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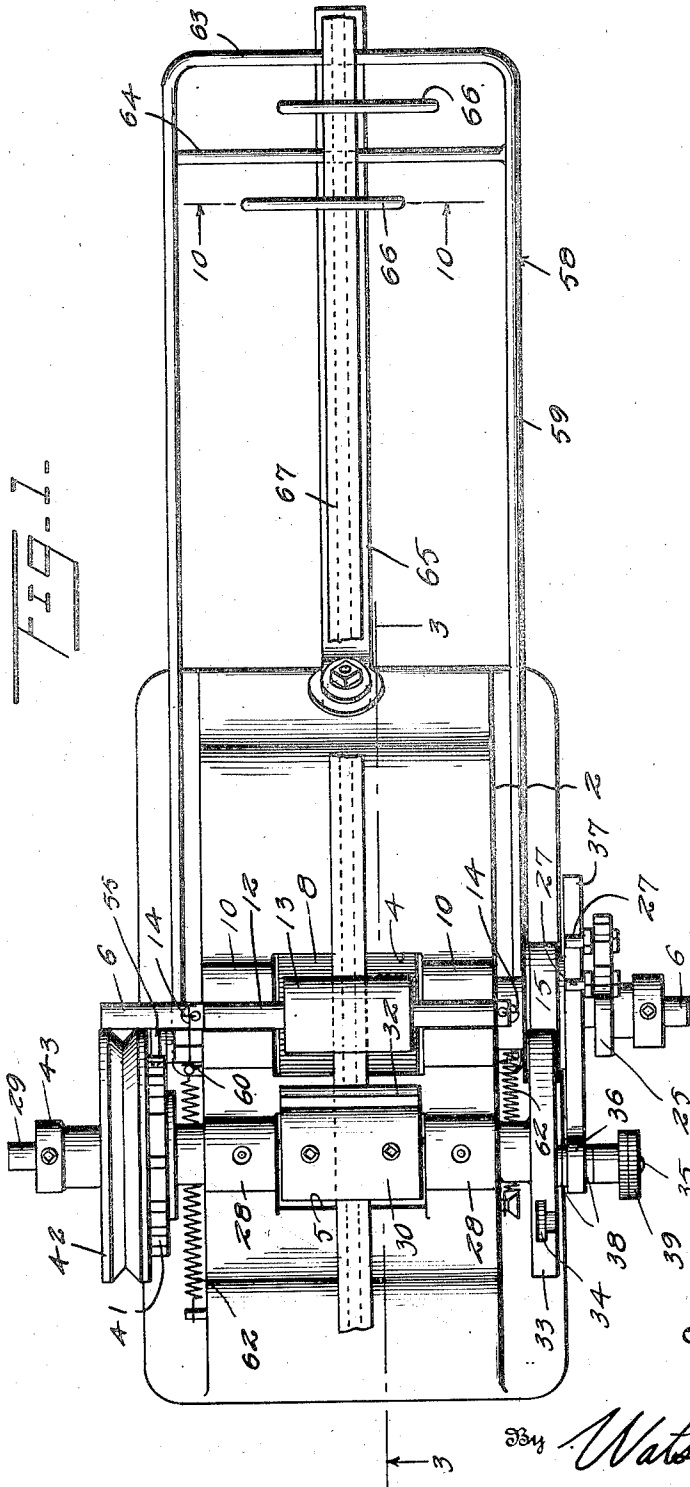
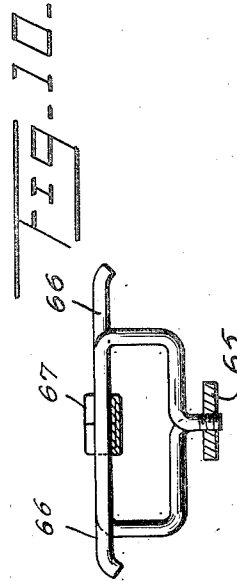
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TAPE CUTTING MACHINE

Filed Aug. 20, 1936

3 Sheets-Sheet 1



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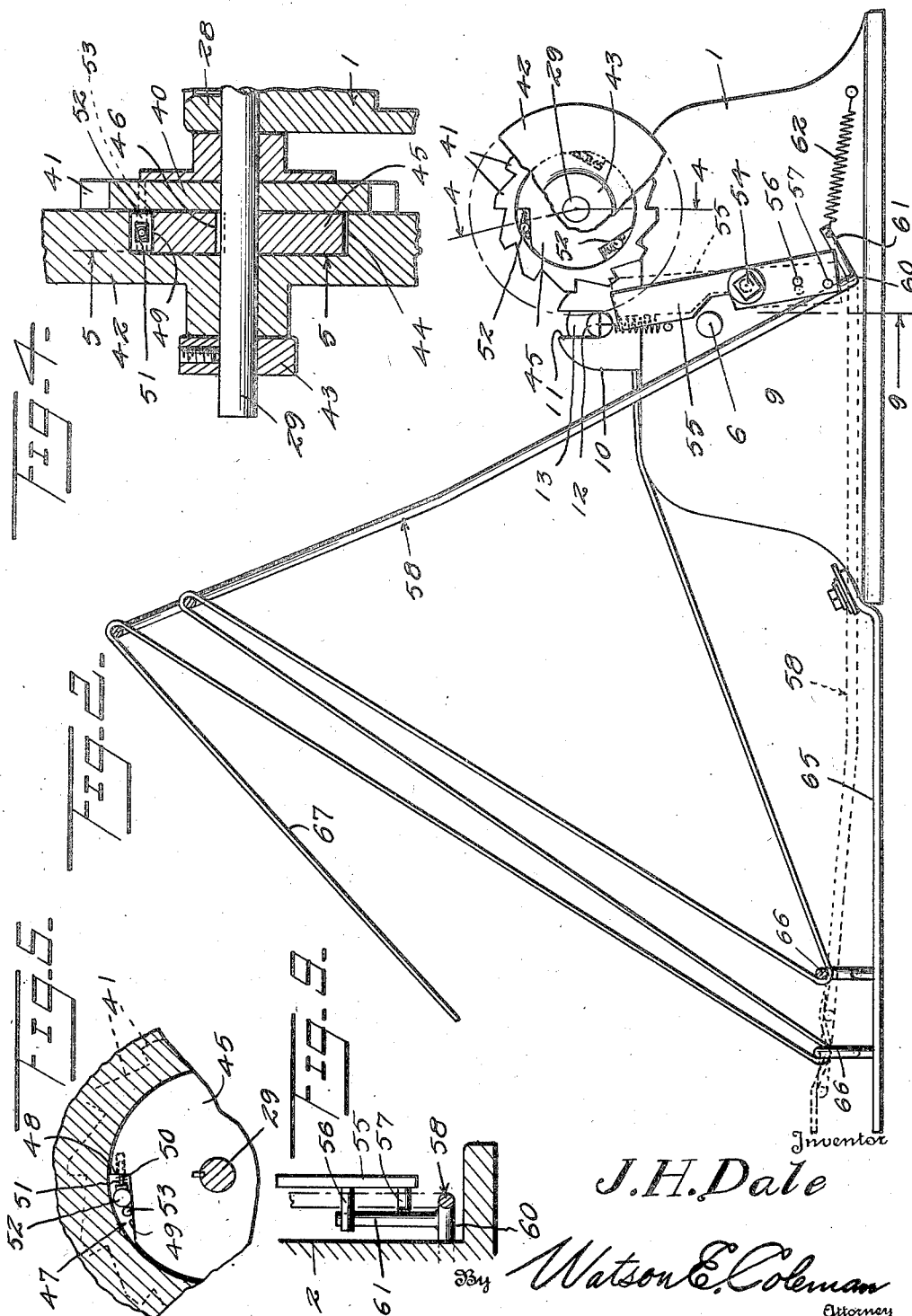
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UNITED STATES PATENT OFFICE

2,080,305

TAPE CUTTING MACHINE

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15 Claims. (Cl. 164—68)

This invention relates to improvements in machines designed for the cutting of regulated lengths of strip or tape-like material, and pertains particularly to a machine designed for cutting soft material such as cloth, for use as trousers belt loops, overall suspender short ends, or the like.

The primary object of the present invention is to provide a machine which is designed to be used in association with a sewing machine upon which continuous strips of lengths of material are sewn to be subsequently cut into lengths of predetermined character for use as belt loops or the like, in which a cutting mechanism is employed together with an automatically operated clutch unit or starting and stopping mechanism which is controlled by the belt loop or strip material being fed from the sewing machine whereby when a predetermined amount of the material is run through the sewing machine the clutch mechanism will be engaged to start the cutting machine and as the strip material is used up by the cutting machine the clutch mechanism will be automatically acted upon to stop the cutter mechanism until more tape has been prepared by the sewing machine.

Another object of the invention is to provide a novel means operating between the loop cutter and the sewing machine for starting and stopping the loop cutter in accordance with the quantity of loop material which has been formed by and run through the sewing machine.

A still further object of the invention is to provide in a device of the character herein described, a novel type of over-running clutch, by means of which a driving pulley may be kept moving at a constant speed and the cutting and feeding units of the device may be automatically started and stopped without changing the speed of the said pulley.

A still further object of the invention is to provide in a machine of the character herein described, novel means of intermittently feeding predetermined lengths of strip material to a rotary cutter.

A still further object is to provide a novel type of rotary cutter wherein a rotating knife is moved across a movable or rotary cutting anvil in such a manner as to effect a shearing action upon a cloth strip.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a view in top plan of the loop cutting machine embodying the present invention.

Fig. 2 is a view in side elevation of the machine.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1, in which the loop strip actuated clutch control is shown raised.

Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a view in elevation of the mechanism for effecting the step by step movement of the strip through the machine.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6.

Fig. 8 is a sectional view on the line 8—8 of Fig. 7.

Fig. 9 is a sectional view on the line 9—9 of Fig. 2.

Fig. 10 is a sectional view on the line 10—10 of Fig. 1.

Referring now more particularly to the drawings the numeral 1 generally designates the base of the present machine which may be formed in any suitable manner, but which is here illustrated as being in the form of a hollow casting having substantially vertical side walls 2 and a top wall 3. The top wall of the casting is provided with two openings 4 and 5 and extending transversely through the casting and thru the two side walls, are the shafts 6 and 7, the shaft 6 being in a lower plane than the shaft 7 and lying directly beneath the center of the opening 4, while the shaft 7 lies below the opening 5. The shaft 6 also has its ends extended beyond the outer sides of the two walls between which it is mounted, as shown in Fig. 1. Within the casting and secured to the shaft 6 is a feed roller 8

which has its peripheral surface roughened or grooved, as illustrated in Fig. 3, and this surface projects through the opening 4 to a plane slightly above the top surface of the wall 3 of the casting.

5 Secured on the shaft 7 within the casting is an anvil roller 9 which has the upper part thereof extending through the opening 5, in the same plane as the top of the roller 8, as shown in Fig. 3. This roller 9 may be formed of any suitable material, but is preferably formed of soft metal of a character to allow a cutting knife to be brought into firm contact with the surface thereof without injuring the edge of the knife.

10 Extending upwardly from the top wall 3 of the casting at each end of the opening 4, is a boss 10 in which a bearing slot 11 is formed, and extending across the feed roller 8 in longitudinal relation therewith is a shaft 12 which has its ends lying in the recesses 11 and which carries an idling roller 13, the periphery of which is in closed relation but spaced from the feed roller 8. The ends of the idling roller supporting shaft 12 are held down in their bearing slots by the springs 14, each of which has one end coupled with the shaft 12 while the other end is fixed in any suitable manner to the side of the boss or adjacent side wall of the casting, as shown in Figs. 2 and 6.

15 Keyed to the shaft 6 at one side of the casting 1 is an outwardly opening shell 15, the interior of the shell forming a chamber 16 in which is housed a disk 17 which forms a clutch roller carrier. This disk is provided in its periphery with a series of recesses 18, as shown in Fig. 8, and each recess has a radially extending wall 19 and a right-angularly directed wall 20 which extends to the periphery of the disk. The wall 20 forms with the circular interior wall of the chamber 16, a tapered housing for a clutch roller 21, and interposed between this roller and the radial wall 19 is a spring 22 which normally tends to force the roller into the reduced portion of the area so as to form a binding engagement between the shell 15 and the disk body 17 and thus operatively couple this body with the shaft 6. These 20 clutch roller bodies 21 together with the spring and the disk 17 form an over-running clutch so that the disk body 17 idles when turned in one direction and is operatively coupled with the shell 15 when turned in the opposite direction. Formed integral with the clutch roller carrying body 17 is a gear 23, the purpose of which will be hereinafter described, and in spaced relation with the gear 23 is a collar 24 which is fixed to the shaft 6, and mounted upon the shaft 6 between the collar and the gear is a plate 25, which carries a pair of pins 26 upon each of which a roller 27 is mounted. These rollers extend across but in spaced relation with the gear 23, for the purpose of maintaining a rack bar, hereinafter described, in operative connection with the gear.

25 At each end of the opening 5 there is formed a bearing 28 and between these bearings is mounted a drive shaft 29. Secured to the drive shaft between the bearings 28 is a knife carrier in the form of a cylindrical body 30 which is provided in its periphery with a longitudinally extending slot 31 which is designed to receive a cutting blade or knife 32, the cutting edge of which extends longitudinally of the body 30 and outwardly therefrom as shown in Fig. 3. The edge of the knife 32 is so disposed that when the body 30 is rotated by the shaft 29, it will come into contact with the periphery of the anvil roller 9 and as it passes the longitudinal center of this roller it will be pressed firmly against the same so that

any material lying on the surface of the anvil roller will be completely cut through. As shown in Fig. 3 the slot 31 is so disposed in the body 30 as to position the knife at one side of the radial center of the body. From this it will be apparent upon viewing Fig. 3, that when the body 30 is rotated in a clockwise direction, the knife 32 will not assume a vertical position until after it has passed the center line of the two shafts 7 and 29. It will thus meet the anvil roller while it is still at an inclination to the vertical, and in this way a positive cutting action is obtained as the edge of the knife will be pressed firmly against the anvil roller as it passes the vertical center thereof.

30 Upon the side of the casting where the gear 23 and the other mechanism illustrated in Fig. 7 is located, there is positioned and mounted upon the adjacent end of the shaft 29, a plate 33 which is provided in its outer face with the radially extending T-slot 34. Slidably disposed in the T-slot 34 is the headed end of a threaded pin 35 which passes through the yoke 36 which is formed at one end of a rack bar 37. Upon either side of this yoke 36 are friction washers 38 and threaded upon the outer end of the pin 35 is the securing nut 39 which binds the inner ones of the washers 38 against the face of the plate 33 so as to secure the head of the pin 35 in an adjusted position in the T-slot 34. The rack bar 37 extends across and has toothed engagement with the gear 23 and the back edge of the rack bar has the hold-down rollers 27 which are carried by the plate 25 extended thereacross and in contact therewith. The plate 25 is freely oscillatable upon the shaft 6 so that as the plate 33 is rotated and the rack bar 37 is given a reciprocal motion, it will also be given a movement in an arcuate path and the plate 25 will be oscillated on the shaft 6 as the rollers 27 operate to maintain the rack bar in engagement with the gear.

35 Upon the other end of the shaft 29 there is mounted adjacent to the casting body 1 a free-running ratchet wheel 40, the teeth of which are indicated by the numeral 41. This ratchet wheel bears against one side face of a pulley wheel 42 which is mounted on the shaft 29 but is not keyed thereto so that it may rotate freely thereon with the ratchet 40. A collar 43 fixed to the shaft 29 maintains the wheels 40 and 42 in operative relation, as illustrated in Fig. 4. The face of the pulley wheel 42 which is in opposition to the ratchet wheel 40 has a circular chamber 44 formed therein concentric with the shaft 29, and disposed within this circular chamber 44 is a clutch roller carrying disk 45 which is keyed to the shaft 29 as indicated by the numeral 46. This disk 45 has the peripheral recesses 47 each of which has a radially extending wall 48 and an angularly extending wall 49. Each radial wall 48 is apertured to receive a headed pin 50 which is encircled by a spring 51 and the spring, compressed between the head of the pin and the wall 48, normally tends to urge the pin head away from the said wall and against the clutch roller 52 which lies in and transversely of the recess. This clutch roller is designed to form a binding engagement between the wall 49 of the recess and the encircling wall of the chamber 44 in which the disk 45 is located, during one period of the operation of the machine.

40 The ratchet wheel 40 is provided with a series of pins 53, each of which extends from the side face of the ratchet wheel into a recess 47 across a roller 52 upon the opposite side of the same

from the head of the spring pressed pin 50. The springs 51 normally tend to urge the rollers 52 into the constricted portion of the recess 47 and in so doing tend to move the ratchet wheel 40 through their contact with the pins 53. Thus it will be seen that if the ratchet wheel 40 is not held against movement, rotary motion applied to the pulley 42 will be transmitted to the disk 45 through the medium of these clutch rollers 52 and thus effect the rotation of the shaft 29.

Upon the same side of the casting 1 as the pulley and clutch wheels, there is oscillatably mounted upon the supporting pin 54 the pawl 55. The mounting for this pawl is substantially midway of its ends and the upper end of the pawl is arranged to swing into engagement with the ratchet wheel tooth 41 when the pawl is oscillated in one direction. Adjacent its lower end the pawl 55 carries the two inwardly extending stop pins 56 and 57. These pins are spaced longitudinally of the pawl as shown in Fig. 2, and as is shown more clearly in Fig. 9 the upper pin 56 extends in toward the casting 1 further than the lower pin 57.

The numeral 58 generally designates a frame of elongated U-shaped design, between the ends of the legs 59 of which the casting 1 is disposed. These legs at their free ends are provided with inturned portions 60 which engage in suitable apertures in the adjacent walls of the casting so that the frame may oscillate vertically. As shown in Fig. 2 the center of oscillation for the frame passes directly beneath the lower end of the pawl 55 and the inturned portion 60 adjacent this pawl carries an upwardly extending finger 61 which is too close to the casting to engage the pin 57 but which is adapted to engage the pin 56 when the frame 58 is swung down to the lowered position in which it is shown in dotted outline in Fig. 2. At each side of the casting a spring 62 couples the pivoted end of the frame 58 with the casting body as shown in Figs. 2 and 6, in a manner to constantly urge the frame to swing to the upright position in which it is shown in Fig. 2.

The side members 59 of the frame 58 are connected by the outer cross bar 63 and in spaced parallel relation with this bar is an inner cross bar 64.

Secured to the lower part of the casting 1 upon the side from which the frame 58 extends, is an arm 65 which adjacent its outer end carries the two transversely disposed and spaced parallel guide bars 66. These guide bars 66 are arranged relative to the cross bars 63 and 64 so that when the outer end of the frame 58 is in its lowermost position one of the fixed guide bars 66 will be disposed centrally between and parallel with the cross bars 63 and 64 and the other guide bar 66 will be disposed inwardly of the inner cross bar 64, as illustrated in Fig. 1. The bars 66 are at a substantial elevation above the fixed supporting bar 65.

In the use of the belt loop cutting machine, the latter is placed behind the sewing machine upon which the folded material is sewn, the bar 65 being in a line with the machine needle. The cloth material to be finally made up into belt or other loops is first cut into narrow strips suitable to be fed through the folder of the stitching machine. This is usual factory practice. A length of the material is first stitched and the end of the same is then threaded through the guide bars 66 and the bars 63-64 so that the material will extend from the sewing machine over the

outer bar 63 of the frame 58, then under the outer one of the bars 66, across one bar 64, and then under the inner fixed bar 66 from which it is carried to the feeding roll 8. The end of the material is then fed through between the roll 8 and the roll 13 so that it will be gripped by these rolls and the strip of material is then drawn tight so that the clutch controlling frame 58 will be pulled or oscillated downwardly to the position in which it is shown in dotted outline in Fig. 2. The strip of material which is shown in Fig. 2, threaded over and under the guiding bars of the frame and of the fixed bar 65, is indicated by the numeral 67. When the frame 58 is drawn down as described, the finger 61 will be swung to a substantially vertical position where it will strike the pin 56 of the pawl 55 and the pawl will be oscillated so as to engage one of the teeth of the ratchet wheel 40. Since the pulley wheel 42 has a driving belt connected therewith which is constantly driven from a suitable line shaft, the pulley will turn at all times and when the pawl engages the ratchet wheel in the manner described it will check its movement and this will effect the application of pressure against the clutch rollers 52 to force them back against the tension of the springs 51 and thus release the driving connection which these rollers establish between the pulley 42 and the disk 45 which is keyed to the driving shaft 49. Thus the pulley will be allowed to run freely so long as the pawl 55 is in engagement with one of the teeth 41 of the ratchet wheel. The operator of the machine which is stitching the strip material 67 will continue to stitch the strip and pay out the same behind the sewing machine and as the length of stitched material increases the action of the springs 62 will cause the outer end of the frame 58 to gradually rise until it finally reaches the position in which it is shown in Fig. 2. When the frame arrives at this position the side bar 59 which is adjacent the pawl 55 will strike the lower pin 57 and effect the oscillation of the pawl 55 in a direction to release the ratchet wheel 40, and as soon as this occurs the springs 51 bearing against the ratchet rollers 52 will force the latter and the adjacent ratchet wheel carried pin 53 to move so that the rollers 52 will bind between the wall surfaces 49 and the encircling surface of the chamber 44, thus establishing an operative connection between the pulley 42 and the shaft 29. This will start the cutter machine to operating and as the knife 32 revolves the strip of material 67 will be fed across the anvil roller 9 and be cut in fixed lengths. The feeding of the strip material is effected through the reciprocation of the rack bar 37 and as will be readily apparent from the foregoing description of the overrunning clutch mechanism connecting the gear 23 with the shaft 6, the shaft will be given a certain amount of rotation each time the rack bar moves longitudinally in one direction across this shaft.

As it moves in the opposite direction the said over-running clutch mechanism will permit the gear 23 to idle or rotate freely without turning the shell 15 which is coupled with the shaft 6. It will be readily apparent that the length of the pieces of strip material which are cut by the knife 32 can be varied by moving the pivot screw 35 relative to the rotating center of the disk 33 to which it is eccentrically attached.

The novel hold-down device for the rack bar 37 which comprises the plate 25 oscillatably mounted on the shaft 6 and the rollers carried by the plate which lie across the back of the rack

bar, permits the rack bar to have the necessary movement in an arcuate path while it is reciprocating and at the same time preventing the teeth of the rack bar and those of the gear from becoming disengaged one from the other.

The cutter device is preferably operated independently of the power means employed for driving the stitching machine used in forming the loop strip 67 and it is driven to cut the strip material at about twenty percent faster than the same can be stitched and fed out from the sewing machine. Consequently the strip material will gradually be used up by the cutting machine faster than it is produced by the stitcher and the frame 58 will be drawn downwardly until it reaches its lowermost position where it will operate the pawl 55 to throw out or disengage the clutch mechanism coupling the pulley with the shaft 29 and the cutting operation of the machine will be stopped.

There is thus provided a flexible clutch mechanism which is directly controlled by the production of the stitching machine, the cutting machine operating intermittently while the stitching machine forming the strip material 67 is continuously in operation. It will thus be seen that while the cutter machine is directly under the control of the sewing machine, it does not have any mechanical connection to it and does not obtain its operating power from the sewing machine but may be driven from the same or common source of power or from an independent source with equal facility.

What is claimed, is:

1. In a cutter for material of ribbon or tape-like character, a base body, a rotary cutting surface carried thereby, a rotatable cutter adapted to make intermittent cutting contacts with said surface, constantly operating driving means for the cutter, a clutch mechanism normally coupling the driving means with the cutter, and a material slack take-up means controlling the engagement and disengagement of said clutch in response to the rate at which the slack in the material is reduced in being supplied to the cutter.

2. In a cutter for material of ribbon or tape like character, a body, cutting means on the body, means for feeding the material in a manner to constantly supply definite lengths for cutting, means for applying operating power to the cutting means, means for continuing or discontinuing the application of said power, and means controlled by the amount of slack in the material between the source of supply therefor and the feeding means to effect a continuance or discontinuance of the application of power to the cutting means.

3. In a cutter for material of ribbon or tape-like character, a rotary knife having its cutting edge extending longitudinally of its axis of rotation, a rotatable body providing a cutting surface against which said knife intermittently contacts, a power wheel, clutch means operatively coupling said wheel with the knife, and mechanism normally tending to maintain the clutch means in a prescribed driving relation with the knife and having the material connected therewith between the source of supply therefor and the knife whereby the degree of slack in the material will effect, through the mechanism, a change in said driving relation.

4. In a cutter for material of ribbon or tape-like character, a rotary knife having the cutting edge extending longitudinally of its axis of rota-

tion, a rotatable body providing a cutting surface against which said knife intermittently contacts, a power wheel, clutch means operatively coupling said wheel with the knife, a vertically oscillatable unit, resilient means normally urging said unit to a raised position, a fixed guide, means constituting a guide forming part of said unit, said fixed guide and the unit carrying guides being designed to have the material threaded there-through in passing from its source of supply to the cutter, and means actuated by said unit to affect the relation of the clutch to the knife when the unit is in either its raised or lowered position.

5. In a cutter for tape or ribbon-like material, a pair of spaced rollers constituting feeding means between which the material passes, a rotatable cutting surface adjacent said rollers, a rotatable knife over said surface, said knife having its cutting edge extending longitudinally of the axis of rotation, driving means for said knife, clutch mechanism adapted to operatively couple the driving means with the knife, a fixed material guide, a vertically oscillatable material guide, the said material being threaded alternately from an oscillatable to a fixed guide before passing between said feed rollers, means normally urging the upward movement of said oscillatable guide to take up slack in the material, and means actuated by the oscillatable guide whereby said clutch will be made to couple the driving means with the knife when the oscillatable guide is raised and to uncouple the connection between the driving means and the knife when the guide is lowered.

6. In a cutter for tape or ribbon-like material, a pair of spaced rollers constituting feeding means between which the material passes, a rotatable cutting surface adjacent said rollers, a rotatable knife over said surface, said knife having its cutting edge extending longitudinally of the axis of rotation, driving means for said knife, clutch mechanism adapted to operatively couple the driving means with the knife, a fixed material guide, a vertically oscillatable material guide, the said material being threaded alternately from and oscillatable to a fixed guide before passing between said feed rollers, means normally urging the upward movement of said oscillatable guide to take up slack in the material, means actuated by the oscillatable guide whereby said clutch will be made to couple the driving means with the knife when the oscillatable guide is raised and to uncouple the connection between the driving means and the knife when the guide is lowered, and mechanism coupling the rotary supporting means for the knife with said feed rollers whereby a step-by-step movement of the material is effected while said clutch is engaged.

7. In a cutter for ribbon or tape-like material, a rotatably mounted roller cutting anvil, a shaft rotatably mounted upon the anvil, a knife blade extending longitudinally of and carried by said shaft, said blade being positioned relative to the anvil whereby its cutting edge will be brought into firm contact with the anvil surface upon each rotation of the shaft, means for feeding the material across the surface of the anvil in step-by-step movements, a drive pulley mounted for free rotation on the shaft, a ratchet wheel mounted adjacent the pulley for free rotation on the shaft, a pawl member oscillatably mounted for engagement with the ratchet, a fixed guide means for said material, movable guide means mounted for vertical oscillation relative to the fixed guide, the

material being threaded through said fixed and movable guide means in passing to the cutter, resilient means normally urging the movable guide to a raised position, means whereby the movable guide will effect the oscillation of said pawl relative to the ratchet when the guide is in either its raised or lowered position, and a clutch mechanism between said ratchet and pulley which is made inoperative to couple the ratchet and pulley when the pawl is oscillated into engagement with the ratchet.

8. A cutter for ribbon or tape-like material comprising an elongated rotatably mounted cutting knife in which the cutting edge extends longitudinally of the axis of rotation, a cutting surface with which the knife contacts at each rotation, a pulley wheel and a toothed ratchet wheel mounted in side-by-side relation for rotation upon the same axis as the knife, said pulley wheel having a chambered side opposing the ratchet wheel, a disk within said chamber and constantly operatively coupled with the knife, said disk having peripheral recesses each of which has a portion of the chamber wall extending thereacross, spring-pressed rotatable wedging members each in a peripheral recess and normally forming a frictional coupling between the disk and the pulley, pin members carried by said ratchet wheel and extending into said recesses across the wedging members whereby application of a force opposing the rotation of the ratchet wheel will effect the disengagement of the wedge members from the pulley to allow the latter to run free, a pawl member oscillatably mounted adjacent the ratchet, and means controlled by the amount of slack existing in the material as it passes from the source of supply to said cutter for controlling the operation of said pawl.

9. In a cutter for tape or ribbon-like material, a cutting knife, a rotary shaft carrying the knife and having the latter extending longitudinally thereof, a cutting surface beneath the knife, a free-running pulley mounted upon said shaft, clutch means for establishing connection between the shaft and the pulley, means for effecting a step-by-step feeding of material beneath the knife, an elongated frame member oscillatably mounted at one end in proximity to the clutch mechanism, the opposite end of the frame constituting a guide for the material, resilient means normally tending to oscillate the frame in a manner to raise the material guiding end thereof, a fixed guide arranged to lie adjacent the oscillatable guide when the latter is in its lowest position, the material being slidable past and through the fixed and oscillatable guides in its passage to the feeding means, and mechanism actuated by the oscillatable guide whereby said clutch will be engaged when the oscillatable guide is raised and disengaged when the same is lowered.

10. In a cutter for tape or ribbon-like material, a cutting knife, a rotary shaft carrying the knife and having the latter extending longitudinally thereof, a cutting surface beneath the knife, a free-running pulley mounted upon said shaft, clutch means for establishing connection between the shaft and the pulley, means for effecting a step-by-step feeding of material beneath the knife, an elongated frame member oscillatably mounted at one end in proximity to the clutch mechanism, the opposite end of the frame constituting a guide for the material, resilient means normally tending to oscillate the frame in a man-

ner to raise the material guiding end thereof, a fixed guide arranged to lie adjacent the oscillatable guide when the latter is in its lowest position, the material being slidable past and thru the fixed and oscillatable guides in its passage to the feeding means, mechanism actuated by the oscillatable guide whereby said clutch will be engaged when the oscillatable guide is raised and disengaged when the same is lowered, a gear associated with the top feeding means, a rack eccentrically pivotally connected at one end with the knife carrying shaft and engaging the gear, and means whereby the movement of the rack in one direction only will effect the rotation of the feeding means.

11. In a device for cutting predetermined lengths of material, a driven rotary cutter, a rotatable cutting anvil beneath the cutter, a pair of material feed rollers adjacent the anvil between which the material is fed to the cutter, a gear mounted concentrically with one of said feed rollers, an over-running clutch coupling the gear with the said feed roller, a rack disposed across and in toothed connection with the gear, a pivotal driving connection between an end of the rack and the knife and eccentric to the axis of rotation of the knife, and oscillatably mounted elements having sliding engagement with the back of said rack to effect a constant connection of the rack with the gear.

12. In a device for cutting predetermined lengths of material, a driven rotary cutter, a rotatable cutting anvil beneath the cutter, a pair of material feed rollers adjacent the anvil between which the material is fed to the cutter, a gear mounted concentrically with one of said feed rollers, an over-running clutch coupling the gear with the said feed roller, a rack disposed across and in toothed connection with the gear, a pivotal driving connection between an end of the rack and the knife and eccentric to the axis of rotation of the knife, a plate member oscillatably mounted upon the same center as said gear, and a pair of roller members supported by the plate and extending from one face thereof across the back of the rack to maintain the latter in engagement with the gear.

13. In a cutter of the character described, a rotatably mounted cylindrical cutting surface, an elongated body disposed in spaced parallel relation with said surface and mounted for rotation on its long axis, said body having a slot formed longitudinally thereof, means for rotating the body, and a cutting blade secured in said slot and adapted when rotated with the body to have its cutting edge brought into contact with the cutting surface, said slot being in the elongated body in such relation to the radius thereof as to position the blade in a plane parallel with the plane common to the rotary axes of the cutting surface and body, after it has passed such common plane.

14. In a cutter for strip material, a cutting surface, means for advancing the material across said surface, a cutting blade movable relative to and adapted to periodically contact the surface, a rotatable element designed for connection with a power delivering means, clutch means engageable for coupling said element with the cutting blade to impart cutting movement thereto, means for actuating the material advancing means in a manner to move the material a definite distance, and means operating automatically to disengage said clutch for a predetermined period when all slack in the material

is taken up between the advancing means and the material source of supply.

15. In a cutter for strip material, a cutting surface, means for advancing the material across
5 said surface, a cutting blade movable relative to and adapted to periodically contact the surface, a rotatable element designed for connection with a power delivering means, clutch means engage-
10 able for coupling said element with the cutting blade to impart a cutting movement thereto, means for actuating the material advancing

means in a manner to move the material a definite distance, an oscillatable clutch control lever having clutch-engaged and clutch-disengaged positions, and means having engagement with the material between the source of supply therefor
5 and said advancing means for moving said control lever in clutch-disengaged position when no slack exists in the material between said source and the advancing means.

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