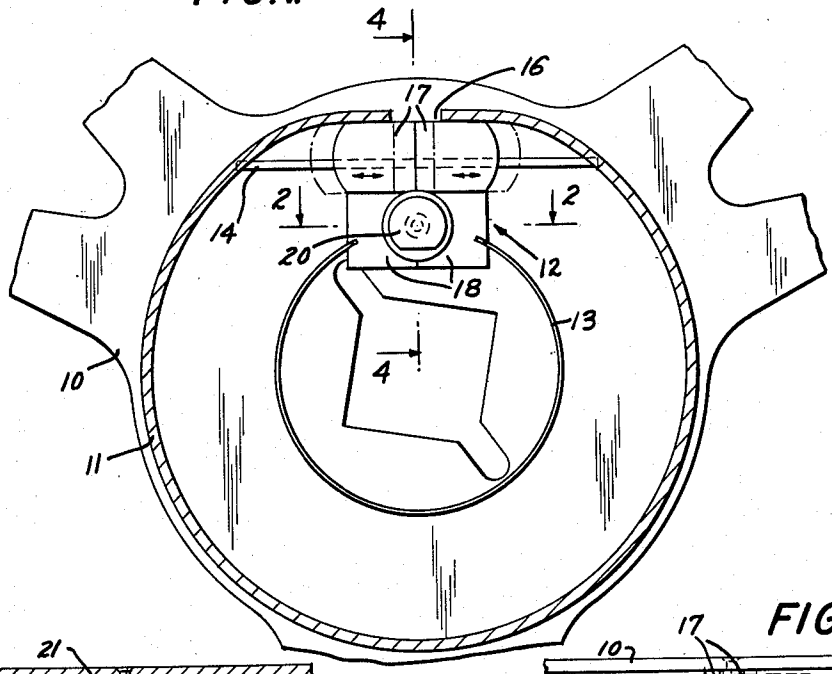
Dec. 25, 1956 J. N. LIEBMAN ET AL 2,775,413

REEL STRIP-END FASTENER

Filed April 25, 1955

FIG. 1.



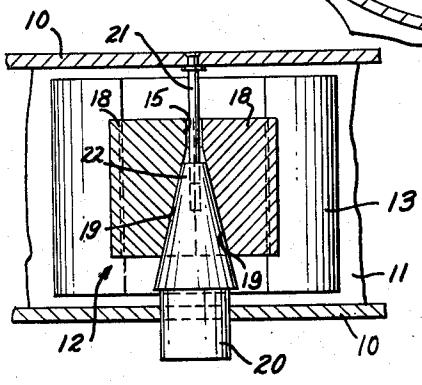
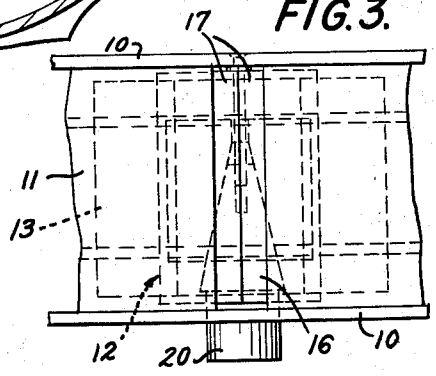


FIG. 2.

FIG. 3.



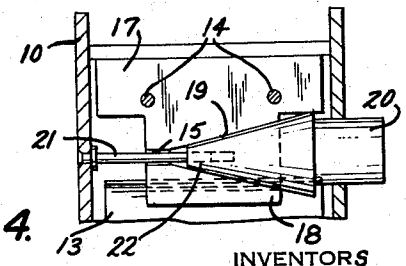


FIG. 4.

INVENTORS
JOSEPH N. LIEBMAN &
THOMAS NELSON RYON
BY
Lester Allenhofer
ATTORNEY

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REEL STRIP-END FASTENER

Joseph N. Liebman, North Miami Beach, and Thomas Nelson Ryon, Miami, Fla.

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3 Claims. (Cl. 242—74)

This invention relates to a reel strip-end fastener, and more particularly to a fastener for securing an end of a tape, film, ribbon, or like flexible strip to the hub or spool of a reel.

The principal object of the invention is to provide a strip-end fastener that will greatly facilitate the attachment and threading of a flexible strip on a reel.

Another object is to provide a fastener having a pair of jaws that can be easily closed or opened to grip the strip-end securely, or to release it.

A further object is to provide a fastening device in which separation movement of the jaws is controlled by a push-button.

Other objects of the invention are to provide a fastener that is easy to operate, of simple design, and inexpensive to manufacture.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a fragmentary vertical cross-section of the spool or hub of a reel embodying the fastening device;

Fig. 2 is a horizontal cross-section on the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of the reel of Fig. 1; and,

Fig. 4 is a vertical cross-section on the line 4—4 of Fig. 1.

The reel comprises a pair of spiders or side plates 10 between the centers of which a hollow hub or spool 11 is secured. The fastening device, with which this invention is primarily concerned, is housed within the hollow hub or spool, and the strip or tape, not shown, is wound about the outer surface of the hub.

The fastening device comprises a pair of jaws 12 that are normally urged into closed position, with the jaws in facial contact with each other, by a spring 13 the ends of which are attached to the jaws. The jaws are supported, and guided in their opening and closing movement, upon pins or rods 14 that pass through openings in the jaws and the ends of which are secured to the hub. A slot or opening 16 is formed in the hub to permit ingression of the strip-end between the jaws.

Each jaw comprises an upper and a lower portion 17 and 18. The upper portions 17 preferably extend across approximately the full width of the hub and constitute the portions between which the end of the strip is gripped in closed position of the jaws. The lower portions 18, to which the ends of the spring 13 are attached, preferably extend only part way through the width of the hub. The portions 18 of the jaws, as best seen in Fig. 2, have opposed oblique faces 19 that converge inwardly and that may terminate at their inner ends in parallel face portions 15.

A push-button having a knob or outer end 20 that projects from one face of the reel is mounted for to-and-fro sliding motion on a pin 21 fixed to the other face of the reel. The push-button has an inner tapered or conical

end portion 22 shaped to fit into the space, and to slide between, the opposed oblique faces 19 of the jaw portions 18.

On referring to the drawing, and particularly Figs. 2, 3, and 4, it will be seen that on pressing the push-button inwardly, its inner tapered end will operate to wedge the jaws apart, against action of the spring, and so permit of insertion or removal of the strip-end. On releasing the push-button, the spring acts automatically to close the jaws and to return the push-button to its initial position.

From the foregoing description, and on reference to the drawings, it will be seen that the fastening device is wholly enclosed within the hub, with no portion thereof extending over its outer surface. Consequently, the device not only makes it easy to attach or detach the strip, but also eliminates any likelihood of tearing or injuring the strip.

Various modifications in the details herein described and illustrated in the drawings may be made within the scope of the invention.

What we claim is:

1. In combination with a reel having a hub, a fastener for an end of a flexible strip to be wound about the hub, said fastener comprising a pair of jaws supported within the hub for movement toward and away from each other, a spring acting on the jaws to urge them normally together, and a push-button having a head portion projecting outward from one side of the reel and an inner portion that extends between the jaws and that upon pressing the push-button inward operates to wedge the jaws temporarily apart against resistance of the spring to permit of inserting an end of the flexible strip between the jaws or withdrawing it therefrom.

2. In combination with a reel having a hub, a fastener for an end of a flexible strip to be wound about the hub, said fastener comprising a pair of jaws supported within the hub for movement toward and away from each other, said jaws having inwardly converging opposed oblique face portions, a spring acting on the jaws to urge them normally together, and a push-button having a head portion projecting outward from one side of the reel and an inner tapered portion that extends between the opposed oblique facial portions of the jaws and that upon pressing the push-button inward operates to wedge the jaws temporarily apart against resistance of the spring to permit of inserting an end of the flexible strip between the jaws or withdrawing it therefrom.

3. In combination with a reel having a hub, a fastener for an end of a flexible strip to be wound about the hub, said fastener comprising a pair of jaws supported within the hub for movement toward and away from each other, said jaws having inwardly converging opposed oblique face portions, a spring acting on the jaws to urge them normally together, and a push-button having a head portion projecting outward from one side of the reel and an inner tapered portion that extends between the opposed oblique facial portions of the jaws and that upon pressing the push-button inward operates to wedge the jaws temporarily apart against resistance of the spring to permit of inserting an end of the flexible strip between the jaws or withdrawing it therefrom, and a pin extending inward from the opposite face of the reel and upon which the push-button is slidably mounted.

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