

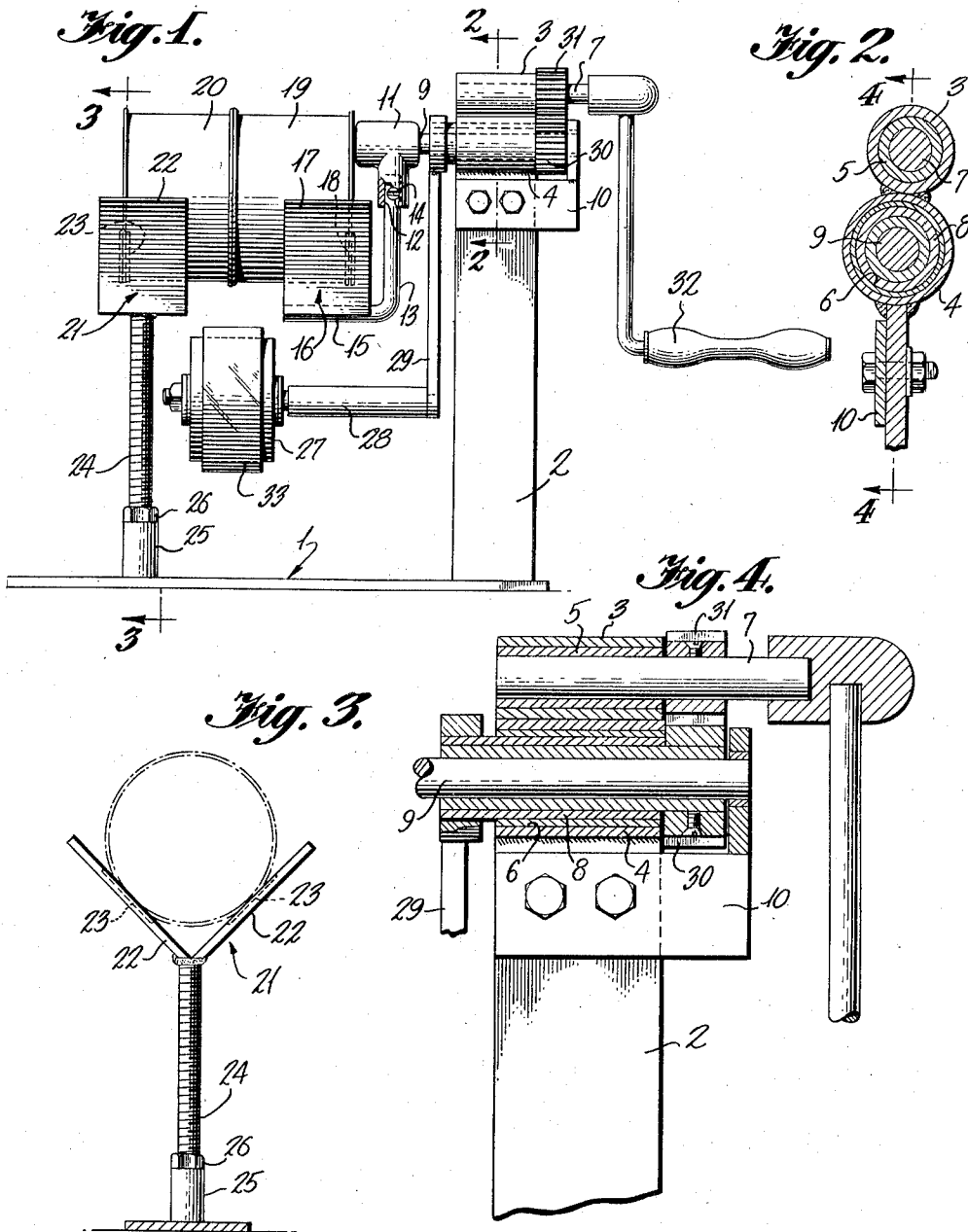
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TAPE APPLYING DEVICE

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TAPE APPLYING DEVICE

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This invention relates to devices for applying an adhesive tape, and more particularly to such devices for applying such tape peripherally of articles which are to be joined together.

There are times in the merchandising of packaged goods that it is desirable to sell two packaged units simultaneously. This may be true when the packer is making a special offer, or in the introduction of a new product, or when two commodities are usually used together. By joining the two packages, it is only necessary for the retail salesman to handle them as single items. The two will be unitary and thus cannot become separated, saving the customer the trouble of locating the items separately.

It is an object of the present invention to provide a device for applying tape peripherally of articles, wherein the article or articles to be taped will be held in proper position and the tape-applying mechanism may be moved around it.

Another object is the provision of such a device which is adjustable to permit its use with articles of different sizes.

A further object is to provide a device of this nature which will be of extremely simple design yet rugged in construction, inexpensive to manufacture and proficient in operation.

Other objects of the invention will become apparent from the following description of one practical embodiment thereof, when taken in conjunction with the drawings which accompany, and form part of, this specification.

In the drawings:

Figure 1 is a side elevational view of a tape-applying device constructed in accordance with the principles of the present invention.

Figure 2 is a fragmentary vertical section taken on the line 2—2 of Figure 1;

Figure 3 is a vertical section, showing in elevation one of the adjustable article-supporting members; and

Figure 4 is a longitudinal, vertical section taken on the line 4—4 of Figure 2.

In general, the invention consists of a tape-applying device which has means for supporting the article, or articles, to be taped, and means to cause a tape roll-supporting arm to rotate about the supported article to apply tape peripherally thereto. The supports are adjustable to accommodate cans of different diameters.

Referring to the drawings in detail, the device is shown as constructed upon a base 1. The base may have sufficient area to make the device self supporting, or it may be made relatively small and screwed or bolted to a table, bench or other support. Rising from the base, near one end, is a standard 2 which supports the moving parts of the device. At the top of the standard there are two lengths of tubing 3 and 4, arranged in superimposed relation with their axes horizontal and parallel, welded or brazed to each other and the lower one welded to the standard. The upper tubing length 3 carries a bushing 5 and the lower a bushing 6. A shaft 7 is jour-

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nalled in the upper bushing 5 and a hollow shaft 8 in the lower bushing 6.

A shaft 9 passes through the hollow shaft 8 and has one end fixed in a bracket 10 bolted, or otherwise secured, to the standard 2. Shaft 9 extends an appreciable distance beyond the opposite end of the hollow shaft and carries a T-shaped fitting 11. The fitting is bored to fit over the shaft 9 and can be fixed to the shaft in any convenient manner. The depending portion of the fitting is bored, as at 12, at right angles to the first mentioned bore to form a socket to receive the end of an article-supporting arm 13. The arm fits within the socket and can be held in desired positions of vertical adjustment by means of a set screw 14. The arm is bent at right angles to provide a horizontally extending portion 15 which carries the support proper 16. This comprises a pair of angularly related plates 17 fixed to the horizontal portion of arm 13. The plates are arranged symmetrically with respect to a vertical plane passing through portion 15 of arm 13 at approximately 90° to one another. In the embodiment shown, each is grooved, as at 18, to receive the flanged end of a can 19 to prevent endwise movement of the can when resting in the V-support formed by the plates.

The device is shown set up to secure two cans together by passing adhesive tape, such as cellophane tape, about the peripheral end surfaces of the cans when their ends are in abutting relation. One of the cans will be held in the support 16, as described, with its end projecting beyond the support. Another can 20 will be similarly held in a support 21, spaced longitudinally of the device from the support 16. Support 21 is composed of plates 22 arranged similarly to the plates 17 of support 16. Plates 22 also have grooves 23 to receive the end flange or bead of the can 20. The support 21 is mounted upon a vertical, threaded stud 24, which is threaded into a boss 25, formed on the base. A lock nut 26 serves to hold the support in positions of vertical adjustment.

When cans are placed upon the supports, their ends will abut intermediate the two supports. The space between the supports is sufficient to permit the application of tape to the adjacent surfaces of the cans. To do this, a tape spool-holder 27 is rotatably mounted upon a horizontally positioned spindle 28. The spindle forms part of a rotatable arm 29, fixed at one end upon the hollow shaft 8 to rotate with the shaft. The opposite end of shaft 8 carries a spur gear 30 which is in mesh with a gear 31 fixed to shaft 7. A crank 32 is also carried by shaft 7, by which the shaft may be rotated.

When cans are placed in abutting relation on the supports 16 and 21, their end beads will rest in the grooves in the respective supports, holding the cans against end movement. A spool of tape 33 is placed on holder 27 and the end of the tape drawn off and adhered to the cans. It will be noted that the spool holder position is centered with the vertical plane of abutment of the cans so that the tape will bridge the line of abutment and the tape will cover equal areas on the two cans. Rotation of the crank will cause arm 29 to rotate carrying the spool around the cans. One revolution of the crank will cause one layer of tape to be applied completely around the cans. The tape can be severed in any appropriate manner.

It has been mentioned that both supports 16 and 21 can be adjusted vertically to permit use of different diameter cans. The V-shaped arrangement of the support plates makes them self-centering, and cans of different diameters will find seats in the V. Cans of considerably larger diameter than those shown in the drawings can be taped with the device without adjustment of the supports. Due to the fact that larger diameter cans will seat higher in the V-shaped supports, the supports can

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be lowered if desired. The device will permit simple, rapid and effective taping together of cans or other containers or articles.

While in the above one practical embodiment of the invention has been disclosed, it will be understood that the precise details of structure shown and described are merely by way of example and the invention may take other forms within the scope of the appended claims.

What is claimed is:

1. A device for applying tape around adjacent edge portions of articles in abutting relation comprising, a base, a pair of horizontally spaced article holding means supported above said base, said article-holding means being V-shaped to form article-receiving and locating troughs, said troughs having means to prevent endwise movement of articles seated therein, said troughs being spaced apart a distance sufficient to hold articles seated therein in end abutting relation with the plane of abutment intermediate the article holding means, and means to receive a tape roll mounted for rotation in a vertical plane intermediate the article holding means to move the tape roll in an orbit about articles seated in the article holding means.

2. A device for applying tape around adjacent edge portions of articles in abutting relation comprising, a base, a standard rising from said base, a hollow horizontal

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shaft journaled in the standard, a shaft fixed to the standard and extending through the hollow shaft to project beyond the end of the hollow shaft, an article holding V-shaped trough suspended from the projecting end of the fixed shaft, an upwardly projecting boss on the base, a second article holding V-shaped trough mounted on the boss in spaced horizontal relation to the first-mentioned trough, both said troughs having means to prevent endwise movement of articles seated therein, a crank arm mounted on the hollow shaft and having a portion extending across the space between the article holding troughs to support a tape roll, and means to rotate said hollow shaft to carry the tape roll about the abutting ends of articles supported in the troughs.

3. In a device for applying tape around adjacent edge portions of articles in abutting relation as claimed in claim 2, the suspension for the first-mentioned trough and the support for the second-mentioned trough each being adjustable to move their respective troughs vertically.

References Cited in the file of this patent

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