be drawn from the roll 64 and may be selectively engaged with the prong 80 and with the prongs 82 so as to effect separation thereof into two or three strips of equal width, respectively, as will be clearly apparent. Moreover, tape may be dispensed without being separated, this being achieved by drawing the tape from the roll in such manner as not to engage any of the separating prongs 80, 82. The tape so drawn may be severed from the roll by the tearing edge 70, and since the prong 80 is disposed immediately adjacent this edge, only a small end portion of the tape remaining on the roll will be damaged by the prong while the severing operation is effected.

It is believed that the advantages and use of the invention will be clearly understood from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. In a tape dispenser, the combination of a holder adapted to rotatably receive a roll of tape and including an extension affording a passage for tape drawn from said roll and a pair of tape guides at the sides of said passage, said guides being provided with a pair of coaxial openings, said extension being provided with a bore parallel to the axis of said openings, a pair of shanks slidable in and projecting outwardly from opposite ends of said bore, a compression spring positioned in said bore between the inner ends of

said shanks for urging the latter outwardly, a pair of knobs secured to outer ends of the respective shanks, a pair of rods secured to the respective knobs and slidable through the respective openings in said guides, and a pair of upwardly projecting prongs provided at the inner ends of the respective rods and movable toward and away from each other against the resiliency of said spring, whereby to separate tape drawn from said roll through the passage into a plurality of strips of predetermined width.

2. The device as defined in claim 1 wherein inner surfaces of said guides are provided with recesses to fully receive said prongs when said shanks are pushed outwardly by said spring.

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