July 22, 1924. 1,502,340

W. L. E. KEUFFEL

TAPE REEL

Original Filed May 2, 1922

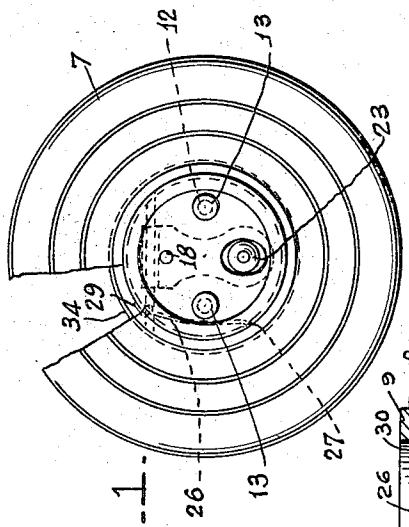


Fig. 1.

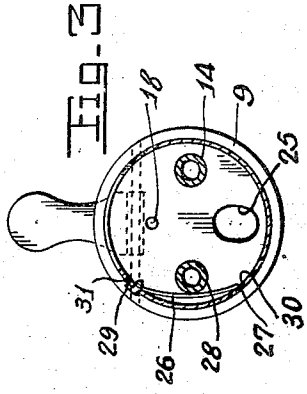


Fig. 3

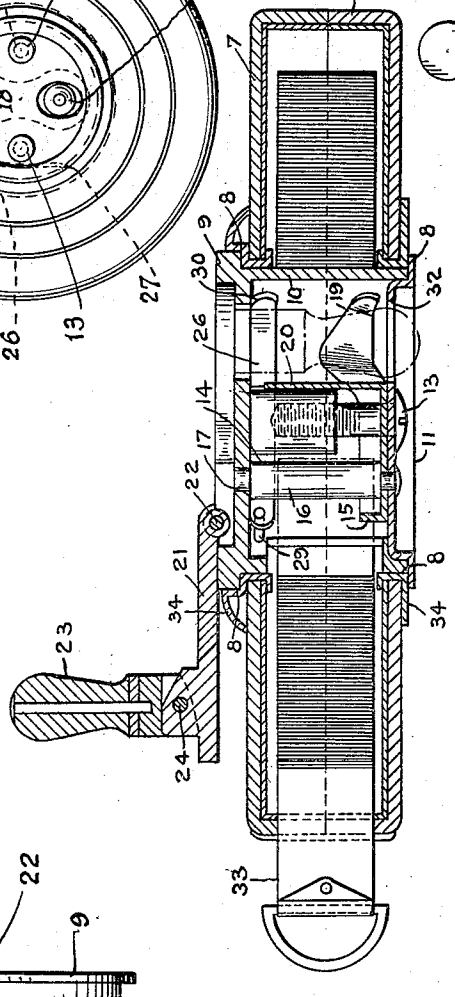


Fig. 4

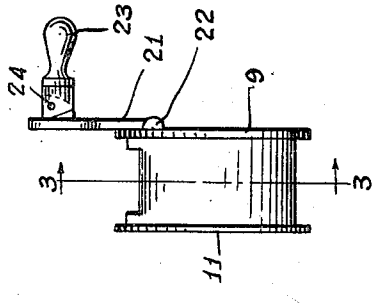


Fig. 2.

INVENTOR

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Patented July 22, 1924. 1,502,340

UNITED STATES PATENT OFFICE.

WILLIE L. E. KEUFFEL, OF WEEHAWKEN TOWNSHIP, HUDSON COUNTY, NEW JERSEY, ASSIGNOR TO KEUFFEL & ESSER COMPANY, OF HOBOKEN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

TAPE REEL.

Original application filed May 2, 1922, Serial No. 558,038. Divided and this application filed April 14, 1923. Serial No. 632,013.

To all whom it may concern:

Be it known that I, WILLIE L. E. KEUFFEL, a citizen of the United States, residing at 18 King Avenue, in the township of Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Tape Reels, of which the following is a specification.

My invention relates to cased tape reels, and its novelty consists in the adaptation and construction of the parts, as will be more fully hereinafter pointed out.

This is a divisional case being divided out from my application Serial No. 558,038, filed May 2, 1922, as requested by the Commissioner of Patents.

The tapes in tape reels have a tendency to snap back, as they are usually metal tapes and are coiled around a drum, which puts the tape under a spring tension so that it naturally draws back on the end of the tape which has been pulled out, as the coiled tape is released upon releasing the tape drum handle. This construction therefore requires the operator to hold onto the end of the tape or onto the tape drum handle.

My device is adapted to overcome this difficulty by furnishing an even tension in the winding or unwinding of the drum, thereby enabling the operator to handle the device without holding onto the tape or handle, as the tape will not automatically be drawn back into the casing.

Referring to the drawings, Figure 1 is a bottom plan view of my device with a portion of the case broken away, in order to show the interior construction of the reel; Fig. 2 is a vertical side view of the reel member showing the crank and handle in the open position; Fig. 3 is a vertical section on the line 3—3 of Fig. 2, and Fig. 4 is a vertical section of my device as it lies in the horizontal position, showing the complete internal construction.

In the drawings 7 is a casing usually made of thin steel covered with leather which has bushings 34 in central openings in the top and bottom thereof forming bearings 8. A reel having an upper plate 9 and a drum 10 integral therewith is adapted to be mounted in said bearings 8, and a bottom plate 11 having holes 12 is adapted to be secured by means of screws 13 through said holes 12 to two internally threaded posts 14 and 28 which are rigidly secured to the inside of the plate 9. A retaining spring 15 is rigidly secured to the bottom plate 11 by means of a post 16, and the post 16 has a cut-down portion 17 at its upper end adapted to engage a hole 18 in the upper plate 9, so as to form the third post between the upper plate 9 and the lower plate 11 together with the two posts 14 and 28. The spring 15 has two spring gripping jaws 19 and an upturned guide member 20, all of which are integral with said spring 15. A crank 21 in hinged to the plate 9 in the usual well-known manner at 22, and a handle 23 is hinged to the crank 21 at 24. The upper plate 9 has an opening 25 through which the handle 23 is adapted to pass when the crank 21 is in the closed position, and the handle 23 also is adapted to press open the spring gripping jaws 19 sufficiently to allow the handle 23 to pass through, thereby gripping the handle in the small portion of the same and holding it against accidental dislodgement therefrom, and the guide member 20 acts as a guide for the handle 23 when the crank 21 is being closed. When the crank 21 is in the closed position and the handle 23 is retained by the spring gripping jaws 19, the handle 23 as it projects through the lower plate 11 and through an opening 32 in the plate 11, may be readily pushed through the spring gripping jaws 19 until the larger part of the handle 23 passes through, whereupon the spring gripping jaws 19 snapping together throw the handle 23 outwardly together with the crank 21, thereby effecting a strong knockout for the handle 23 and the crank 21. A spring 26 having a downturned portion 27 at one end and a small shoe 29 rigidly secured to the other end is adapted to be mounted under spring tension between the post 28 and the inside of the drum 10, so that the downturned portion 27 will engage a small aperture 30 in the drum 10, and the shoe 29 will pass through an opening 31 in the drum 10 so that the shoe 29 is always under spring tension pressing 29 outwardly through the opening 21. As the reel is placed complete in the casing 7, the shoe 29 under constant pressure of the spring 26 contacts with the bearings 8 sufficiently to act merely as a

retarder in either direction that the reel may be turned, and a tape 33 is mounted in said reel.

I claim:

1. In a tape reel the combination with a tape case of a top and bottom plate, a tape drum rigidily secured to said plates between the same, suitable bearings in said case adapted to receive said plates for rotation, and means for retarding the rotation of said tape drum consisting of a shoe mounted under constant spring pressure in said drum and adapted to contact with one of said bearings.

2. In a tape reel the combination with a tape case of a top and bottom plate, a tape drum rigidly secured to said plates between the same, suitable bearings in said case adapted to receive said plates for rotation, means for retarding the rotation of said tape drum, a crank hinged to said top plate, a handle hinged to said crank, suitable openings for said handle in said plates, and a spring rigidly secured to said bottom plate having a pair of gripping jaws adapted to engage and retain said handle and to also snap it out when the handle is pressed out of engagement therewith.

3. In a tape reel the combination with a tape case of a top and bottom plate, a tape drum rigidly secured to said plates between the same, suitable bearings in said case adapted to receive said plates for rotation, means for retarding the rotation of said tape drum consisting of a shoe mounted under constant spring pressure in said drum and adapted to contact with one of said bearings, a crank hinged to said top plate, a handle hinged to said crank, suitable openings for said handle in said plates, and a spring rigidly secured to said bottom plate having a pair of gripping jaws adapted to engage and retain said handle and to also snap it out when the handle is pressed out of engagement therewith.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIE L. E. KEUFFEL.

Witnesses:

B. B. VAN SICKLE,

A. F. MENZER.