

Nov. 5, 1940.

L. R. WILSON

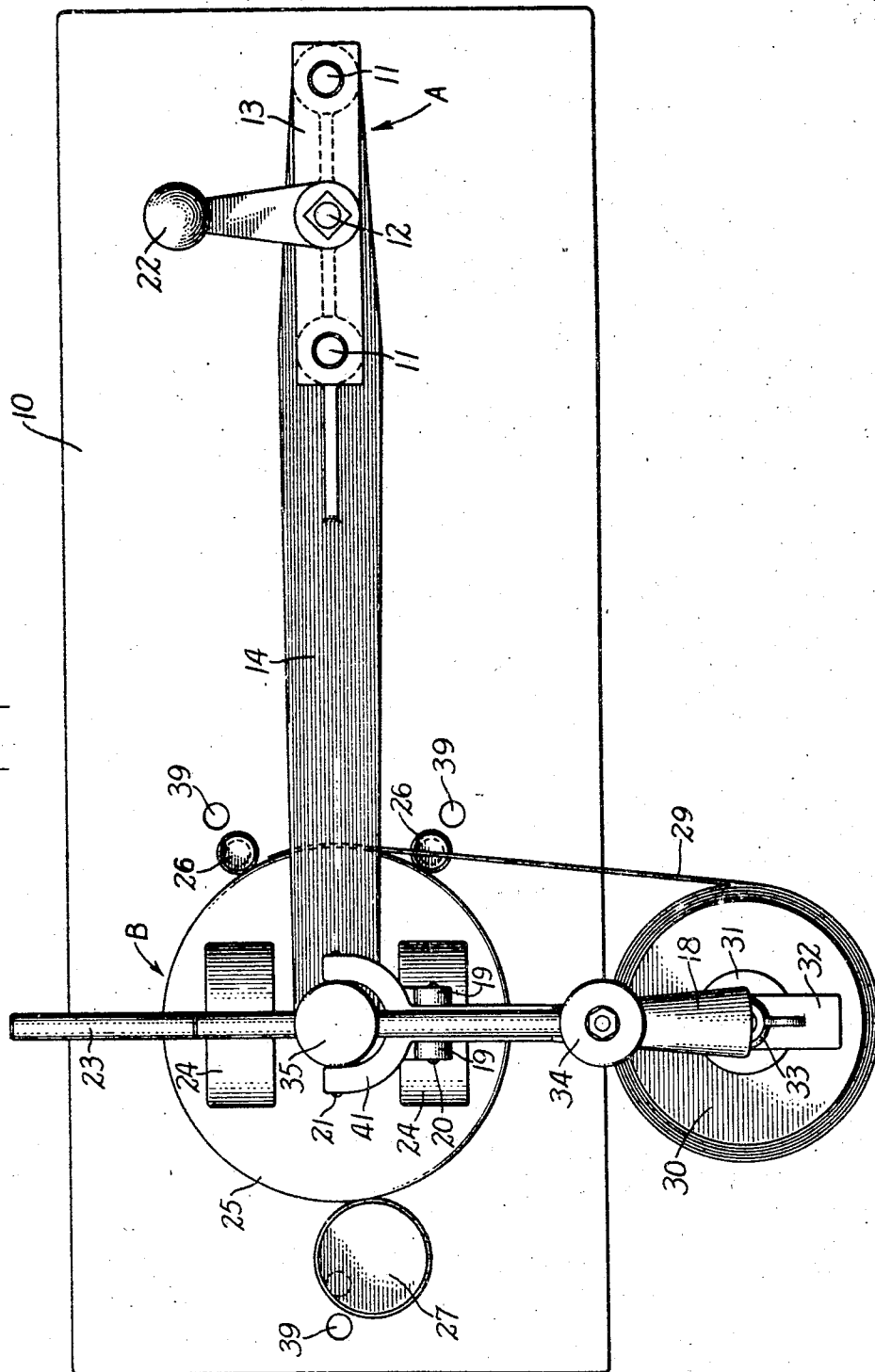
2,220,381

PACKAGING MECHANISM

Filed March 14, 1940

3 Sheets-Sheet 1

Fig. 1.



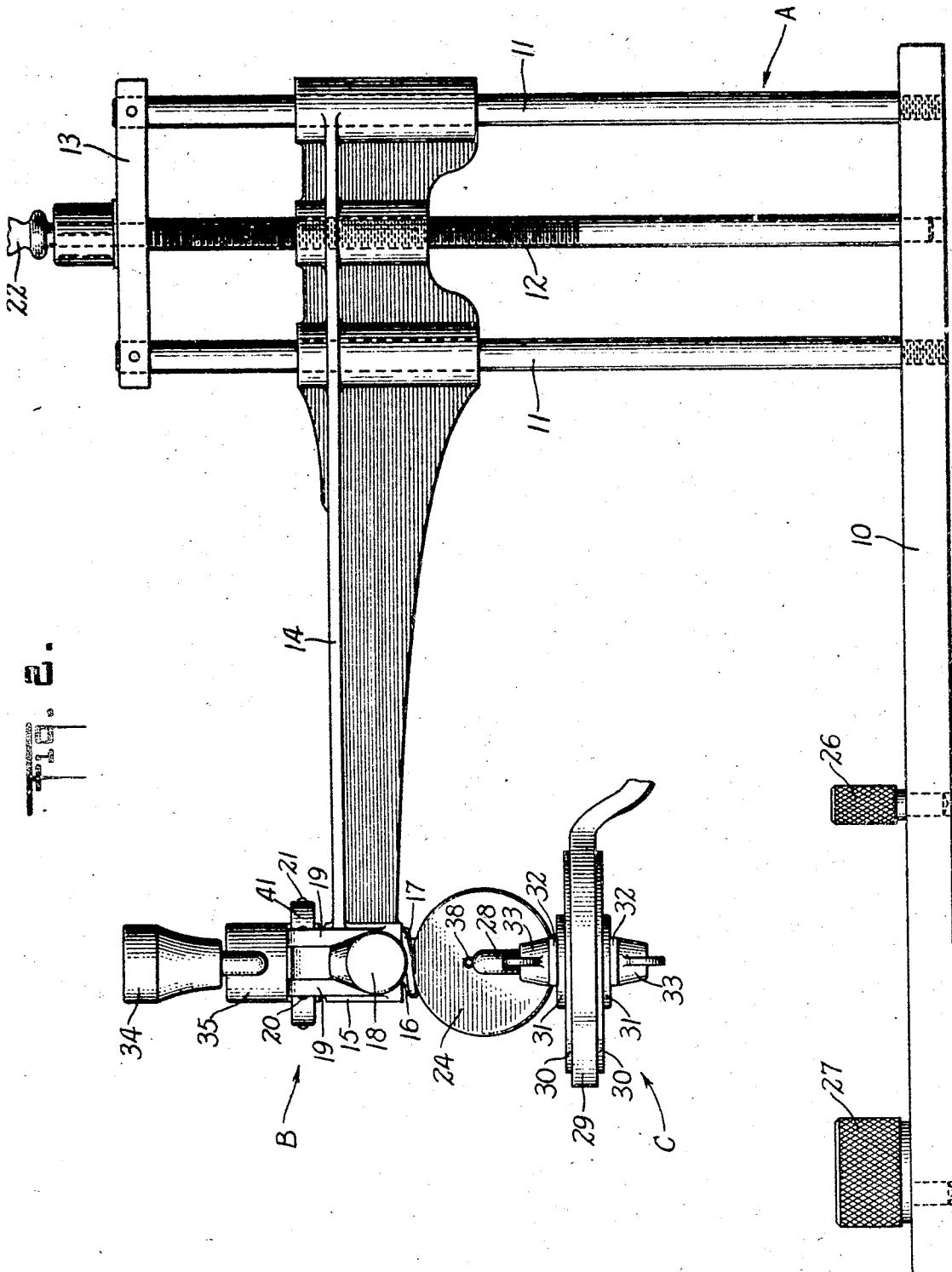
INVENTOR
Leon R. Wilson
BY
Maréchal + Noe
ATTORNEYS

Nov. 5, 1940.

L. R. WILSON
PACKAGING MECHANISM
Filed March 14, 1940

2,220,381

3 Sheets-Sheet 2



INVENTOR
Leon R. Wilson
BY
Marichal & Noe
ATTORNEYS

Nov. 5, 1940.

L. R. WILSON

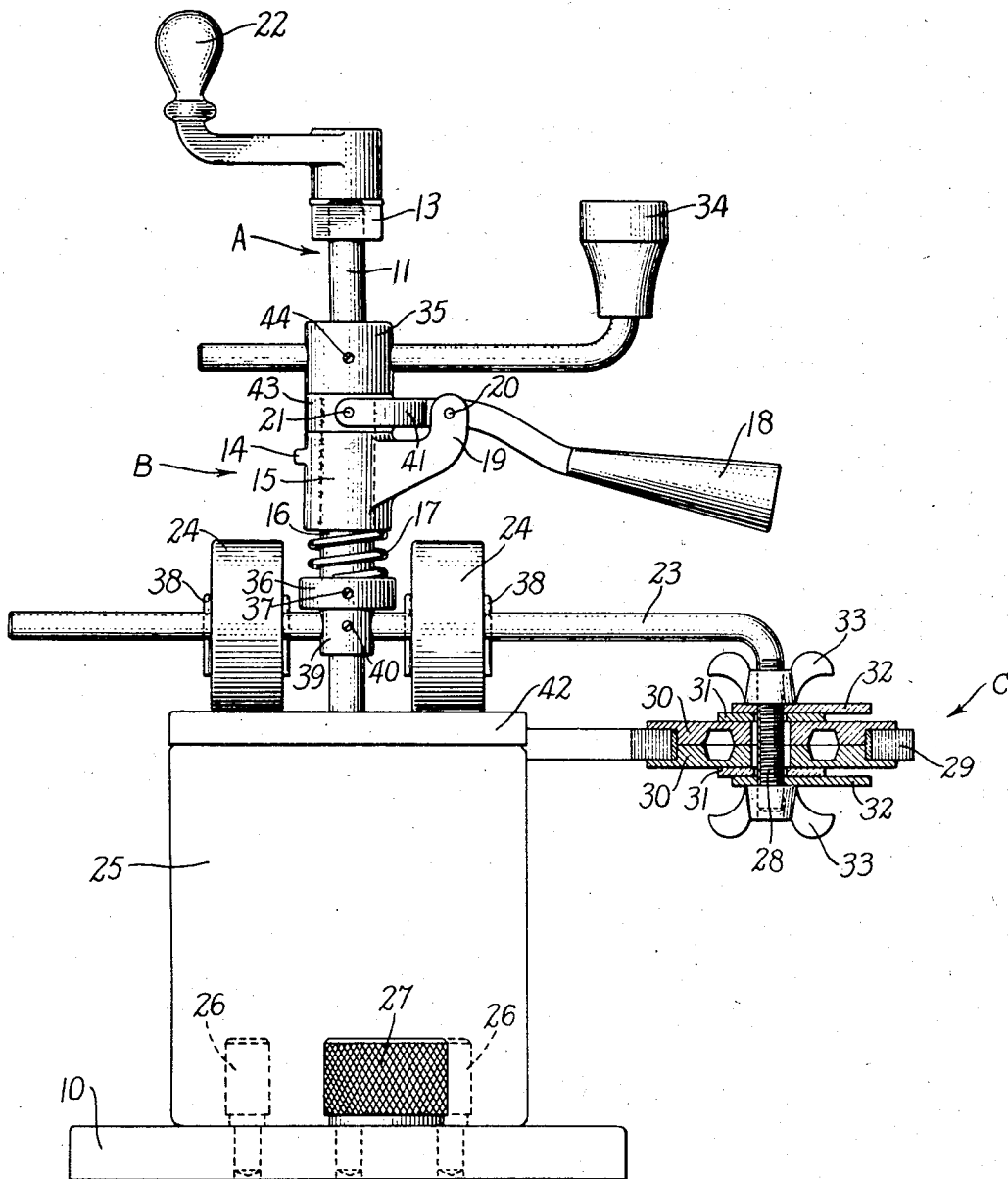
2,220,381

PACKAGING MECHANISM

Filed March 14, 1940

3 Sheets-Sheet 3

Fig. 3.



INVENTOR
Leon R. Wilson
BY
Marichal & Noe
ATTORNEYS

UNITED STATES PATENT OFFICE

2,220,381

PACKAGING MECHANISM

Leon R. Wilson, Needham, Mass., assignor to General Printing Ink Corporation, New York, N. Y., a corporation of Delaware

Application March 14, 1940, Serial No. 323,965

2 Claims. (Cl. 216—20)

This invention relates to a device and method for applying adhesive tape to containers. It has to do, more particularly, with a device for applying non-drying adhesive tape to seal the covers of relatively small cylindrical, rectangular or other shaped containers having a flat base, and in which the cover slips down over the body portion of the can or package. It is especially useful in sealing cylindrical ink containers to prevent ink oozing out beneath the slip covers upon handling and storage.

Heretofore, sealing of containers of this type has usually been done by hand, which operation was awkward and time consuming, the sticky tape being difficult to handle and to secure evenly and tightly around the edge of the cover.

One of the objects of my invention is to provide a simple, convenient device for applying sealing tape to cans or other packages of the slip cover type.

Another object is to provide a device of the type indicated which may be quickly and easily adjusted for applying tape to containers of different dimensions.

A further object is to provide a device which will allow the incorporation of commercial spools of adhesive tape of the variety commonly known as "Scotch tape" in the tape feeding mechanism of the device.

A still further object is to provide a tape applying device in which the tape applicator is moved around the stationary container, and in which the tape is maintained at a predetermined tension.

A still further object is to provide a seal which is easily removed when the contents of the package is to be used.

Other objects will be apparent from the following description and claims and the accompanying drawings.

Figure 1 is a plan view showing the horizontal relations of the parts of my invention.

Figure 2 is a side elevation of my device showing the supporting assembly and certain details of the container retaining and tape applying means.

Figure 3 is an end elevation showing in greater detail the means for holding the container in place, for adjusting the device for containers of different dimensions, and the tape holding and applying means.

With the reference to the drawings, like characters denote similar parts throughout the various figures.

In the drawings, 10 designates a base to which

is affixed a frame designated generally at A, comprising supporting standards 11, adjusting screw 12 and top yoke 13. One end of arm 14 is slidably mounted upon supports 11 and co-operatively threaded with screw 12, while the other end terminates in collar 15 through which passes shaft 16. Below collar 15 and encircling shaft 16 is a spring 17, compressed between collars 15 and 36. Hand lever 18 pivotally secured by pin 20 to lugs 19 of collar 15 forming a fulcrum at 20, terminates in yoke 41 which is pivotally mounted on collar 43 by the arms of yoke 41, and secured by pins 21.

Spring 17 rests on fixed abutment collar 36 secured to the end of the shaft 16 by set screw 37.

Above frame member A is handle 22, locked onto the upper extremity of adjusting screw 12. Upon turning, handle 22 raises or lowers arm 14, and the entire sealing assembly B—C attached thereto, to accommodate for varying heights of containers to be sealed.

Mounted near the lower extremity of shaft 16 and piercing the shaft at right angles is a swinging rod 23, one end of which is bent downwardly and carries the tape holding mechanism designated generally at C.

Rod 23 is secured to the end 39 of shaft 16 and is held in place by set screw 40.

The intermediate portion of rod 23 carries two wheels 24, 24, axially mounted thereon and adapted for free rotation around rod 23 as well as for circumferential travel around the top of container 25, and fixed in place by cotter pins 38. Container 25 is secured in the desired position by knurled lock nuts 26, 27, inserted in holes in base 10, and at least one of which 27 is eccentrically mounted for rotation for locking the container in place on the base.

Additional holes 39 may be bored in base 10 to allow the insertion of nuts 26, 27 in varying positions depending on the dimensions of the package to be sealed.

The various members of the tape holding mechanism C are mounted on the threaded downwardly disposed end member 28 of swinging rod 23. The spool of tape 29 is held firmly between two recessed discs 30, 30, which in turn are held by two washers 31, 31, two lever lock washers 32, 32, and two wing nuts 33, 33. The end member 28 of rod 23 is threaded to allow the spool to be set at the proper height for alignment with the head of the container and the bottom edge of the cover.

Crank 34 is adjustably mounted in enlarged head 35 of shaft 16, and held in position by set

screw 44, and serves to turn the entire assembly B—C in the application of tape 29.

In operation, container 25, on which cover 42 has been secured, is placed on base 10, centered in alignment with shaft 16 and locked in position by knurled lock nuts 26 and 27. By turning hand wheel 22 the assembly B—C is lowered until rollers 24 rest on the top of cover 42. The rollers 24 are firmly held against cover 42 by the action of spring 17 acting against collar 36 exerting a predetermined resilient pressure through shaft 23 on rollers 24, and insuring complete closure and seating of the lid before sealing. Threaded portion 28 of arm 23 provides means for raising and lowering the assembly C to effect the desired alignment. The free end of adhesive tape 29 is affixed by gentle pressure to the line of closure of can and cover, with part of the tape extending over the cover above, and the can below, the point of closure. The tape feed is brought to proper desired tension by adjustment of wing nuts 33 and lever lock washer 32. Then hand wheel 34 is rotated one or more revolutions by which tape 29 is wrapped tightly and evenly about the perimeter of the can, sealing the closure, the tension furnishing the necessary pressure to cause the non-drying adhesive tape to adhere firmly to can and cover.

Eccentric lock nut 27 is set opposite to the direction of rotation of the tape so that rotation of the mechanism holds the container firmly in place.

After sealing has been effected by suitable overlapping of the tape, the tape is severed, the can 25 released by lowering hand lever 18, and if another can of the same size is to be sealed it can be inserted without changing the primary adjustment of arm 14.

If a different sized container is to be sealed appropriate adjustments can be made by again raising or lowering arm 14 and by moving pins 26, 27 to other holes 39.

While the method herein described and the form of apparatus for carrying it out constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to this precise method and form of apparatus and changes may be made in either without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. Apparatus of the character described for applying tape to articles of the type indicated, comprising a base adapted to retain a container to be sealed, a tape applying means carried by said base and positioned in cooperative relation to the container, said means provided with rotatable tape holding means, adjustable container retaining means comprising a pair of rollers mounted so that they may be resiliently urged against the top of the container, and to move in a circular path around the top of the container, synchronously with the rotation of the tape applying means.

2. Apparatus of the character described for applying adhesive tape to cylindrical ink cans of the type provided with slip covers, comprising a tape applying means positioned in cooperative relation to the can and equipped with rotatable tape holding means, and means for controlling the tension exerted on the tape during application; adjustable article retaining means comprising a pair of rollers for positioning to be urged against the top of said can and resilient means for urging the rollers against said can and to move in a circular path around the top thereof means for moving said rollers and to thereby actuate the tape applying means to traverse the perimeter of the can and surround and seal the cover of said can with adhesive tape under the controlled applying pressure.

LEON R. WILSON.