Nov. 8, 1955 H. C. SIMMONS 2,723,087

APPARATUS FOR WINDING SLICING BANDS

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FIG. 1

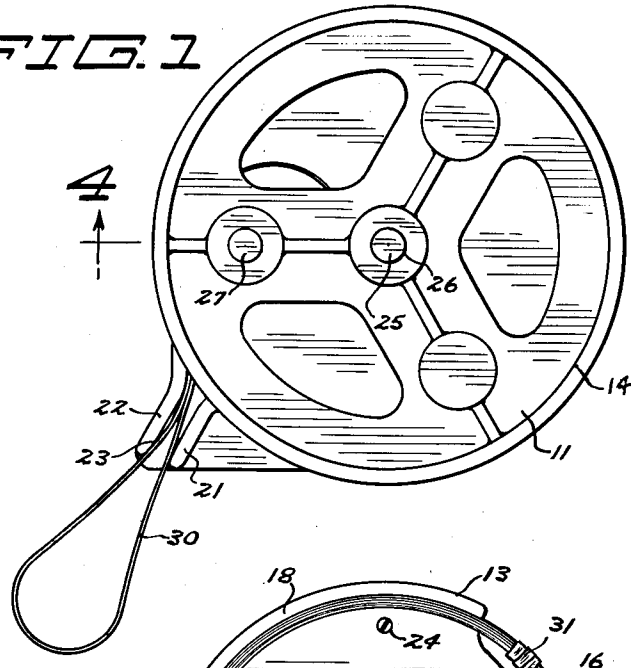
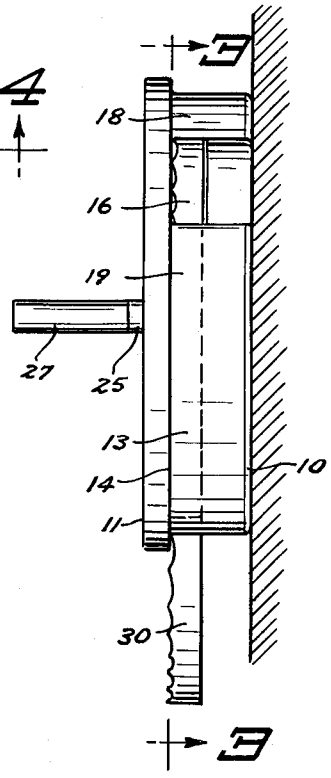


FIG. 2



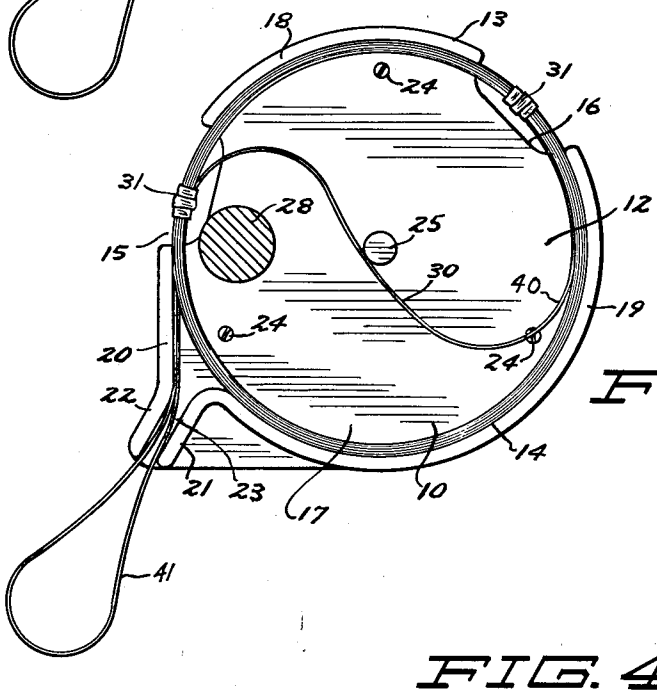
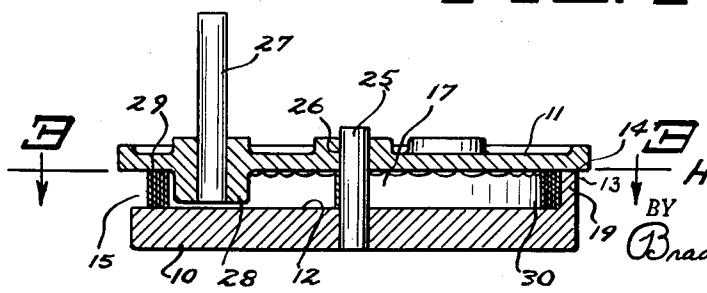


FIG. 3

FIG. 4



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FIG. 5

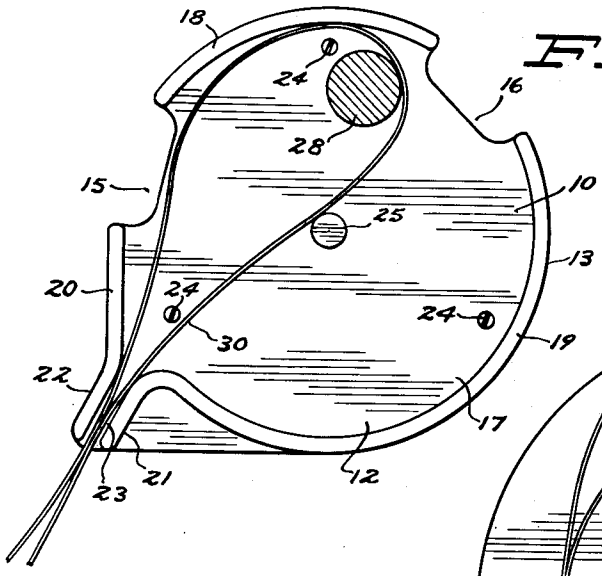


FIG. 6

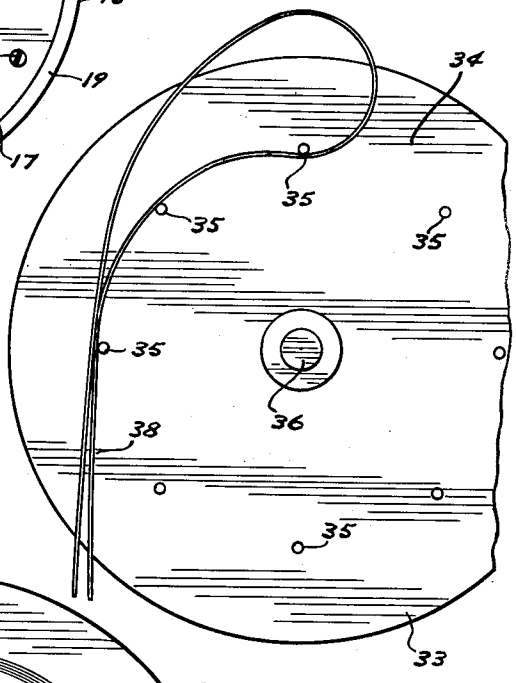


FIG. 8

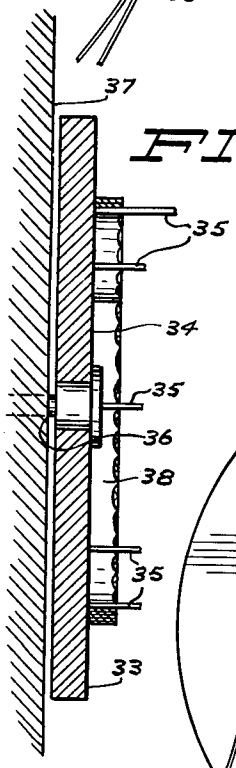
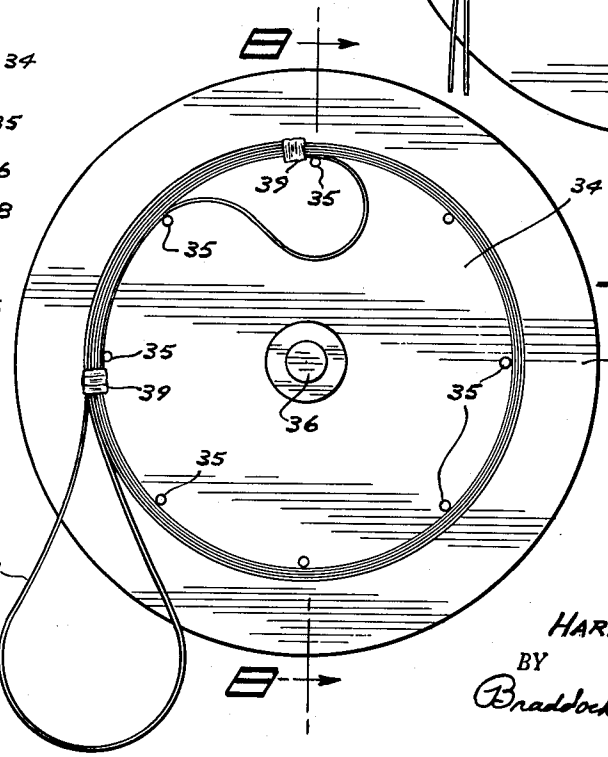


FIG. 7



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APPARATUS FOR WINDING SLICING BANDS

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Application April 2, 1953, Serial No. 346,344

1 Claim. (Cl. 242—84.8)

The invention herein has relation to a novel and improved method of and a new and improved apparatus for winding into compact form, for ready, safe and economic handling and shipment, cutting bands of the type employed for slicing bread.

In the accompanying drawings forming a part of this specification,

Fig. 1 is a top plan view of an apparatus for winding slicing bands made according to the invention;

Fig. 2 is a side elevational view of the apparatus as it would appear from the right in Fig. 1;

Fig. 3 is a detail sectional view, taken on line 3—3 in Fig. 2; or as on line 3—3 in Fig. 4; showing a slicing band as when wound and bound;

Fig. 4 is a detail sectional view, taken on line 4—4 in Fig. 1;

Fig. 5 is a view corresponding generally with the disclosure of Fig. 3, showing a fragment of a slicing band as when being wound during commencement of the winding operation;

Fig. 6 is a plan view of an apparatus of modified construction for winding slicing bands incorporating features and characteristics of the invention, disclosing a fragment of a slicing band at the commencement of the winding operation;

Fig. 7 is a view corresponding generally with the disclosure of Fig. 6, showing a slicing band as when wound and bound; and

Fig. 8 is a detail sectional view, taken on line 8—8 in Fig. 7.

Referring to Figs. 1 to 5 of the drawings and the numerals of reference thereon, an apparatus there shown for practicing the method of the invention is constituted as a pair of separate entities one of which is a stationary base member **10** and the other of which is a rotatable actuator member **11**.

The stationary base member **10** includes a body of rigid material having a flat forward surface **12** thereof peripherally bounded by a forwardly projecting, substantially circular element **13** which is integral with said body. The forward edge **14** of the circular element **13** is in a plane parallel with the flat forward surface **12**, and spaced marginal portions of the body and circumferentially spaced portions of said circular element are cut away, as denoted at **15** and **16**, respectively. Together, the flat forward surface **12** and the circular element **13** provide or define a circular concavity **17** bounded at the bottom thereof by the flat forward surface **12** and at the side thereof by said circular element.

In the disclosure as made, the forwardly projecting, substantially circular element **13** is, in fact, constituted as three separate forwardly projecting walls, a first one of which, represented **18**, is of arc-shape and is situated between the cutaway portions **15** and **16**, a second one of which, denoted **19**, is of arc-shape and is situated adjacent and to the right of the cutaway portion **16** in Figs. 3 and 5, and a third one of which, denoted **20**, is more or less straight and is situated adjacent and to the left

of the cutaway portion **15** in said Figs. 3 and 5, between the last mentioned cutaway portion and said second wall **19**.

The second wall **19**, of arc-shape, merges in a radially extending wall **21** which is in perpendicular relation to the flat forward surface **12** of the stationary base member and in spaced, parallel relation to a radially extending wall **22** in which the third, more or less straight, wall **20** merges. The radially extending walls **21** and **22** are situated exteriorly of the substantially circular wall **13** and the circular concavity **17**. Together, said radially extending walls provide a radially extending guide slot, denoted **23**, open at both its interior and exterior ends and contiguous at its interior end with said circular concavity **17**.

The body of the base member **10** has openings therethrough, spaced at 120 degrees apart as disclosed, for receiving screws **24** for fixedly securing said base member upon a supporting surface therefor.

And, too, the body of the stationary base member rigidly supports a stub shaft or pivot pin **25** which extends forwardly from said body in perpendicular relation thereto and is disposed in concentric relation to the arc-shape walls **18** and **19**.

The rotatable acuator member **11** consists of a disc-shape body having a central opening **26** therethrough for removable reception of the stub shaft or pivot pin **25**, and also having an operating handle or finger piece **27** and an actuator **28** thereon. The operating handle or finger piece **27** is in radially spaced relation to the central opening **26** and extends forwardly from said actuator member, at the side thereof opposite the stationary base member. The actuator **28** also is in radially spaced relation to the central opening **26** and extends rearwardly from the actuator member. The actuator is situated between said actuator member and the stationary base member, within the circular concavity **17**, when said actuator member and base member are in assembled relation. Also, when the actuator member and base member are assembled, the rearward end of the actuator **28**, composed as a cylindrical lug in the disclosure as made, desirably may be in adjacent relation to the flat forward surface **12** of said base member, about as disclosed in Fig. 4. The operating handle or finger piece is rotated manually, during practical operation of the apparatus, while an inner annular marginal surface **29** of the actuator member **11** rides upon or slides over the forward edge **14** of the forwardly projecting annular element **13**.

The manner in which the apparatus of Figs. 1 to 5 is manipulated thus to be made operative to wind a slicing band, represented **30**, into compact form will be apparent. A loop **40** of the slicing band, at an end thereof when folded, is first placed in the circular concavity **17** at a side of the stub shaft or pivot pin **25**, with contiguous portions of the length of the slicing band next adjacent to said loop situated in the radial guide slot **23**, about as disclosed in Fig. 5. Then the actuator member is assembled with the base member **10**, by insertion of said stub shaft or pivot pin in the central opening **26**, so that the actuator **28** lies in the loop of the slicing band within said circular concavity. Thereafter, the operating handle or finger piece **27** is manually rotated, in clockwise direction in Figs. 1, 3, 4 and 5, to cause the slicing band to be wound up, from its position about as in Fig. 5 to its position as in Fig. 3. With rotative movement ahead of the actuator **28**, the loop of the slicing band will be pulled along or advanced and caused to rotate about the stub shaft or pivot pin **25** while confined between said stub shaft or pivot pin and the forwardly projecting circular element **13**. As the loop is rotatively advanced, the doubled length of slicing band, folded upon itself, will

be slid inwardly along the radial guide slot **23** and also slid circumferentially along the internal surface of said circular element **13** until said slicing band is wound upon itself in superimposed layers about as disclosed in Fig. 3. Upon release of the operating handle or finger piece **27** after winding is completed, the loop will expand, from its tensed or stretched condition while winding is being accomplished, as in Fig. 5, to its natural condition, as in Fig. 3, and cause the actuator **28** to be kicked back somewhat from the forward end of the loop, about as in said Fig. 3. When winding is completed, superimposed portions of the length of the slicing band are firmly bound together, as by placing encircling tape **31** thereon, at the cutaway portions **15** and **16**. The slicing band when bound is ready for shipment. The loop **40** is a forward loop of the slicing band. A rearward loop **41** of the slicing band is denoted **41**.

Winding of a slicing band could be accomplished in the apparatus of Figs. 1 to 5 in an instance when the member **11** was held stationary and the member **10** rotated, in counterclockwise direction in Figs. 1, 3, 4 and 5. Operation as hereinbefore set forth is, however, to be preferred, since with rotational movement of the member **10**, the unwound portion of the slicing band would be continually rotated about the axis of said member **10**. Insofar as accomplishment of winding is concerned, the stub shaft or pivot pin **25** could as well be rigid with the actuator member **11** and free of the base member **10**, because, upon completion of winding and kick-back of the actuator **28**, said stub shaft or pivot pin ceases to perform any useful function. It could as well be withdrawn with the actuator member as left within the circular concavity **17**. But, support of the stub shaft or pivot pin upon the base member is preferable for the reason that the loop has to be situated in the circular concavity **17** at a side of said stub shaft or pivot pin, in position to receive the actuator **28**, while the actuator member is removed from the base member.

With respect to Figs. 6 to 8, the apparatus there disclosed for practicing the novel and improved method consists of a disc-shape member **33** including a flat forward surface **34** and having a plurality of spaced posts, each denoted **35**, extending forwardly from said flat forward surface and arranged in a circumference in concentric relation to a stub shaft or pivot pin **36** extending rearwardly from the disc-shape member **33** in perpendicular relation thereto. The stub shaft or pivot pin **36** is for rotatably supporting the disc-shape member **33** upon a wall, such as **37**, or other fixture, as in Fig. 8.

The manner in which the apparatus of Figs. 6 to 8 is manipulated in the accomplishment of winding of a slicing band, indicated **38**, into compact form also will be apparent. A loop of the slicing band, at an end thereof when folded, is placed upon and about one or more of the posts **35**, with contiguous portions of the length of the slicing band next to the loop situated exteriorly of and in proximate relation to posts **35** other than that post or those posts upon and about which said loop is placed, as disclosed in Fig. 6. Then the disc-shape member **33** is manually rotated on the stub shaft or pivot pin **36** as an axis, in clockwise direction in Figs. 6 and 7, while contiguous portions of the length of the slicing band are manually retained in proximate relation to different ones of the posts **35**, to cause the slicing band to be wound up on said posts, from its position as in Fig. 6 to its position as in Fig. 7. With rotative movement of the disc-shape member **33**, the loop at the forward end of the slicing band will be advanced and caused to rotate about the stub shaft or pivot pin **36**. As said loop is rotatively advanced, the doubled length of slicing band, folded upon itself, will be wound in superimposed layers upon the circumferentially arranged posts **35** about as disclosed in Fig. 7. The loop will be forced to rotate about the axis for the disc-shape member **33** upon commencement of the winding operation by reason of engagement of one or more of the posts **35** with an internal surface or with internal surfaces of the slicing band inside the loop at the forward end of said slicing band. Thereafter, with the winding of superimposed lengths of the slicing band upon said posts, said loop at the forward end of said slicing band will be confined by said superimposed lengths. During the winding operation, the slicing band will be reduced in size and shaped to have compact form. Upon completion of winding, superimposed portions of the length of the slicing band are secured to each other, as by placing encircling tape **39** thereon, at spaced apart locations. As shown, there is a first encircling tape at the forward interior loop of the slicing band and a second encircling tape adjacent to a rearward exterior loop of said slicing band.

In the instance of each form of the invention, both as in Figs. 1 to 5 and as in Figs. 6 to 8, the method of winding is substantially the same. The slicing band is shaped to provide a forward loop by bending portions of said slicing band at the rear of said forward loop one upon the other. The doubled-up portions are wound upon each other. The winding of said doubled-up portions upon each other causes the slicing band to be so shaped as to provide a rearward loop. And the forward and rearward loops are bound to the wound doubled-up portions of said slicing band, and said wound doubled-up portions are bound to each other, to provide a compactly wound and securely bound slicing band having a first loop at one end thereof situated interiorly and in the plane of the wound doubled-up portions and a second loop at the other end of the slicing band situated exteriorly and in the plane of said wound doubled-up portions.

What is claimed is:

An apparatus for winding an intermediate doubled-up portion of an endless band of flexible and resilient material into compact form upon itself with forward and rearward loops of the endless band at opposite ends of and situated, respectively, interiorly and exteriorly of said intermediate doubled-up portion when wound, comprising a base member, an actuator member, a pin supporting said actuator member upon said base member for rotative movement and engageable with an internal surface of the doubled-up portion of the endless band, means upon said base member for circumferentially confining said endless band engageable with an external surface of said doubled-up portion, guide members upon the base member exteriorly of said means engageable with both said internal and external surfaces of the doubled-up portion, and an actuator upon said actuator member between said pin and means in spaced relation to each receivable within said forward loop and operable in response to forward rotative movement of said actuator member to cause said endless band to be moved bodily forwardly of said guide members, said internal and external surfaces of said doubled-up portion to slide over said pin and said means respectively, and said doubled-up portion to be wound upon itself in spaced, encircling relation to said pin at the side of said actuator adjacent said means.

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