

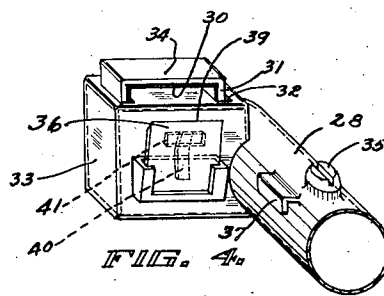
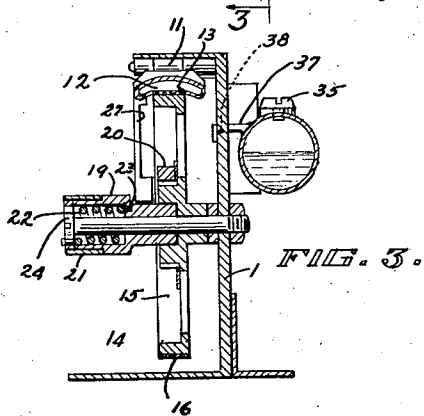
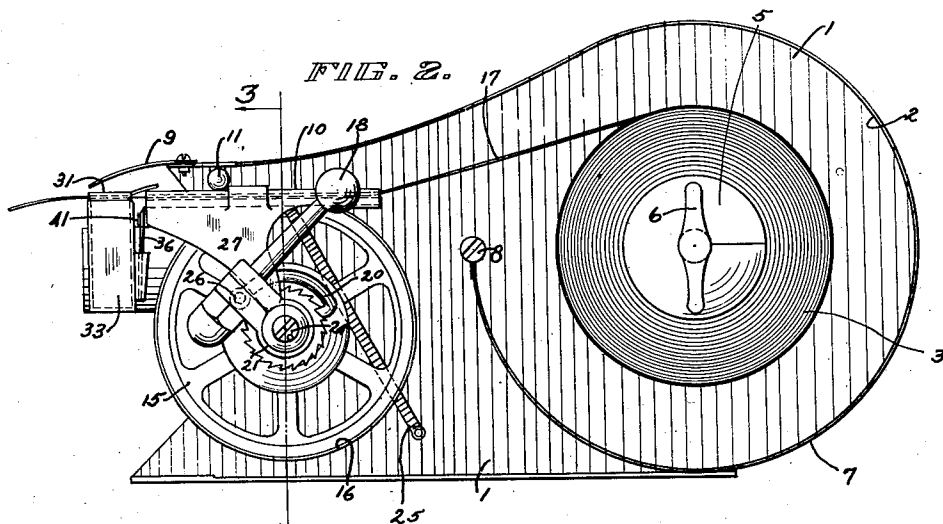
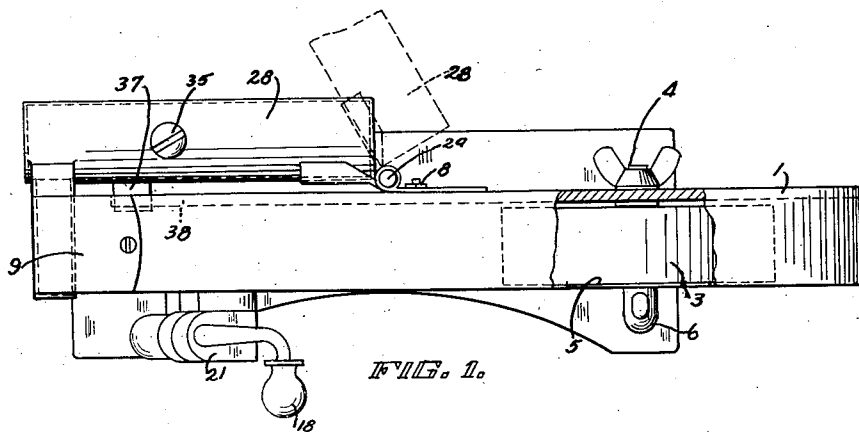
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R. M. BROOKS

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TAPE FEEDING MACHINE

Filed May 9, 1927



INVENTOR

RUFUS M. BROOKS

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

RUFUS M. BROOKS, OF ROSEBURG, OREGON.

TAPE-FEEDING MACHINE.

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My invention relates to improvements in tape feeding and moistening machines and it consists in the combinations, constructions and arrangements hereinafter described and claimed.

An object of my invention is to provide a tape feeding and moistening machine in which novel means is actuated by the tape feeding means for automatically cutting off the tape when the tape feeding means is manually released.

A further object of my invention is to provide a device of the type described which makes use of novel means for moistening the tape.

Other objects and advantages will appear in the following specification, and the novel features of my invention will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawing forming a part of this application, in which—

Figure 1 is a top plan view of the device, a portion thereof being broken away;

Figure 2 is a side elevation of the device;

Figure 3 is a section along the line 3—3 of Figure 2; and

Figure 4 is a perspective view of a portion of the device.

In carrying out my invention I provide a frame 1 which has an open side 2 in which a roll of tape 3 is mounted, the tape being supported by a bolt 4 and being held in place by a spring-washer 5 against which a thumb-screw 6 bears. The pressure of the washer 5 against the roll of tape may be varied at will.

The tape is protected from dust and the like by a curved rim 7, this rim being secured to the frame by a fastening device 8, (see Figure 2) and having its other end secured to the front of the machine at 9. If desired the rim 7 may be welded or soldered to the frame 1.

The tape 3 is fed through a carrier 10, which is hinged to the rim 7 at 11 (see Figure 3) and which is therefore adapted to rock slightly for a purpose hereinafter described. The carrier 10 is tubular in shape and the cross section of the tube 12 is clearly shown in Figure 3. The bottom of the tube 12 is provided with a slot 13 for receiving the rim 14 of a wheel 15. The rim 14 carries a gripping member 16 such as a rubber tire, this member contacting with the tape 17 and being adapted to feed the tape from the roll 3

and through the tube 12 when the wheel is rotated.

The means for rotating the wheel comprises a crank handle 18, which is carried by a hub 19 and which carries a pawl 20. This pawl engages with a ratchet 21 integral with the wheel 15 when the crank handle is swung in a counter-clockwise direction in Figure 2. This movement of course causes the wheel to feed the tape.

In Figure 3 I show the hub 19 as housing a torsional spring 22, this spring having one of its ends secured to the hub at 23 and its other end secured to a supporting bolt 24. The spring 22 is tensioned when the handle 18 is moved and as soon as the handle is released the spring will return it to the position shown in Figure 2 and will cause the pawl 20 to ride over the ratchet 21 prior to the next engagement therewith.

It will be noted from Figure 2 that a spring 25 connects the carrier 10 with the frame 1 so that the tape 17 will be forced down against the wheel 15. One of the objects of the present invention is to provide means for spacing the tape 17 away from the wheel 15 when the machine is idle. This is accomplished by the torsional spring 22 which causes the pin 26, carrying the pawl 20, to strike against a depending lug 27 carried by the carrier 10 and to create enough force against the lug to swing the tubular member 12 away from the wheel 15 and against the tension of the spring 25. It will therefore appear that the first movement of the crank handle 18 will be to free the lug 27 thus permitting the spring 25 to move the tape 17 down into contact with the wheel 15. The tape 17 is fed through a moistening device shown in Figures 1, 2 and 4, this device comprising a container 28 hinged at 29 to the frame 1 and carrying a moistening member 30 (see Figure 4). This member is U-shaped and has its legs 31 disposed in openings 32, the legs then extending down into the compartment 33 which is kept supplied with water by the container 28. The U-shaped member 30 is preferably made of wick material so that the liquid will keep the member moist by capillary attraction. Of course, the moistening member 30 is flexible and I therefore support it by a U-shaped member 34, preferably made of metal. The tape 17, gummed surface uppermost, is passed over the top of the compartment 33 and beneath the moistening member 30 and the member 30,

due to its own weight and to the weight of the member 34, bears against and moistens the latter prior to its passing from the machine. The container 28 is filled with liquid from time to time through the inlet opening 35.

The container 28 is pivotally secured at 29 for the purpose of removing the member 30 when desired, and for the purpose of removing a cutting blade 36 when desired. Figures 1 and 3 clearly show how the container 28 is pivoted with a hook 37 that drops over a ledge 38 carried by the frame 1. The pivot point 29 is loose enough to permit the container to be raised slightly for releasing the hook 37 whereupon the container is free to be swung into the dotted line position shown in Figure 1.

The blade 36 bears against the outer end of the carrier 10 and its cutting edge 39 is disposed directly beneath the tape 17 so that a swinging of the carrier 10 in a counter-clockwise direction about the pivot 11 in Figure 2 will cause the carrier to move the tape past the edge 39, whereupon the tape will be severed. A spring 40 bears against the blade 36 and keeps the edge 39 in contact with the end of the carrier 10. This assures a shearing action for providing positive means for cutting the tape. It should also be noted from Figure 4 that the spring 40 has its upper end bearing against the top of a shoulder 41 formed in the blade 36. This construction prevents the blade 36 from being accidentally moved upwardly as the carrier 10 moves back into normal position.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. As heretofore stated the tape has passed through the tube 12 and beneath the member 30 as clearly shown in Figure 2. If now it is desired to use a portion of the moistened tape, the handle 18 is actuated for causing the wheel 15 to feed the tape and the handle is reciprocated the desired number of times for feeding a piece of tape of the required length. As heretofore mentioned the member 10 brings the tape 17 into contact with the wheel 15 upon the initial movement of the handle 18. After the desired amount of tape has been moistened and the operator wishes to sever the tape, he merely releases the handle 18 whereupon the spring 22 will rapidly swing the handle in a clockwise direction with sufficient force for causing the pin 26 to strike the lug 27 and to swing the carrier 10 in a counter-clockwise direction against the tension of the spring 25. This movement causes the carrier to move the tape past

the cutter 36 and the cutter severs the tape at a point adjacent to the end of the carrier. As soon as this movement takes place the spring 25 will again tend to swing the carrier 10 for bringing the tape 17 into contact with the wheel, but the spring 22 will be strong enough to remove the carrier from the wheel and the tape therewith until the handle 18 is again actuated.

The device is particularly simple in construction and provides novel and efficient means for preventing the tape from adhering to the tape feeding wheel and for automatically cutting the tape from the roll when the operating handle is released.

I claim:

1. A device of the type described comprising a tape carrier, tape feeding means, means for causing said carrier to bring the tape into contact with the feeding means, a tape cutter, and means carried by said feeding means and said carrier for causing said carrier to move the tape past the cutter for severing the tape when said feeding means is suddenly released.

2. A device of the type described comprising a tape carrier, tape feeding means, a cutter, said carrier being movable for bringing the tape into contact with the feeding means or into contact with the cutter and manually controlled means for actuating said feeding means and for selectively causing said carrier to bring the tape into contact with the feeding means or into operative position with the cutting means.

3. A device of the type described comprising means for supporting a roll of tape, a tape guide, a cutter disposed adjacent to said guide, tape-moving means cooperating with said guide for moving the tape therethrough, a spring connected to and adapted to be placed under tension when said tape-moving means is moved in one direction, said means when released adapted to be moved by said spring and to actuate said tape guide for moving it past the cutter, whereby the tape is severed.

4. A device of the type described comprising a pivoted tape guide, a cutter associated therewith, means adapted to be manually reciprocated for moving tape through the guide, a spring connected to and adapted to be placed under tension by the movement of said means in one direction, said spring causing said tape-moving means to rock said guide when said tape-moving means is suddenly released, the rocking of said guide moving the tape across the cutting knife, whereby the tape is severed.

RUFUS M. BROOKS.