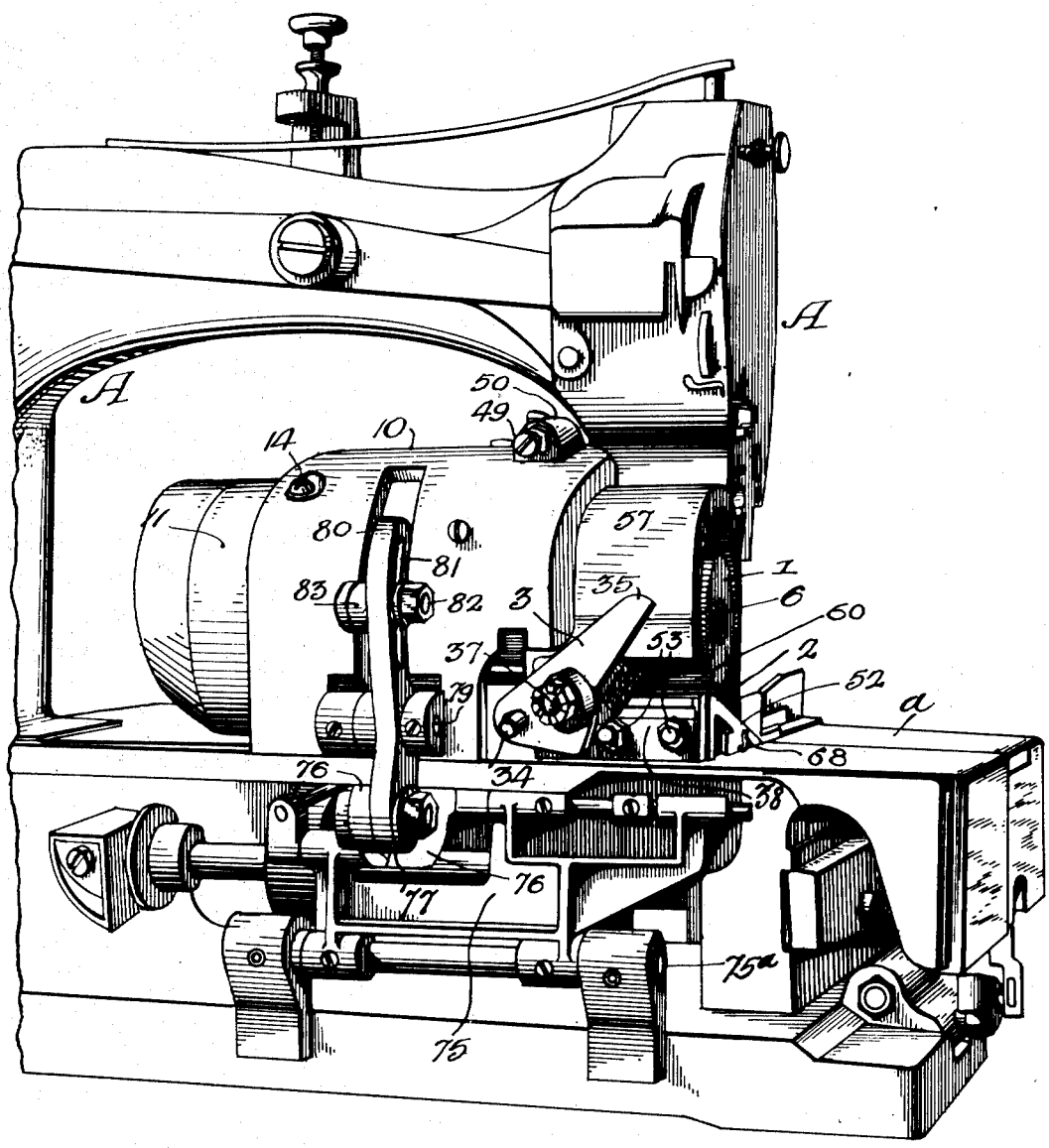
Dec. 13, 1938. G. D. COLLAR 2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Filed Nov. 19, 1935 5 Sheets-Sheet 1

Fig. 1.



Inventor:
George D. Collar
by his Attorneys
Howson & Howson

Dec. 13, 1938. G. D. COLLAR 2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Filed Nov. 19, 1935 5 Sheets-Sheet 2

Fig. 12

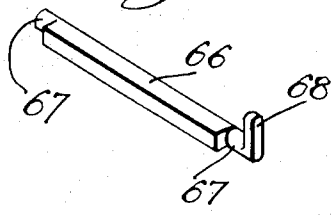


Fig. 11

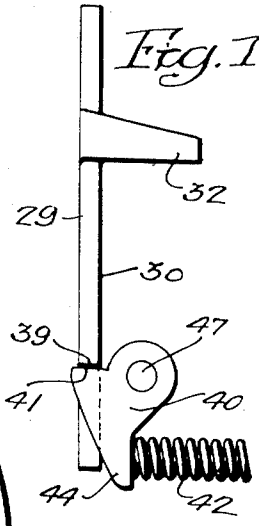
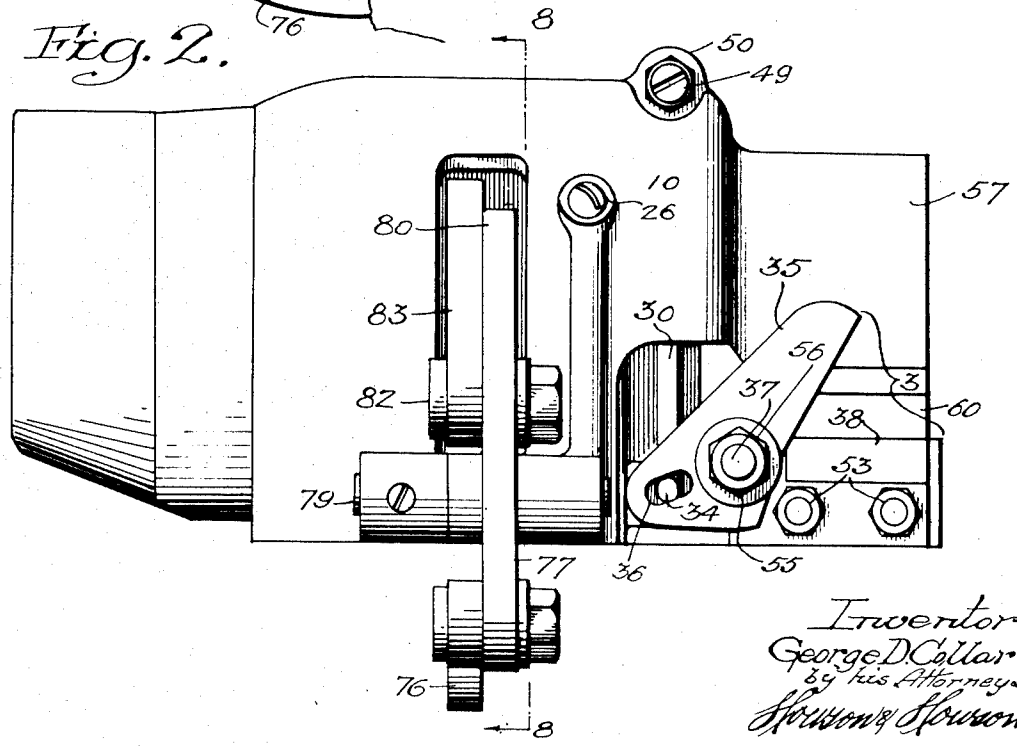


Fig. 3.

Fig. 2.



Inventor
George D. Collar
by his Attorneys
Howson & Howson

Dec. 13, 1938. G. D. COLLAR 2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Filed Nov. 19, 1935 5 Sheets-Sheet 3

Fig. 4.

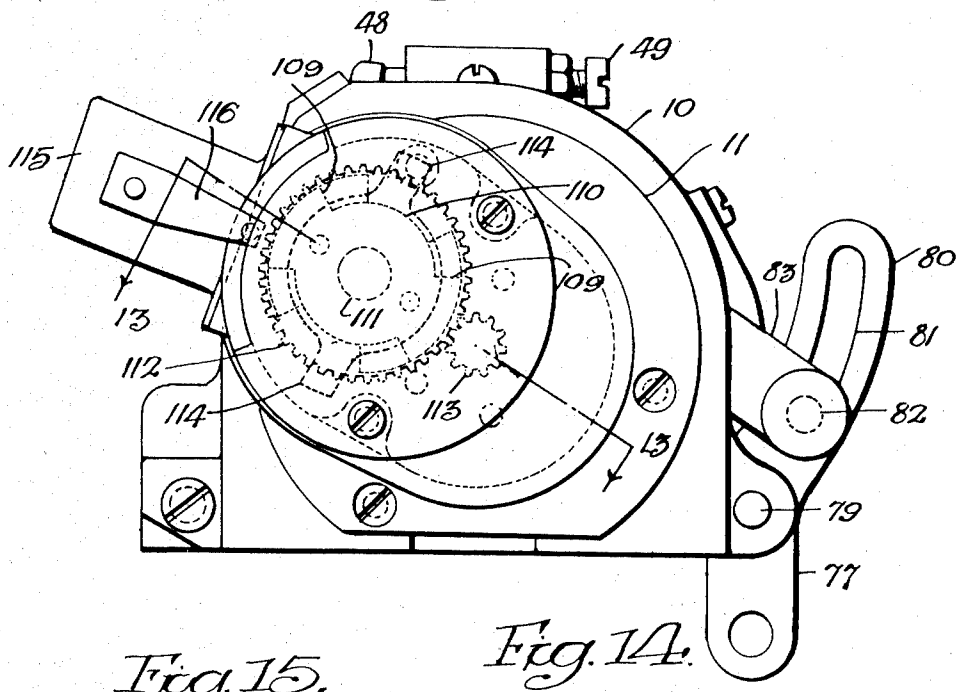


Fig. 15.

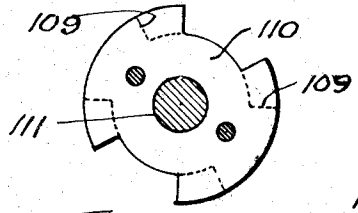


Fig. 14.

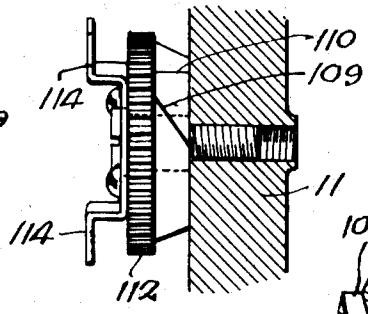


Fig. 16.

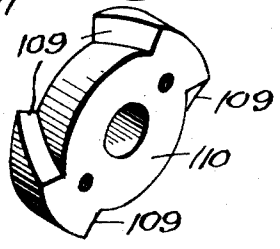


Fig. 17.

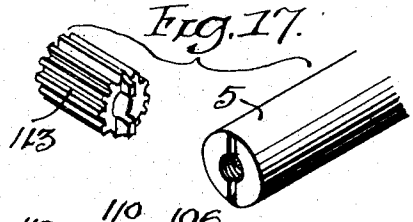
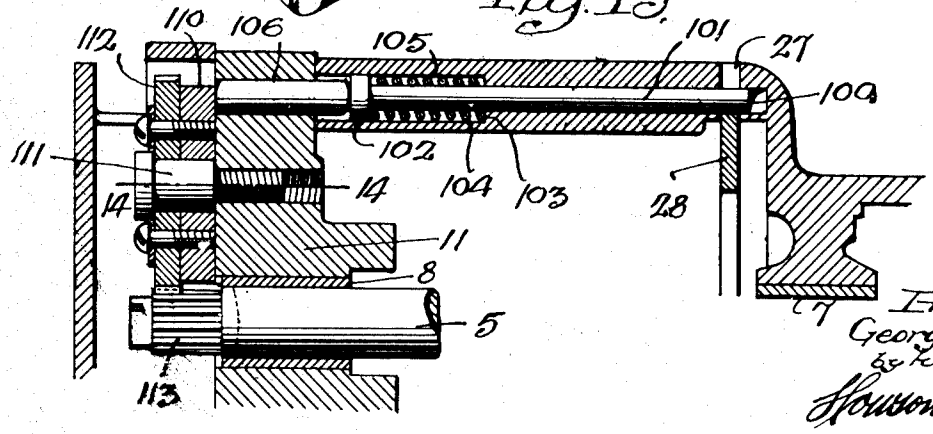


Fig. 13.



Inventor
George D. Collar
by his Attorneys
Howson & Howson

Dec. 13, 1938. G. D. COLLAR 2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Filed Nov. 19, 1935 5 Sheets-Sheet 4

Fig. 5.

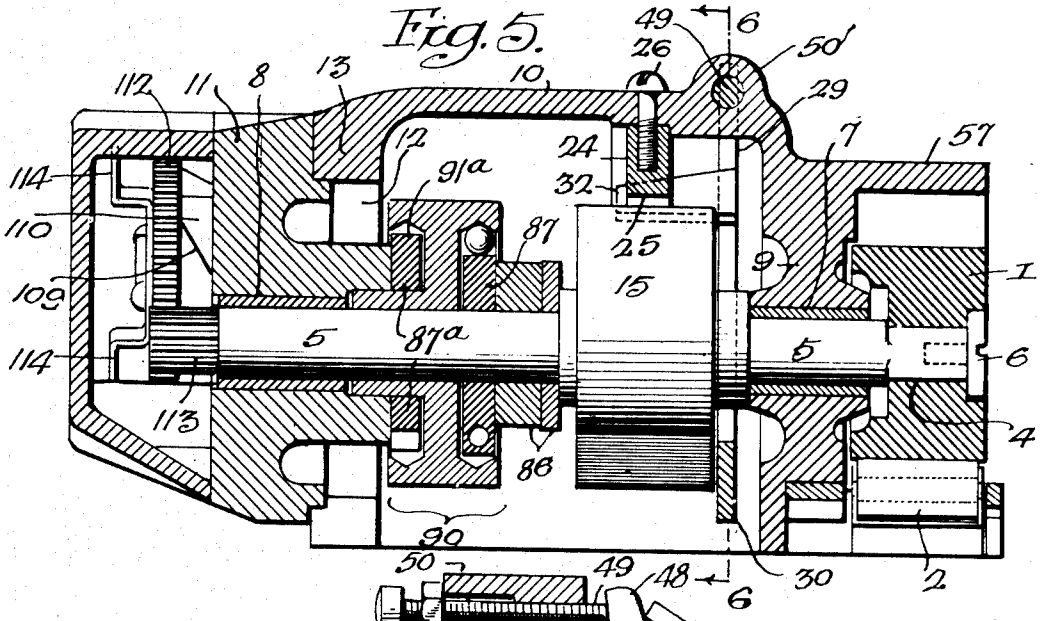


Fig. 6.

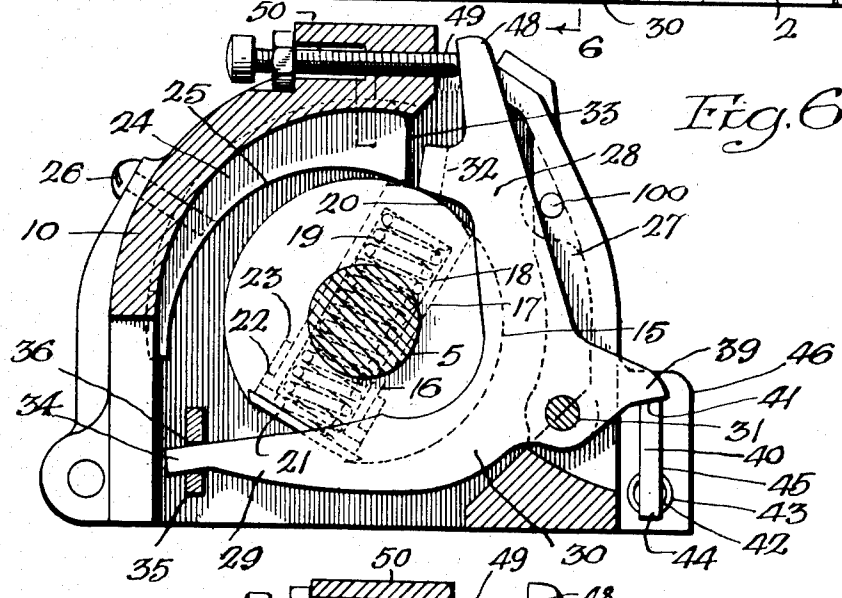
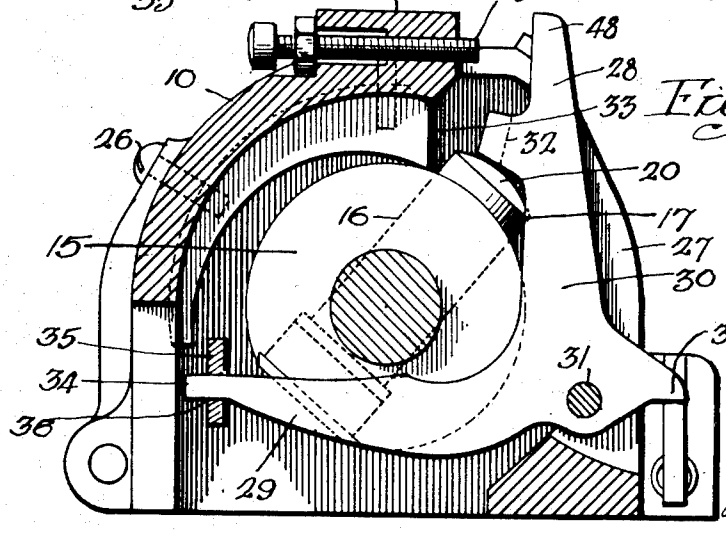


Fig. 7.



Inventor
George D. Collar
by his Attorneys
Howson & Howson

Dec. 13, 1938. G. D. COLLAR 2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

Filed Nov. 19, 1935 5 Sheets-Sheet 5

Fig. 8.

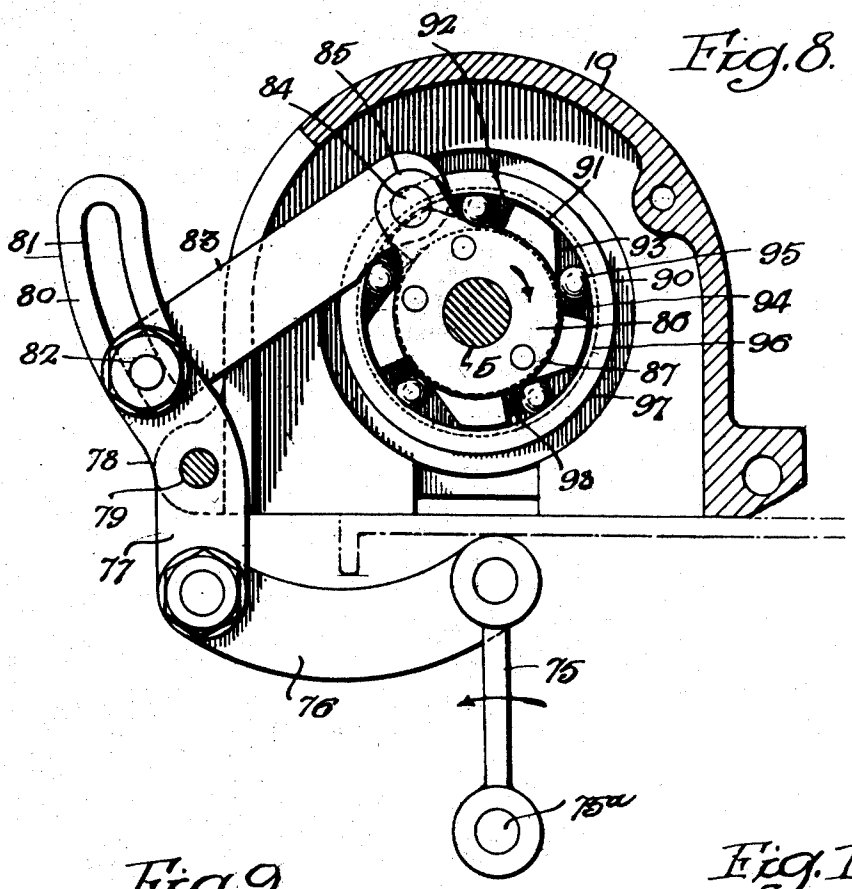


Fig. 9.

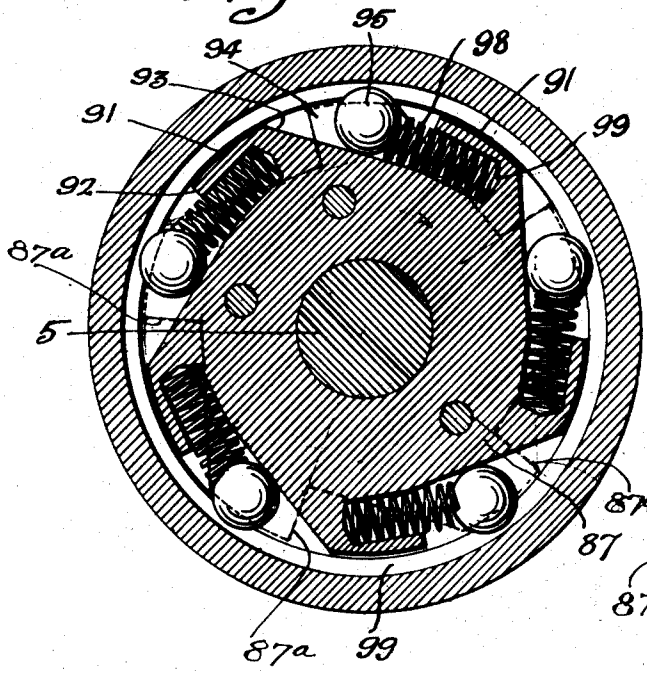
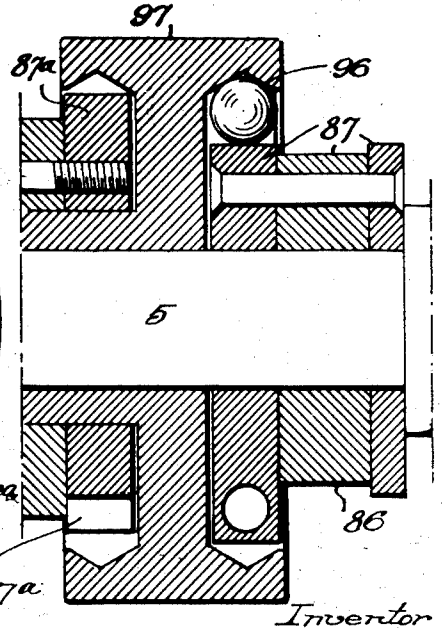


Fig. 10.



Inventor
George D. Collar
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE

2,140,416

MEASURING AND CUTTING ATTACHMENT FOR SEWING MACHINES

George D. Collar, Glenside, Pa., assignor to Fidelity Machine Company, Wilmington, Del., a corporation of Delaware

Application November 19, 1935, Serial No. 50,610

12 Claims. (Cl. 164—17.5)

This invention relates to a device which is adapted to be applied to and actuated by and in conjunction with a sewing machine, for measuring and cutting, into predetermined lengths, a continuous strip of fabric which has been folded inwardly along its opposite side edges and sewn longitudinally by the sewing machine, said lengths being adapted for use, for example, as belt, buckle and other straps for men's trousers, children's coats, suit and dresses, ladies' coats, dresses, slips, etc. or for other purposes.

The construction and operation of the device will be fully disclosed hereinafter, reference being had to the accompanying drawings, of which:

Fig. 1 is a perspective view illustrating the device as applied to a conventional type of sewing machine;

Fig. 2 is a rear view of the device detached from the sewing machine;

Fig. 3 is a right end elevation of the device as viewed in Fig. 2;

Fig. 4 is a left end elevation;

Fig. 5 is a longitudinal sectional elevation of the device taken on the line 5—5, Fig. 3;

Fig. 6 is a transverse sectional elevation taken on the line 6—6, Fig. 5, with the shear-operating lever of the device in the shear-opening position;

Fig. 7 is a view similar to Fig. 3, but showing the shear-actuating lever in the shear-closing or cutting position;

Fig. 8 is a transverse sectional elevation taken on the line 8—8, Fig. 2;

Figs. 9 and 10 are enlarged transverse and longitudinal sectional elevations respectively of the drive and lock clutch mechanism of the device;

Fig. 11 is a detail view of the shear lever return mechanism;

Fig. 12 is a perspective view of the press roll pressure control means;

Fig. 13 is a sectional plan view taken on the line 13—13, Fig. 4, showing shear lever locking means for producing multi-length straps;

Fig. 14 is a sectional elevation taken on the line 14—14, Fig. 13;

Figs. 15 and 16 are face and perspective views respectively of the multi-length control cam; and

Fig. 17 is a detached perspective view of a detail of the invention.

The device forming the subject matter of the present invention primarily comprises a feeding and measuring wheel or roller 1 and a cooperating press roll 2 (see Figs. 1 and 3) which receive a step-by-step or intermittent rotary movement in synchronization with a corresponding motion of the feeding mechanism (not shown) of any sewing machine to which the device is attached, whereby the strip of fabric being sewn by the sewing machine is measured by the roller 1 as it leaves the stitching station of the sewing machine.

The device also includes a shearing means 3 which is controlled by the measuring wheel 1 and which is actuated intermittently to cut the fabric strip into pieces of predetermined lengths.

The strip, when used for trouser-belt and/or buckle straps, etc. usually consists of two or three plies of material which is formed by folding a relatively wide strip inwardly along its longitudinal edges until the two parallel edges abut or overlap each other. These edges are sewed down tightly to the underlying main portion of the strip by a single or double parallel longitudinally extending row or rows of stitches produced by the stitching and feeding mechanism of the sewing machine.

The sewing machine is set to produce a predetermined number of stitches per inch, which may be eight, ten, twelve, etc. according to the weight and texture of the fabric and the use to which the straps are to be put.

The driving mechanism for the measuring wheel 1 is arranged to be driven from and by the same mechanism of the sewing machine which effects the intermittent step-by-step movement of the feed dogs or rollers of the sewing machine, in order that the measuring wheel will receive a predetermined peripheral step-by-step movement, for example, an equal number of intermittent movements with the feeding mechanism of the sewing machine, i. e. one for each stitch or any desired number of stitches produced.

The extent of each of the intermittent movements of the measuring wheel 1 is preferably greater, and never less, than the extent of each single intermittent movement of the feeding mechanism of the sewing machine, thus the strip is always maintained in a taut condition between the measuring wheel and the stitching mechanism.

The actual measuring is accomplished more by counting the number of stitches which would be made in a strap of the length desired, for example, if a strip of three inches long is desired and the sewing machine is set to produce ten stitches to the inch, when the measuring or counting wheel 1 has received thirty intermittent movements, effecting a complete revolution of the measuring or counting wheel 1, the shear 3 will operate to cut off the measured length of the strip. This is made possible by providing for slippage between

the peripheral surface of the wheel 1 and the strip engaged thereby and by the press roll 2. This keeps the strip taut and also allows for making strips of variable lengths within certain limits.

If extra long straps are desired, the device is equipped with means whereby the shear may be held against actuation after the measuring wheel 1 makes a full revolution and is permitted to operate only on every second or other desired number of revolutions of the measuring wheel, according to the length of the strap desired.

In the present case, the measuring wheel 1 is mounted on a diametrically reduced end 4 of a shaft 5, said end being flattened on at least one side and the bore of the wheel 1 being similarly shaped to key or spline the wheel to the shaft. The shaft 5 is axially bored and the wheel 1 is counter-bored to receive a screw 6 by which the wheel is removably held on the shaft.

The shaft 5 is rotatably mounted in bearing bushings 7 and 8, the first of which is secured in one end wall 9 of a housing 10, while the bearing 8 is mounted in an end cap 11 which removably closes an opening 12 formed in the second end wall 13 of the housing 10.

The housing 10 is adapted to be secured to the bed plate a of a sewing machine A, in any suitable manner, such, for example, by screws passing upwardly through the bed plate and tapped into the housing or by screws 14 passing down through the housing and tapped into the bed plate, or both.

The shaft 5 is formed with an integral enlargement 15 intermediate its opposite ends and which is bored transversely to the axis of the shaft 5, as illustrated at 16, for the reception of a hollow cylindrical plunger 17.

The plunger 17 is counterbored at 18 for the reception of a spring 19, one end of which bears against the closed end 20 of the plunger. The opposite end of the spring 19 bears against a plate 21 having a dovetail sliding fit in and transversely of the shaft enlargement 15, closing one end of the bore 16 thereof. The plunger 17 has an annular shoulder 22 adapted to engage a similar shoulder 23 formed in the transverse boring 17, to limit the movement of the plunger under the influence of the spring 19.

Normally the head 20 of the plunger 17 is engaged and pressed inwardly to a position substantially coincident with the peripheral surface of the shaft enlargement 15 by a cam surface 25 which is formed on a segmental cam plate 24 which is secured in the housing 10, in a position transversely of the shaft 5, by screws 26.

Adjacent one end of the shaft enlargement 15 the housing 10 is slotted transversely as indicated at 27 for the reception of a shear-operating lever 30. The shear-operating lever 30 is in the form of a bell crank lever, comprising arms 29 and 28 respectively disposed substantially at right angles to each other and substantially radial to the pivot 31 for said lever.

The arm 28 of the bell crank lever 30 is provided with a lateral projection or lug 32 which extends laterally from said lever across the face of the shaft enlargement 15, in a position to be engaged by the end 20 of the spring-pressed plunger 17 carried by said shaft enlargement 15 when the shaft 5 rotates to a position permitting the plunger 17 to be projected outwardly beyond the peripheral surface of the shaft enlargement 15, under the influence of the spring 19, as the plunger moves beyond the end 33 of the segmental cam 24.

The arm 29 of the shear-operating bell crank lever 30 has a reduced end 34 arranged to operate in a radial slot 36 formed in the movable blade 35 of the shear mechanism 3, whereby, as the plunger 17 is projected outwardly from the periphery of the shaft enlargement 15 into contact with the lateral projection 32 on the shear-operating lever 30, the said movable blade 35 of the shears is turned rapidly about its pivot 37 to effect shearing action of the strip which is then passing between the movable blade 35 and the stationary blade 38 of the shear mechanism 3.

The shear-operating bell crank lever 30 is returned to its shear-opening position as soon as the plunger 37 moves from under the projection 32 on said lever, by a third arm 39 on said lever being engaged by a shouldered projection 41 on a return lever 40 under the influence of a spring 42 which is housed in a cavity 43 formed in the housing 10 and bearing against a second arm 44 of the lever 40, said return lever 40 being mounted in a slot 45 formed in an extension 46 of the housing 10 and pivoting about a pin 47 which is mounted in the extension 46 and projects across the slot 45.

The bell crank shear-operating lever 30 is maintained in correct shear-opening position by the end 48 of the arm 28 of said lever bearing against one end of an adjustable stop screw 49 which is mounted in a lug 50 formed on the housing 10.

The pivot stud 37 for the movable blade 35 of the shear mechanism 3 is carried by and projects outwardly from the fixed blade 38 of said shear, said fixed blade being secured to one end 51 of the feed plate 52 by bolts 53 whereby the shearing mechanism 3 may be removed as a unit for resharpening, etc.

The movable blade 35 is pressed into cutting engagement with the fixed blade 38 by a spring 54 which encircles the pivot stud 37 between the outer face of the movable blade 35 and a washer 55 which is retained on the pivot stud 37 by a nut 56, by removal of which the movable blade 35 of the shear may be readily detached from the unit.

The measuring wheel 1 is housed within an extension 57 formed on the one end of the housing 10 and the feed plate 52 is secured to the housing 10. As shown in Fig. 3, the feed plate 52 has an inclined fabric-guiding surface 58 which extends at an angle from substantially the plane of the top of the bed plate a of the sewing machine to the cutting edge of the fixed blade 38 of the shears. The lower edge of the housing extension 57 is cut away substantially parallel to the surface 58 of the feed plate 52 to provide a channel 60, through which the strip of material being operated upon passes and is guided to the bite of the rolls 1 and 2 and from said bite to and between the open blades of the shearing mechanism 3.

The upper surface 58 of the feed table 52 is recessed as shown at 61 for the reception of the presser roll 2, said presser roll being rotatably mounted on a pin 62 carried by and extending between ears 63 which are formed at the outer end of the presser spring 64, the opposite end of said spring being secured to the under side of the feed table 52 as by rivets or screws 65.

The degree of pressure exerted by the roller 2 to hold the strip of fabric against the counting or measuring wheel 1 and the extent of the grip of said roll upon the material passing through the channel 60 may be regulated, released, or applied by a cam element 66 having trunnions 67, 67 rotatably mounted in the under part of the feed

table 52 and adapted to be turned by a lever 68 disposed at the side of the feed plate to control the pressure of the roll 2 against the roll 1.

The strip of material is guided from the stitching and feeding mechanism of the sewing machine into the channel 60 of the measuring and cutting device by a guide 70 which is secured to the housing 10 by screws 69.

Rotation of the shaft 5 is effected in intermittent steps in accordance with the intermittent feeding movements of the feed dogs or other feeding mechanism of the sewing machine, once for each stitch produced by the stitching mechanism, by and from a rocker element 75 (see Figs. 1 and 8) which replaces a somewhat similar rocker element which normally forms a part of the regular feeding mechanism of the sewing machine. The rocker 75 is oscillated about its pivot 75a in synchronization with each reciprocation of the feed dogs of the sewing machine and in timed relation to each of the stitch-forming reciprocations of the needle bar of the machine.

The rocker 75 is connected by a link 76 to one arm 77 of a driving lever 78 which is pivoted at 79 to the housing 10 of the device. The second arm 80 of the lever 78 is provided with an arcuate or segmental slot 81 for receiving a stud 82 which is arranged to be adjusted longitudinally of the slot 81 and to be clamped in any desired position therealong. The stud 82 connects one end of a driving link 83 to the arm 80 of the driving lever 78. The second end of the driving link 83 is pivotally connected at 84 to an arm 85 which is formed on or secured to the hub 86 of the internal member 87 of a roller or ball clutch 90, said internal member 87 being loosely mounted on the shaft 5 for oscillation about the axis thereof.

The internal member 87 of the clutch 90 is provided with substantially radially extending lugs or arms 91 each having a radially extending surface 92 at one side and a relatively angular surface 93 at opposite side, circumferentially of the internal member 87. In recess 94 formed between the radial surface 92 of one lug 91 and the adjacent angular surface 93 of the next of said projections 91 is a ball or roller 95 which is normally pressed outwardly, with respect to the radial surface 92, into the angle formed by the surface 93 of the lug and the internal peripheral surface 96 of the external member 97 of the clutch 90, by a spring 98 having one end seated in a bore 99 formed in the projection 91 and its opposite end bearing against the roller or ball 95.

In the present instance, the intermediate members 95 are in the form of balls and are seated in a V-shaped groove 96 formed in the internal peripheral surface 96 of the outer member 97 of the clutch 90.

By the means just described, each time a stitch is formed by the sewing machine and the rocker 75 oscillates in the direction of the arrow shown in Fig. 8 to operate the feed dogs of the machine and thereby advance the sewed material away from the stitching point of the machine, the internal clutch member 87 is rocked in the opposite direction. Through the intermediate elements 95 jamming between the surfaces 93 and 96, the member 87 rotates the outer member 97 of the clutch 90 and consequently the shaft 5 and the counting or measuring wheel 1. Oscillation of the rocker 75 in the opposite direction releases the internal member 87 from the external member 97 of the clutch 90.

During the return rocking of the clutch member 87, any tendency of the wheel 1, shaft 5 or the outer clutch member 97 to move backwardly, in accordance with said reverse rocking of the element 75, is prevented by a locking clutch which comprises an internal clutch member 87a, which is similar in all respects to the drive clutch member 87 with the exception that it is fixed against rotation with the clutch member 87. The clutch member 87a of the locking clutch is fixed against rotation, by being secured to the casing cap 11, and the intermediate members 95a of the lock clutch function to engage and lock the outer clutch member 97 in a fixed position, consequently the shaft 5 and the wheel 1 are held against reverse rotation between the intermittent advancing movements of the fabric.

The extent of each intermittent forward rotation of the shaft 5 and the wheel 1 is determined and controlled by the position of the stud 82 along the slot 81 of the driving lever 78, and by varying the position of the stud 82 in the slot 81, the length of the straps cut from the strip is accurately and definitely determined.

If straps longer than the circumference of the measuring wheel 1 are desired, the shear mechanism 3 is not operated after each complete revolution of the feed wheel. This interruption of the operation of the shears is controlled by a stop rod 100, shown in Figs. 6 and 13, being projected across the slot 27 in which the arm 28 of the shear-operating lever 30 operates. When in the position shown in Fig. 13, the lock pin or rod 100 prevents the shear lever 30 from being rocked to close the shears when the plunger 17 rides off the end 33 of the cam 24. Consequently, the end 20 of the plunger 17 slides under the lateral projection 32 of the shear lever 30, without effect.

The lock rod 100 is slidably mounted in a boring 101 formed in the wall of the housing 10 and is provided with a head 102 between which and the end 103 of a counterbore 104 is disposed a spring 105. The spring 105 tends to retract the end of the rod 100 from the slot 27.

The head 102 of the locking rod 100 is engaged by one end of a pin 106 which is slidably mounted in the cap 11 of the housing with its opposite end arranged to be engaged by one of a plurality of inclined cam surfaces 109 formed on a control disc 110.

The control disc 110 is rotatably mounted on a stud 111 threaded into the cap 11 and is arranged to be rotated about the axis of the stud 111 by a gear 112 which is secured to said control disc and meshes with a pinion 113 formed on or attached to the end of the shaft 5 outside the cap 11. The cam disc 110 is readily removable and may be interchangeable with another disc provided with as many cam surfaces 109 as are necessary for the proper control of the shears for any given length of the strap.

Also carried by the gear 112 is a pair of arms 114, 114 arranged to engage alternately with an operating arm 116 of a counter 115 by which the number of straps cut by the shear mechanism 3 is recorded.

I claim:

1. A device for cutting a strip of material into pieces of predetermined lengths, comprising a shear, a rotary shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip to said shear, means on and operable relative to said shaft for effecting actuation of said shear during each revolution of said feed wheel, means adjacent said shaft for controlling the actuations of the first said means relative to said shaft, and

means for resiliently pressing said strip into feeding contact with said feed wheel, the circumference of said feed wheel being equal to the normal maximum length of the pieces cut by the shear from said strip.

2. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on and operable relative to said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, and means adjacent said shaft for controlling the actuations of the first said means relative to said shaft.

3. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on and operable relative to said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, and means adjacent said shaft for controlling the actuations of the first said means relative to said shaft.

4. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on and operable relative to said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, means adjacent said shaft for controlling the actuations of the first said means relative to said shaft, and an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft.

5. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, and an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm.

6. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm, and means for retracting said plunger to an inoperative position subsequent to each strip-cutting actuation of said shear.

7. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement

with said second lever arm, and means for retracting said plunger to an inoperative position subsequent to each strip-cutting actuation of said shear, comprising a cam surface disposed in a plane transverse to the axis of the shaft in the path of circular movement of the plunger about the axis of the shaft.

8. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said sheaf and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm, means for retracting said plunger to an inoperative position subsequent to each strip-cutting actuation of said shear, comprising a cam surface disposed in a plane transverse to the axis of the shaft in the path of circular movement of the plunger about the axis of the shaft, and means for tripping said plunger for actuating said lever.

9. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm, means for retracting said plunger to an inoperative position subsequent to each strip-cutting actuation of said shear, comprising a cam surface disposed in a plane transverse to the axis of the shaft in the path of circular movement of the plunger about the axis of the shaft, and means for tripping said plunger for actuating said lever, comprising an abrupt decline in said cam surface adjacent the plunger-engaging portion of said second arm of said lever.

10. A device for cutting a strip of material into pieces of predetermined lengths, comprising a shear, a rotary shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip to said shear, means on and operable relative to said shaft for effecting actuation of said shear during each revolution of said feed wheel, means for resiliently pressing said strip into feeding contact with said feed wheel, the circumference of said feed wheel being equal to the normal maximum length of the pieces cut by the shear from said strip, means adjacent said shaft for controlling the actuations of the first said means relative to said shaft, and means for nullifying the shear-actuating efforts of said shear actuating means during predetermined revolutions of said feed wheel for increasing the pieces beyond said normal maximum length.

11. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mounted for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm, and a stop movable across the path of movement of said lever for nullifying the shear operation of said lever by said plunger.

12. A device for cutting a strip of material into pieces of predetermined lengths, comprising a rotary shaft, a shear comprising a pair of cooperating blades disposed in a plane substantially parallel to and spaced from the axis of said shaft, a feed wheel secured to said shaft and arranged to engage and feed said strip substantially at right angles to the axis of said shaft to and between said pair of blades, means on said shaft for effecting actuation of said shear, a shear-actuating lever disposed in a plane at right angles to the axis of said shaft with one arm in operative engagement with said shear and a second arm arranged for engagement with said shear-actuating means on said shaft, resilient means operating against said lever for normally retaining said shear blades in open position for passage of said strip therebetween, an abutment for said lever to arrest shear-opening movement of said lever by said resilient means to maintain said second lever arm in position to be engaged by said shear-actuating means on said shaft, said shear-actuating means comprising a spring loaded plunger carried by and slidably mount-

ed for longitudinal movement transversely to the axis of said shaft into actuating engagement with said second lever arm, a stop movable across the path of movement of said lever for nullifying the shear operation of said lever by said plunger, and means operated by said shaft in predetermined relation to the revolutions of said feed wheel for actuating said stop into and out of lever-arresting position during predetermined revolutions of said feed wheel.

GEORGE D. COLLAR.