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A. P. KRUEGER

TAPE-SERVING MECHANISM

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4 Sheets-Sheet 1

Fig. 1.

Fig. 2.

Inventor

Alfred P. Krueger

Rockwell Standards
Attorneys
Dec. 19, 1944.

A. P. KRUEGER

TAPE-SERVING MECHANISM

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4 Sheets-Sheet 2

Inventor

Atorney
This invention relates to tape-serving machines, and more particularly to a device designed to deliver a strip of gummed tape for sealing packages, parcels, boxes or the like. Such tape is commonly made of paper, and usually is furnished in the form of a roll which contains a continuous strip of the tape gummed upon one surface.

The requirements of a machine for handling a roll of tape of this character are several. In the first place, the device should be able to deliver upon one stroke of the handle mechanism a strip of any predetermined length, which may vary from a short strip to a long strip within the limits of the machine. After the tape has been delivered, provision should be made for cutting it off without interfering with the feeding of the next strip or varying the length of the next strip. In other words, the cut-off mechanism should operate while the feeding means is inoperative. Also provision should be made for moistening the gummed side of the tape, so that a strip of the required length will always be delivered at one stroke of the handle, which strip will be moistened and severed, ready for immediate use. Moreover, there are occasions when, although the machine may be set or adjusted to deliver a given length of tape, a longer length is desired. Therefore, it is advantageous to be able, without changing the adjustment of the machine, to increase the length of the delivered strip by making another stroke or partial stroke of the handle before the operation of the cut-off mechanism.

In the present device the operating handle of the mechanism is arranged to oscillate or to have a forward and back stroke, the forward stroke being adjustably limited so as to adjust the length of tape fed from the machine. The cut-off mechanism is arranged to operate at the end of the back stroke of the handle, and, in fact, when the handle is moved rearwardly of its normal position or position at which the feed stroke begins. In order to prevent the feeding of the tape during the operation of the severing mechanism, the arrangement is such that, when the handle has been moved rearwardly of its normal position of rest to operate the cutter, it will not initiate a subsequent feeding action until it is brought back to its normal position, as will be more fully explained hereinafter.

One object of the invention is to provide a new and improved tape-dispensing device of the character described.

A still further object of the invention is to provide a tape-serving device having all of the functions commonly desired in such a machine, but which may at the same time be economically manufactured and be efficient and noiseless in operation.

A still further object of the invention is to provide a tape-serving machine having an oscillatable actuating handle, and to provide severing mechanism actuated at the end of the back stroke of the handle, the connections between the handle and the feeding mechanism having sufficient lost motion therebetween that the cutting device may be returned to its position after actuation to clear the path of the tape while the feeding mechanism is at rest.

A further object of the invention is to provide a tape-serving mechanism of the character described, having an oscillating handle which has a one-way connection with the feeding mechanism so that the latter is actuated only upon the forward stroke of the handle, and which will be quiet in operation, and which will permit of a plurality of strokes or partial strokes of the handle to serve additional tape prior to the actuation of the severing mechanism.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a side elevational view of a tape-dispensing machine embodying my invention;
Fig. 3 is a longitudinal sectional view through the forward portion of the machine, showing the feed rolls and associated parts;
Fig. 3 is a view similar to Fig. 2, showing the parts in another position;
Fig. 4 is a partial top plan view of the forward portion of the machine;
Fig. 5 is a side elevational view of the drive mechanism;
Fig. 6 is a fragmentary view similar to Fig. 5, showing the parts in another position;
Fig. 7 is a fragmentary sectional view on line 7—7 of Fig. 5;
Fig. 8 is a view similar to Fig. 2, showing a modified arrangement for the severing mechanism and feed rolls; and
Figs. 9 and 10 are side elevational views similar to Fig. 5, showing further modified forms of my invention.

To illustrate a preferred embodiment of my invention, I have shown a tape-serving mechanism comprising a frame or basket having spaced side walls within the rear portion of which a roll of tape is adapted to be housed, and carrying tape-serving mechanism adjacent its forward
portion, as will be hereinafter set forth. Adjacent the front portion of the device is a receptacle 11 adapted to be filled with water or the like, having therein a moistening brush 12 over which the tape is delivered between guide plates 13 and 14. As the above parts may be of usual form, further description thereof is unnecessary. Between the side walls 16 adjacent the forward part of the machine is a supporting table 15 over which the tape is fed, upon which table rests a pressure plate 18 above the upper surface of the tape.

The tape is designed to be fed forwardly through the upper and lower feed rolls 17 and 18. The lower feed roll 18 is carried by a shaft 19 rotatably mounted in the side walls 10 and 16. As shown in Fig. 5, it will be noted that the teeth of the pinion 39 are in mesh with those of the gear 32, this pinion serving as the actuating device for the drive gear 32 when the handle 31 is moved forwardly.

Also loosely mounted on the shaft 30 is a plate 42 lying between the arm 37 and the gear, the plate being generally sector-shaped, as shown, but being provided at one end with a laterally extending abutment 43 which projects over the gear 32 and is designed to contact one of the forward edge portion of the arm 40 so as to move this arm in a clockwise direction, as shown in Fig. 5, upon the return stroke of the handle, as will be later explained. As previously stated, the arm 37 is secured to the shaft 30 while the plate 42 is loosely mounted thereon. The arm is connected to the plate, however, by means of a pair of studs or abutments 44 and 45 mounted upon the plate in position to engage opposite edges of the arm. These studs are so spaced as to provide a lost-motion connection between the arm and the plate, the arm, however, being normally but yieldably held against the stud 44 by means of the spring 46 connected at one end to the stud 60 and at the other end to a stud 47 carried by the arm 37. It may also be noted that when the adjacent edge of the arm 37 abuts the stud 60, as shown in full lines in Fig. 5, the point 39 of the dog 38 is out of engagement with the teeth of the pinion 39, and when the arm 37 and plate 42 are moved in a counterclockwise direction so as to engage the tooth 38 with the pinion 39, the adjacent edge of the abutment 43 moves away from the arm 40, as shown in dotted lines at the left of Fig. 5 of the drawings.

The severing mechanism comprises a knife or cutter frame consisting of a pair of arms 50, one mounted adjacent each side wall 10, which arms are pivoted upon the rod 25, and which are connected at their forward ends by a knife bar 61 carrying the severing blade 52. Each of the arms 50 is provided with a depending plate 53, which plates are connected together by transversely extending bars 54 in order to form a rigid frame. Secured to the shaft 30 are cutter-actuatingcams or lugs 55, one adjacent each side wall 10, which are adapted at the end of the back stroke of the handle 31 to contact one of the arms 50 and swing the cutter about the shaft 25 from its inoperative position, shown in Fig. 2, to the position shown in Fig. 3, during which movement the tape will be severed against the forward end of the table 15. A pair of coil springs 51, one on each side of the device, are connected at one end 58 to a cutter frame member 50 and at the other end, as shown in 59, to one of the lugs 55, the intermediate portion of each spring being passed about a sheave 60 loosely mounted upon the rod 35 which supports the gears 33 and 34. Thus the springs 51 serve the double purpose of maintaining the handle in its rearward position, or in position to begin a feeding stroke, and also maintain the knife blade in its upper inoperative position, shown in Fig. 2. In this position studs 56 mounted on the frame engage in recesses 60 in the knife arms 50 to limit the swinging movement of these arms.

As shown more especially in Fig. 7, the pinion 39 is loosely mounted upon a pin 61 secured to the arm 40, so that the pinion rotates upon this pin. In order to yieldably or frictionally restrain
the rotation of the pinion, a coil spring 62 is mounted between the head of the pin 61 and the pinion 39, so that, while the pinion will rotate freely when a force is applied to it, there is this slight restraint against its rotation by the influence of gravity, for example, as will be later explained. An abutment or stud 63 (Fig. 5) is provided on the frame to contact the arm 40 and limit the movement of this arm in a clockwise direction, in which direction it travels during the forward stroke of the handle.

The operation of the device is as follows: With the handle 31 in the position shown in Figs. 1 and 2, which is the normal position of the handle to which it will be returned by the spring 57, the parts are in a position to begin a feeding stroke. The handle is drawn forwardly or counterclockwise, as shown in these figures. The dog 38 will be engaged with the teeth of the pinion 39, and prevent this pinion from rotating, due to the fact that the arm 37 will also be moved in a counterclockwise direction, as this arm is fixed upon the shaft 30. As the pinion is prevented from rotation, the engagement of its teeth with those of the gear 32 will effect rotation of this gear in a counterclockwise direction, and through gears 33 and 34 and pinion 29 will effect rotation of the arm 30, which will cause the tape to be fed forwardly past the knife 32 and the moistening brush 12.

It is contemplated that suitable means (not shown) will be provided to variably limit the forward stroke of the handle 31 so as to adjust the length of tape delivered by the machine during the forward stroke of the handle. This, for example, may be a mechanism similar to that shown in the Krueger and West Patent No. 2,333,108.

When the handle reaches the forward end of its stroke, the parts are in the position shown in dotted lines at the left of Fig. 5, having been moved from the full-line position shown in this figure, and a predetermined length of tape has been delivered from the machine. If it is desired to deliver this length of tape or a subsequent stroke before operating the cut-off mechanism, the handle 31 is moved in a clockwise direction to a sufficient extent to enable the pinion 39 to move over the teeth of the gear 32 and get a new purchase thereon, so to speak, so that the handle can again be moved forwardly, bringing the gear 32 with it. During the initial return or backward stroke of the handle 31 from the dotted line position shown in Fig. 5, the parts will move to the position shown in Fig. 6, in which the abutment 43 is in contact with the arm 40 in order to move the latter arm in a counterclockwise direction, but the point or tooth 39 of the dog 38 is out of engagement with the teeth of the pinion 39 so as to permit the pinion to rotate freely upon the teeth of the gear 32, and thus provide a one-way connection between the gear and the pinion, so that the forward stroke of the handle will rotate the gear 32, the back stroke of the arm will not rotate this gear. During the forward stroke of the handle the plate 42 is moved by the arm 37 due to the contact of the arm with the stud or abutment 44, but during the backward stroke of the gear 32 the plate is carried therewith by the spring 45.

It may occur that after a forward stroke of the handle it is desired to increase the length of tape delivered by only a slight amount, and thus move the handle rearwardly through a small angle. In such case the arm 40 carrying the pinion 39 might be in the position shown in Fig. 6, wherein this arm would tend to drop downwardly, or move in a counterclockwise direction, by gravity, and in such case, when a further forward stroke of the handle was attempted the tooth 39 might not catch up with the pinion 39, which would roll over the gear 32 under the influence of gravity. However, the provision of the spring 62 prevents such action under the influence of gravity, and will hold the pinion in any position in which it may have been be- stioned during the forward movement of the handle, will cause the latter to fly back with considerable force. The arm 40 will also be moved in a clockwise direction from its dotted-line position in Fig. 5 to its full-line position shown in that figure, by reason of the engagement of the abutment 43 with the arm, which movement will be arrested when the rear side of the arm 40 strikes the stop 63, thus limiting the back stroke of the arm 40. Due, however, to the spacing of the posts or abutments 44 and 45, the arm 37 may continue to move rearwardly until its rear face strikes the abutment 45, this movement being attended by a stretching or tensioning of the spring 45, so that at the rear end of the stroke the arm 37, due to its lost-motion connection with the plate 42, is allowed an additional movement independent of the arm 40. During this additional movement the lug or cam 55 strikes the bar 54, and swings the knife frame about its pivot 75 so as to effect the severing of the tape strip which has been delivered. The springs 57 or the usual bounce of the handle then brings the parts back to their normal position shown in Figs. 1 and 2, and in full lines in Fig. 5, thus bringing the knife blade 52 out of the path of the tape, and also swinging the arm 31 in a counterclockwise direction from a position against the post 45, as shown in dotted lines in Fig. 5, to the position against the post 44, shown in full lines. During this latter movement there will be no movement of the feed rolls, as the arm 40 has been retained in its position against the stop 63, and no movement of this arm will be effected until the dog 38 again engages the teeth of the pinion 39.

It will thus be seen that there is a lost-motion connection between the arm 40 and the associated driving mechanism at both ends of the stroke. This lost motion at the plate and at the posts 44 and 45, however, is only enough to permit the tooth 39 to become disengaged from the teeth of the pinion 39 when the abutment 43 engages the adjacent edge of the arm 40. At the rear end of the stroke, however, a considerable amount of lost motion is provided, as shown by the spacing of the posts 44 and 45, so that, during the movement of the arm 37 permitted by this lost-motion connection, the cutting action can take place, and the cutter can be lifted from the path of the tape.

In Fig. 8 of the drawings I have shown a modified arrangement of the feeding rolls and cutter.
mechanism, whereby the springs 57 only not serve to effect the rearward stroke of the handle and to hold the knife in its upper or inoperative position, but also serve to hold the upper feed roll in feeding relation with the lower or driven roll. As shown in Fig. 8, the upper feed roll 17 is rotatably mounted upon a shaft 70 loosely mounted in the side walls 10 in elongated slots 11, so that the roller may be raised to permit the insertion of the tape between it and the driven roll 16. A member 72 mounted upon each end of the shaft 70 is an arm 72 having a bearing surface 73 resting upon a stud 74, which studs are carried by rearwardly extending plates 75 secured to the arms 68 of the knife frame. Each of the members 75 is also provided with a bearing portion 76 resting upon a rod 77 connecting the side walls 10. The arms or plates 72 may be rigidly connected together by rod 78 extending from one side of the machine to the other.

In this instance one end of each of the springs 57 is connected to the member 69 as before, while the other end is connected as shown at 73 to one of the arms 72. It will be seen, therefore, that the springs 57 will tend to pull the arms 72 downwardly, and that as the forward ends of these arms are secured to the shaft 70, the upper feed roll 17 will be urged yeldingly toward the lower feed roll 18, and the rear ends of the arms 72 will bear upon the studs 74 on the arms 75 which will cause the latter arms to contact the rod 77, the latter acting as a stop to limit the upper position of the knife under the influence of the springs 57.

When the upper feed roll 17 is lifted by the insertion of the paper between it and the cooperating roll 16, the springs 57 will be slightly extended, and the arms 17 will be raised about the lugs 16 as a fulcrum. When the knife is actuated to cut the strip by the lug 65, the arms 72 will be raised by the lugs 16 about the shaft 70 of the upper roll, thus slightly extending the springs 57, which, when the knife frame is released, will again bring the knife to its upper position as shown. It will be apparent that also in this form of my device the rolls 17 and 18 are at all times in feeding relation, and will serve to feed the tape whenever these rolls are rotated, regardless of the position of the knife. Therefore, it can be seen that the combination of the upper roll 17 and the lower roll 16 can be employed with the drive mechanism shown in Figs. 1 to 7 of the drawings, so that the rolls will not be actuated until the knife is in its upper position out of the path of the tape.

When the handle 81 is released at the forward end of its operative stroke, it will be understood that it is returned or drawn back with considerable force by the springs 87. It is contemplated, therefore, that a stop (not shown) will be provided on the machine against which the handle can strike to cushion the end of its movement. The handle normally will return to some extent from this stop, and in some instances in the past this forward movement has been attended by an objectionable so-called "bounce feed," in that, if the handle actuates the feeding rolls whenever it is moved forward, this bouncing movement will cause a short length of tape to be fed out, which might be fed against the knife blade if it had not cleared the path of the tape, or be fed past the brush to be moistened, and would not adhere properly when used at a later time. The lost motion provided in the present machine at the rear end of the stroke of the handle prevents this "bounce feed," as the detent or abutment 8 will not engage the pinion 38 during this bounce movement, so that no feeding of tape will be effected until the operator again draws the handle forwardly.

In Fig. 9 of the drawings I have shown a modified lower feed roll in which I employ a pawl 81 instead of the pinion 38. The pawl 81 is mounted upon the actuating arm 40 and serves as the actuator of the main gear 32, the pawl being pivoted on the arm and spring pressed into position to engage the gear by the spring 32. Also in this instance the arm 31 is provided with a rearwardly extending pin 83 adapted to engage one face of the arm 40 so as to move this arm in one direction or in a counterclockwise direction, as shown in Fig. 9. It will, of course, be understood that, while the paw 81 is shown in engagement with the teeth of the gear 32, this arrangement may be varied and separate ratchet teeth provided on the inner face of this gear to cooperate with the pawl, as the engagement of the pawl with the teeth of a gear is sometimes objectionable. It may also be noted that in this instance there is no lost motion between the arm 40 and the abutment 43 on one side, and pin 82 on the other, as no lost motion at the forward end of the stroke is necessary, as is the case when the pinion 38 is employed. The same lost motion at the rear end of the stroke is provided, however, as in the form of my invention shown in Figs. 1 to 8 of the drawings, so as to correct the bounce feed and permit the clearing of the knife from the path of the tape.

In Fig. 10 of the drawings I have shown a further modification which is quite similar to that shown in Fig. 9 except for the omission of the plate 42. In this instance a pawl 85 is pivoted upon a pin 86 on the arm 40, and pressed in engagement with the teeth of the gear 32 by the spring 81. A spring 88 connects the pin 86 and a pin 89 on the arm 31, so as to provide an extensible or lost-motion connection between the arms 40 and 86. Also a pin or abutment 86 on the arm 31 engages the arm 40 to move the latter in a counterclockwise direction when the handle 81 of the device is drawn forwardly. When the arm 31 is moved rearwardly, or in a clockwise direction, the arm 40 is carried with it by means of the spring 86, until the arm 40 strikes the stop 88 and terminates the motion of the arm 31, permitting further movement of the arm 31 to effect the cutting operation by reason of the extension of the spring 88. It will be understood that this form of my device, as well as the form shown in Fig. 9, operates in the manner previously described in connection with Figs. 1 to 8 of the drawings, except for the omission of the pinion 38 and the use of the paws 81 and 85 and associated parts.

While I have shown and described some preferred embodiments of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claims.

What I claim is:

1. In a tape-dispensing machine, feed rolls between which a short length of tape is fed forwardly, an oscillating member through which to be fed the tape, means for limiting the forward movement of the actuator, and means for limiting the return movement of the actuator, member having a lost-motion con
connection with the actuator to permit continued rearward movement of said member while said actuator is held by said limiting means.

2. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member through which power is applied to feed the tape, means connecting said member to one of said rolls, said means comprising an actuator connected to said roll to rotate the latter upon the forward movement of the actuator, a stop member limiting the return stroke of the actuator, and said oscillatable member having additional rearward movement independently of the actuator while the latter is held by said stop, driving means connecting said member and said actuator to move the latter in both directions, comprising an abutment at each side of said actuator.

3. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member through which power is applied to feed the tape, means connecting said member to one of said rolls, said means comprising an actuator connected to said roll to rotate the latter upon the forward movement of the actuator, driving means connecting said member and said actuator to move the latter in both directions, comprising an abutment at each side of said actuator, and said oscillatable member having additional rearward movement independently of the actuator while the latter is held by said stop.

4. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member through which power is applied to feed the tape, means connecting said member to one of said rolls, said means comprising an actuator connected to said roll to rotate the latter upon the forward movement of the actuator, driving means connecting said member and said actuator to move the latter in both directions, comprising an abutment at each side of said actuator, said abutments being relatively movable, a spring urging one of said abutments toward the other, a stop member limiting the return stroke of the actuator, and said oscillatable member having additional rearward movement independently of the actuator while the latter is held by said stop.

5. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member through which power is applied to feed the tape, means connecting said member to one of said rolls, said means comprising an actuator connected to said roll to rotate the latter upon the forward movement of the actuator, driving means connecting said member and said actuator to move the latter in both directions, comprising an abutment at each side of said actuator, said abutments being relatively movable, a spring urging one thereof toward the other, a stop member limiting the return stroke of the actuator, and said oscillatable member having additional rearward movement independently of the actuator while the latter is held by said stop.

6. In a tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising a pinion meshing with said gear, means to advance said pinion bodily in one direction and restrain it against rotation, means to move said pinion bodily in a rearward direction while permitting rotation thereof, and means to limit the return movement of the pinion and permit additional movement of said advancing mechanism independently of the pinion.

7. In a tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising a pinion meshing with said gear, means to advance said pinion bodily in one direction and restrain it against rotation, means to move said pinion bodily in a rearward direction while permitting rotation thereof, and means to frictionally retard rotation of the pinion.

8. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis and having an abutment on each side of said arm, and said abutments being spaced apart to permit lost motion between said mechanism and said arm at the end of the stroke.

9. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis and having an abutment on one side of said arm and a dog to engage the teeth of the pinion on the other side of said arm, and means providing relative movement between said arm and drive mechanism to disengage the dog from the pinion when the abutment engages the arm.

10. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis and having an abutment on one side of said arm and a dog to engage the teeth of the pinion on the other side of said arm, and means providing relative movement between said arm and drive mechanism to disengage the dog from the pinion when the abutment engages the arm, said abutment being movable relatively to said dog and being spring pressed toward the dog.

11. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis and having an abutment on one side of said arm and a dog to engage the teeth of the pinion on the other side of said arm, means providing relative movement between said arm and drive mechanism to disengage the dog from the pinion when the abutment engages the arm, and means frictionally restraining said pinion against rotation.

12. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis...
of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis, said drive mechanism comprising a pair of members pivoted on the gear axis, one of said members carrying an abutment to engage one side of said arm and the other member carrying a dog to engage the teeth of said pinion on the other side of said arm.

13. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis, said drive mechanism comprising a pair of members pivoted on the gear axis, each of said members carrying an abutment, and said abutments lying on opposite sides of said arm to move the latter to and fro.

14. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis and having an abutment on one side of said arm and a dog to engage the teeth of the pinion on the other side of said arm, means providing relative movement between said arm and drive mechanism to disengage the dog from the pinion when the abutment engages the arm, and means frictionally restraining said pinion against rotation, said abutment and dog being spaced apart to prevent simultaneous engagement of both said abutment and dog.

15. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis, said drive mechanism comprising a pair of members pivoted on the gear axis, one of said members carrying an abutment to engage one side of said arm and the other member carrying a dog to engage the teeth of said pinion on the other side of said arm, and a lost-motion connection between said members.

16. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis, said drive mechanism comprising a pair of members pivoted on the gear axis, one of said members carrying an abutment to engage one side of said arm and the other member carrying a dog to engage the teeth of said pinion on the other side of said arm, and connecting means between said members comprising a boss on one thereof and a spring urging the other toward the boss.

17. A tape-dispensing machine comprising feeding rolls between which the tape is advanced, a drive gear operatively connected to one of said rolls to rotate the latter, means to drive said gear, comprising an actuating arm pivoted on the axis of said gear and carrying a pinion meshing with the gear, drive mechanism oscillatable about said gear axis, said drive mechanism comprising a plate-like member having a limiting projection thereon, a second arm adapted to engage said projection, an abutment on the plate engaging said pinion-carrying arm, and a dog on said second arm engaging the pinion.

18. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, a drive gear connected to one of said rolls to rotate the latter, an oscillatable member having a forward and return stroke, an actuator moved by said member in both directions and rotating said gear upon the forward stroke only of said member, stop means to positively limit the return movement of the actuator, a severing device, a moveable connection between said oscillatable member and actuator to permit movement of said member while said actuator is held at rest by engagement with said stop means at the end of its return stroke, and means to effect operation of said severing device by said last-named movement.

19. In a tape-dispensing machine, feeding rolls between which the tape is fed forwardly, a drive gear connected to one of said rolls to rotate the latter, an oscillatable member having a forward and return stroke, an actuator moved by said member in both directions and rotating said gear upon the forward stroke only of said oscillatable member, means engaging said actuator to positively limit the return movement thereof, a severing device, and means to effect movement of said severing device by said oscillatable member while said actuator is held against movement by said limiting means.

20. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member having a forward and return stroke, connections between said member and said rolls to operate the latter upon the forward stroke of said member beginning at a predetermined point in said stroke, including an actuating arm having a lost-motion connection with said member, a severing device, said lost-motion connection permitting movement of said member rearwardly of the point at which said tape feeding is initiated without movement of the actuating arm and rolls, and means to effect operation of said severing device by such movement.

21. In a tape-dispensing machine, feed rolls between which the tape is fed forwardly, an oscillatable member having a forward and return stroke, connections between said member and said rolls to operate the latter upon the forward stroke of said member beginning at a predetermined point in said stroke, including an actuating arm having a lost-motion connection with said member, a severing device, said lost-motion connection permitting movement of said member rearwardly of the point at which said tape feeding is initiated without movement of the actuating arm and rolls, means to effect operation of said severing device by such movement, a stop limiting the rearward movement of the actuating arm, and the operation of said severing device taking place while said arm is held against movement by said stop.

ALFRED P. KRUEGER.
CERTIFICATE OF CORRECTION.


ALFRED P. KRUEGER.

December 19, 1944.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 5, first column, lines 10 and 11, claim 2, beginning with the words "a stop member," strike out all to end including "said stop," in line 14; line 18, same claim, after the syllable "ator" and before the period insert --, a stop member limiting the return stroke of the actuator, and said oscillatable member having additional rearward movement independently of the actuator while the latter is held by said stop--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 27th day of March, A. D. 1945.

Leslie Frazer

(Seal) 

Acting Commissioner of Patents.