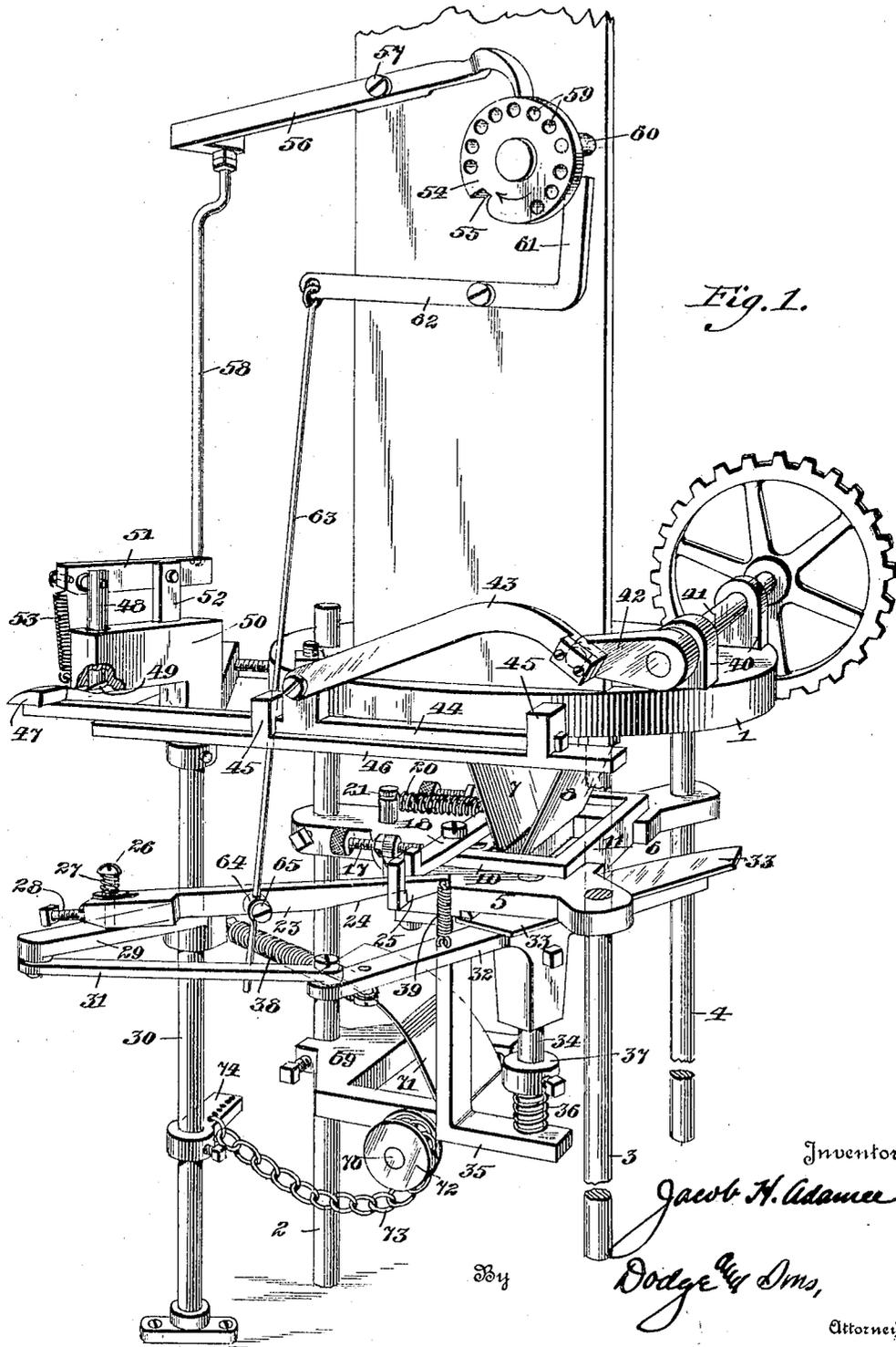


J. H. ADAMEE.  
STRIP SEVERING DEVICE.  
APPLICATION FILED AUG. 18, 1916.

1,298,431.

Patented Mar. 25, 1919.

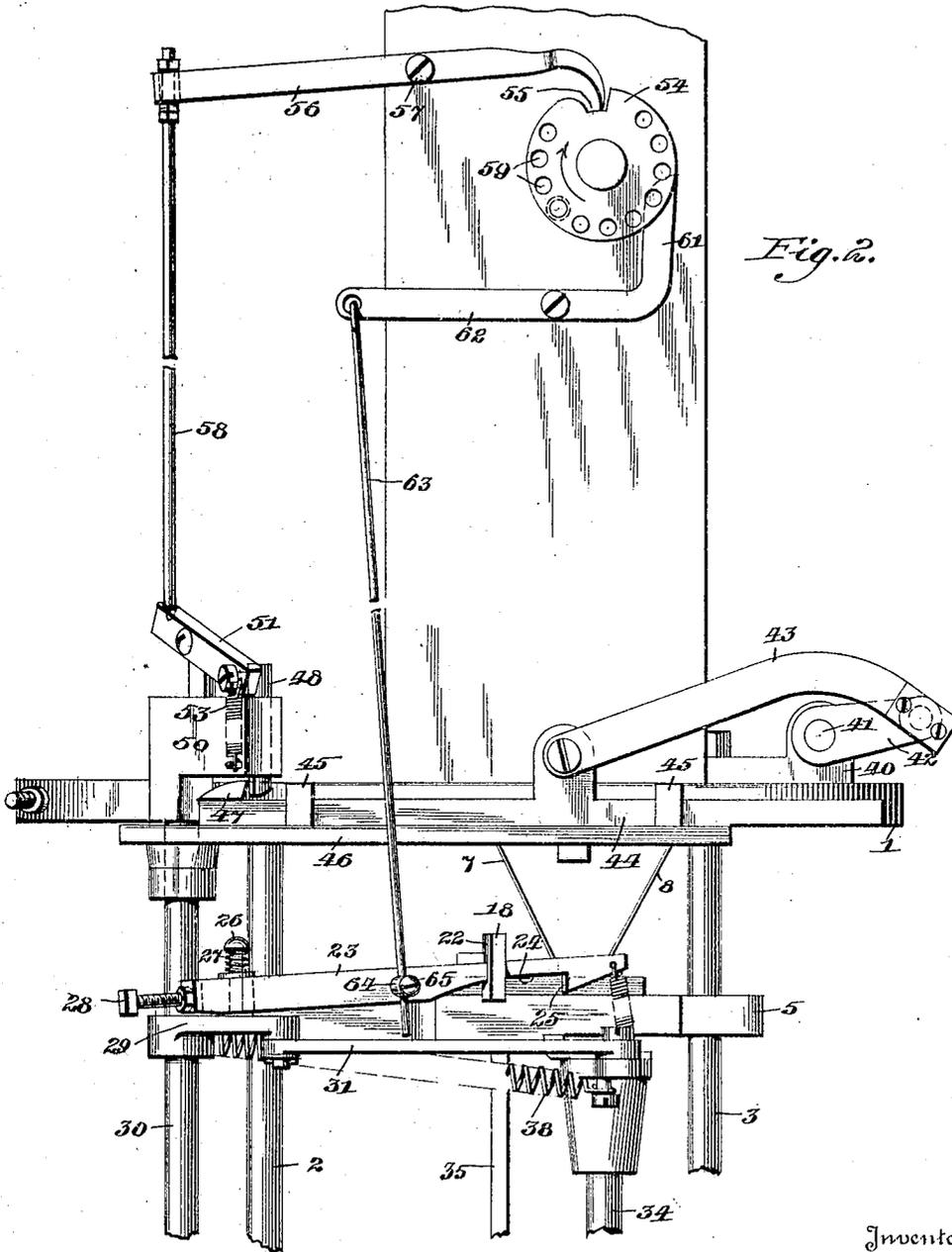
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5 SHEETS—SHEET 2.



*Fig. 2.*

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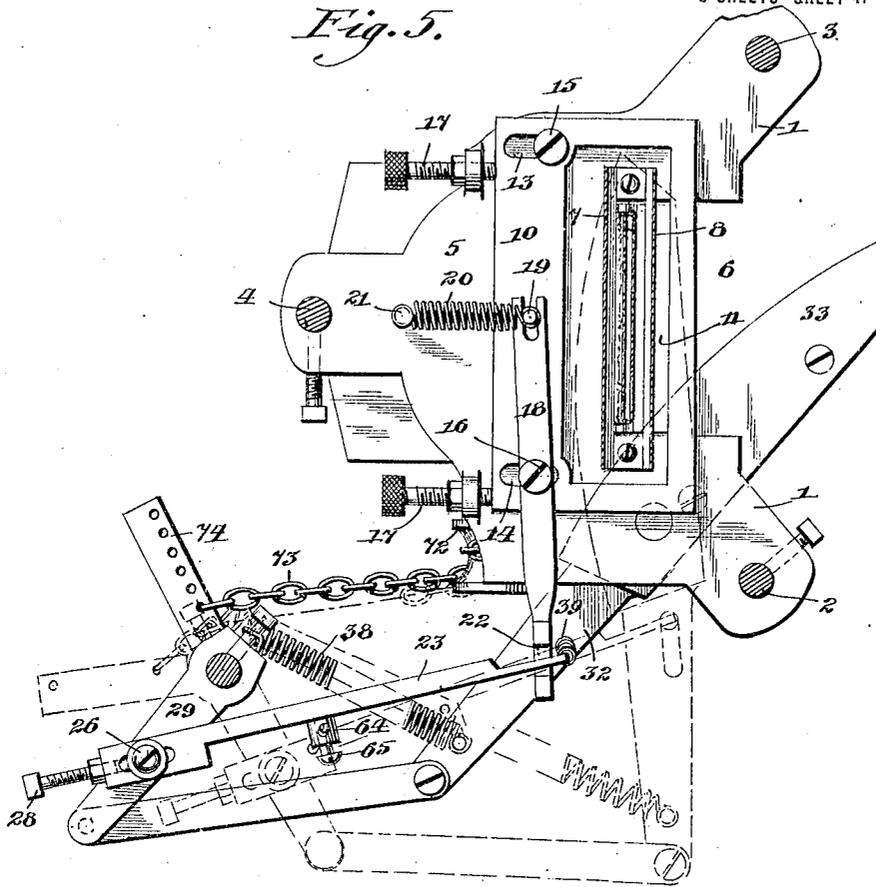
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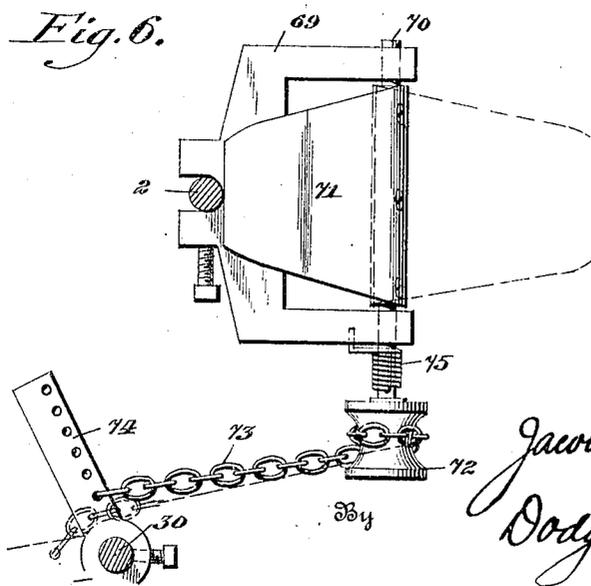
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*Fig. 5.*



*Fig. 6.*



Inventor

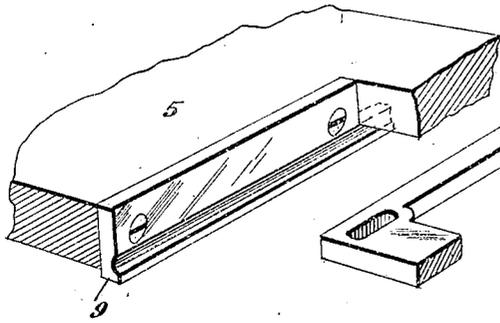
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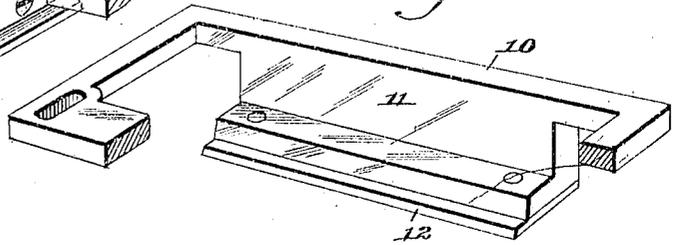
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 5 SHEETS—SHEET 5.

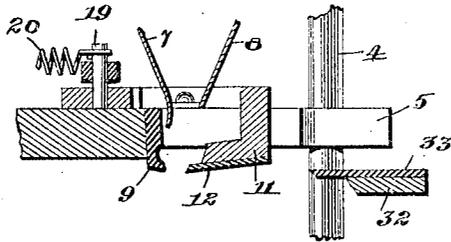
*Fig. 7.*



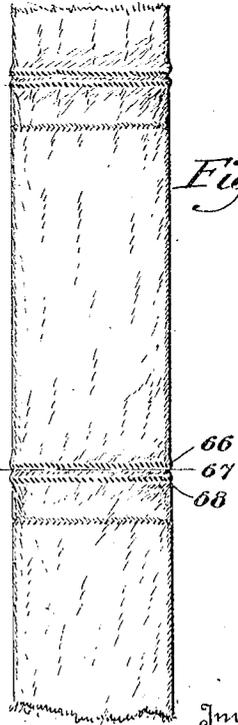
*Fig. 8.*



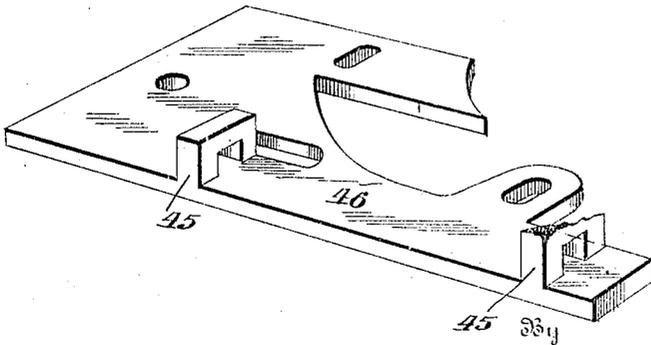
*Fig. 9.*



*Fig. 11.*



*Fig. 10.*



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*Dodge & Sons*  
 Attorneys

# UNITED STATES PATENT OFFICE.

JACOB H. ADAMEE, OF DURHAM, NORTH CAROLINA, ASSIGNOR OF ONE-THIRD TO  
JULIAN S. CARR, JR., OF DURHAM, NORTH CAROLINA.

## STRIP-SEVERING DEVICE.

1,298,431.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed August 18, 1916. Serial No. 115,707.

*To all whom it may concern:*

Be it known that I, JACOB H. ADAMEE, a citizen of the United States, residing at Durham, in the county of Durham and State of North Carolina, have invented a certain new and useful Strip-Severing Device, of which the following is a specification.

My present invention pertains to an improved means for cutting a continuous strip of moving fabric or the like into sections of desired lengths, and has particular reference to means of this character which are adapted to be used in connection with stocking-knitting machines for cutting the stocking-tops apart as the same are discharged from the machine in a single continuous strip but, of course, is not necessarily restricted to such use.

The main object of the invention is to provide a simple mechanism of the above-mentioned character which may be applied to a knitting machine, and which will cut stocking-tops at the right point in an expeditious and continuous manner.

A further object of the invention is to provide a stacker which will pile the severed sections, the cutting and stacking devices working in timed relation.

The invention is illustrated in the annexed drawings wherein:

Figure 1 is a perspective view of the apparatus shown as applied to a knitting machine, the latter appearing only in part and the clamp and knife being in their inoperative positions;

Fig. 2 a side elevation, the parts occupying that relation in which the goods are clamped and the knife is thrown into cutting position;

Fig. 3 a vertical sectional view, showing the clamp as having been advanced to hold the goods against the fixed shear blade;

Fig. 4 a similar view taken on the line 4-4 of Fig. 3;

Fig. 5 a horizontal sectional view, the clamp and knife being shown in their retracted position;

Fig. 6 a plan view of the stacker;

Fig. 7 a perspective view of a portion of the frame and the fixed knife;

Fig. 8 a sectional perspective view of the clamp plate as viewed from the upper side thereof;

Fig. 9 a detail sectional view showing the

clamp and the knife in their inoperative positions;

Fig. 10 a detail perspective view of one of the frame members; and

Fig. 11 a plan view of the knitted web.

Referring to the drawings, 1 denotes the base of the machine, sustained upon suitable rods or legs 2, 3 and 4. Secured to said rods and located beneath the base 1 is a plate or casting 5, the forward face of which is open, as at 6, which opening stands in line with the discharge of the knitting machine, the knitted fabric passing down through said opening and being properly guided by a funnel-shaped member composed of two upwardly-extending and outwardly-flaring plates 7 and 8. A fixed clamp and shearing blade 9 is secured to the member 5 at the inner portion of the opening 6, see more particularly Figs. 3, 4 and 7. A sliding frame 10 (Fig. 8) overlies the member 5 and is provided with a downward extension 11, to which is secured a clamping plate 12, the extension working in the opening 6 in the member 5. Said sliding frame 10 is provided with slots 13 and 14 through which extend, respectively, machine screws 15 and 16, said screws passing into the plate or casting 5. Stop screws 17, secured in lugs extending upwardly from the plate 5, serve to limit the inward movement of the sliding frame 10 toward the fixed knife 9 and consequently to limit the degree of pressure which is exerted by the plate 12 upon the tubular fabric clamped between said plate and the fixed knife 9.

A lever 18, fulcrumed upon the screw 16, is connected to the sliding frame 10 by a pin 19, which passes through a slot in the outer end of said lever. A spring 20, connected to the pin 19 and to a pin or post 21 extending upwardly from the member 5, serves to normally draw the sliding frame 10 rearwardly into the clamping position shown in Fig. 3. Said lever at its outer end is provided with a vertically-disposed slot 22, in which rests a latch-bar 23, best shown in Figs. 1 and 5. The forward end of the bar is cut away on its under face, as at 24, providing a shoulder or abutment 25, adapted under a certain relation of the parts to engage the lever and draw the same rearwardly and thereby force the sliding frame 10 outwardly and away from the

fixed blade 9. The rear end of said latch-bar is slotted, and through said slot extends a screw 26, a spring 27 encircling said screw and permitting a vertical or rocking movement of the latch-bar with reference to the screw. A stop screw 28 is threaded into the rear end of the latch-bar and serves as a means of adjustment whereby the degree of movement of the sliding frame 10, when actuated by the latch-bar 23 and lever 18, may be regulated. The screw 26 is threaded into a lever 29, secured to and movable with an oscillating shaft 30. To the outer end of said lever there is connected a link 31, which in turn is connected to the outer end of a knife-bar lever 32, said lever carrying a movable shear-blade 33, adapted, as it is moved inwardly, to coact with the fixed shear-blade 9 and to cut off the web. Said lever 32 is mounted upon a shaft 34, supported at its lower end in a bracket 35 which extends downwardly from the under side of the plate or casting 5, the upper end of the shaft being journaled in said member 5. A spring 36, interposed between the upper face of the outwardly-extending member of the bracket 35 and a collar 37 mounted upon the shaft 34, tends to force the blade 33 upwardly so as at all times to bring the shear-blades into operative cutting relation. When the shear-blade 33 is moved outwardly (as in Fig. 1) it will be noted that the inner end thereof, or that end adjacent the pivot of the blade, underlies the fixed blade 9, so that said blades are always held in proper relation.

A spring 38 is interposed between the lever 32 and the rear portion of the hub of the lever 29 and tends to hold the shear-blade 33 away from the fixed blade. A spring 39 is interposed between the outer end of the latch bar 23 and the lever 32, said spring tending at all times to draw the latch bar down into engagement with the lever 18.

Mounted in lugs or bearings 40, secured to and extending upwardly from the member 1, is a power shaft 41, which derives its motion from any suitable source. Said shaft carries a crank 42, to which is attached a link or pitman 43, which in turn is pivotally connected to a slide bar 44, said bar working through guides 45 formed upon a plate or casting 46 which is secured to the under side of the member 1. The rear end of the slide-bar carries a lug or abutment 47. Said lug is adapted to cooperate with a latch 48, the lower forward face of which is beveled, as at 49, the latch being mounted to move vertically in a block 50 rigidly fixed to the upper end of the shaft 30. A lever 51, fulcrumed upon a post 52, extending upwardly from the block 50, is pin-jointed to the latch 48, and a spring 53 serves normally to draw the lever downwardly and to project the latch into the path of the lug or abutment 47 of the reciprocating slide-bar 44. Nor-

normally this latch is held in its retracted position by the following mechanism: A member 54, driven in timed relation with the pattern-wheel of the knitting machine, is provided with a peripheral notch 55 adapted to receive the end of a lever 56, fulcrumed at 57 on the side of the knitting machine, the lever in turn being placed in operative relation with the lever 51 through a rod 58. With the parts in the positions shown in Fig. 1, with the end of the lever 56 riding upon the outer face of the member 54, the latch 48 is held in its elevated or retracted position, and the slide-bar 44 will reciprocate without imparting any motion to the other operative portions of the machine. When, however, the parts come to the positions shown in Fig. 2, and the finger of the lever 56 drops into the notch 55, the spring 53 projects the latch downwardly into the path of the abutment 47 and locks the block 50 to the slide-bar and as a consequence the shaft 30 is given a partial rotation.

The member 54 is also provided with a series of threaded openings 59, adapted to receive a pin 60, which pin cooperates with the upwardly-extending arm or finger 61 of a lever 62, said lever at its opposite end being connected to the latch-bar 23 by a rod 63, the rod passing through a lug 64 extending outwardly from the latch-bar and being held in position in the lug by a set-screw 65.

The web, see Fig. 11, is designed to be cut below and adjacent the rib or welt 66, that is, along the line 67, which is above and spaced from the eyes 68 formed upon the upper end of the adjacent lower stocking-top. The pin 60 will be adjusted according to the length of the stocking-top, and as the member 54 is rotated will come in contact with the finger 61, rocking the lever 62, and through the rod 63, elevate the latch-bar 23 and release the lever 18, thereby permitting the spring 20 to draw the sliding frame 10 inwardly and bring the plate 12 into clamping relation with the fixed knife, or into the position shown in Figs. 3 and 5. When in this position the members 9 and 12 hold the web or the lower portion thereof against downward movement so that the shearing blade may sever the web along the proper line. After this has taken place, the finger of the lever 56 will drop into the notch 55, thereby releasing the latch 48 and motion will thus be imparted to the shaft 30 and through the lever 29 and link 31 to knife-lever 32 which will be thrown inwardly into the dotted-line position shown in Fig. 3, and shear the web, which is temporarily held by the clamp.

In order to stack or pile the severed tops, the following mechanism is employed: Adjustably mounted upon the rod 2 is a U-shaped bracket 69 (see Figs. 1, 3, 4 and 6), said bracket having journaled in the outer

end thereof a shaft 70, to which is secured a plate 71, said plate being slightly curved, as shown in the drawings. To the outer end of the shaft there is secured a wheel or pulley 72, to which one end of a chain or other flexible member 73 is attached, the chain being secured to the pulley and extending to a lever 74, adjustably mounted on the shaft 30. The parts are so arranged that as the stocking-top is severed shaft 30 is rotated and, through arm 74 and chain 73, the plate 71 is thrown forwardly and striking the severed top will cause it to move from the vertical to practically a horizontal position, so that the succeeding severed tops will fall or stack directly one upon another. A spring 75, Figs. 4 and 6, tends to return the plate 71 to its vertical or retracted position.

Having thus described my invention, what I claim is:

1. In combination with a knitting machine, a web-clamping mechanism adapted to clamp the free portion of a depending web; a severing mechanism adapted to sever the pendent portion of the web while the web is clamped; and a stacker associated and working in timed relation with the severing mechanism, for stacking the severed portion of the web.

2. In combination with a knitting machine, a web-clamping mechanism; a reciprocating knife adapted to sever the web when clamped; and an oscillating stacker located beneath the clamping and severing mechanisms and adapted, when the web is clamped and a section is severed, to throw the severed section from a vertical to a horizontal position and to successively stack the severed sections one upon another.

3. In combination with a knitting machine, a fixed plate or supporting member; a fixed blade carried thereby in line with the passage of the web; a sliding clamping plate; means acting to urge the plate into clamping relation with the fixed blade; a movable shear blade; a latch for normally holding said clamping plate out of operative relation with the movable shear blade; a constantly-operating actuating mechanism; and means controlled by the knitting machine acting first to release the latch which holds the clamp out of operative relation and then connecting said actuating mechanism with the shear blade.

4. In a machine of the character specified, the combination of a fixed plate; a fixed blade carried thereby in line with the discharge of the web; a clamping plate adapted to cooperate with said fixed blade; means acting to draw said plate into operative relation with the fixed blade to clamp the web; a lever operatively connected with the

clamping plate; a latch tending to hold said lever and to maintain the clamping plate in its retracted position; a movable shear blade; a shaft connected with said shear blade; a block secured to the shaft; a latch mounted in said block; a constantly-actuated operating device moving in the path of said latch; means for normally holding said last-mentioned latch out of operative position; and means for releasing the first-mentioned clamping plate latch, said last-mentioned means coming into operation in advance of said other means.

5. In combination with a knitting machine, a fixed supporting plate or member; a fixed shear blade carried thereby; a clamping plate adapted to cooperate with said shear blade; means acting on said clamping plate to urge the same into clamping relation with the fixed shear blade; a latch for holding said clamping plate out of clamping relation; a movable shear blade; an actuating shaft therefor; a constantly reciprocating actuating mechanism; means controlled by the knitting machine for releasing the latch and then throwing the constantly reciprocating actuating mechanism into operative relation with the movable shear blade actuating shaft; a pivoted plate located in line with the discharge of the web to be severed and beneath the shear blades; and connections between said plate and the shear operating parts, whereby the plate will be thrown downwardly at the time the web is severed.

6. In combination with a knitting machine, a clamping mechanism for the web; means controlled by the knitting machine for causing said mechanism to clamp the web at predetermined intervals; a severing mechanism; continuously-moving actuating mechanism for said severing mechanism; and means controlled by the knitting machine for bringing said severing mechanism into operative relation with said actuating mechanism after the web has been clamped.

7. In combination with a knitting machine, a clamping mechanism for the web; means controlled by the knitting machine for causing said mechanism to clamp the web at predetermined intervals; a severing mechanism; continuously-moving actuating mechanism for said severing mechanism; means for bringing said severing mechanism into operative relation with said actuating mechanism after the web has been clamped; and means for successively stacking the severed sections of the web.

In testimony whereof I have signed my name to this specification.

JACOB H. ADAMEE.