Oct. 15, 1940. S. C. FREEMAN 2,217,897

WEB FEEDING MECHANISM

Filed Dec. 8, 1936 6 Sheets-Sheet 1

Fig. 1.

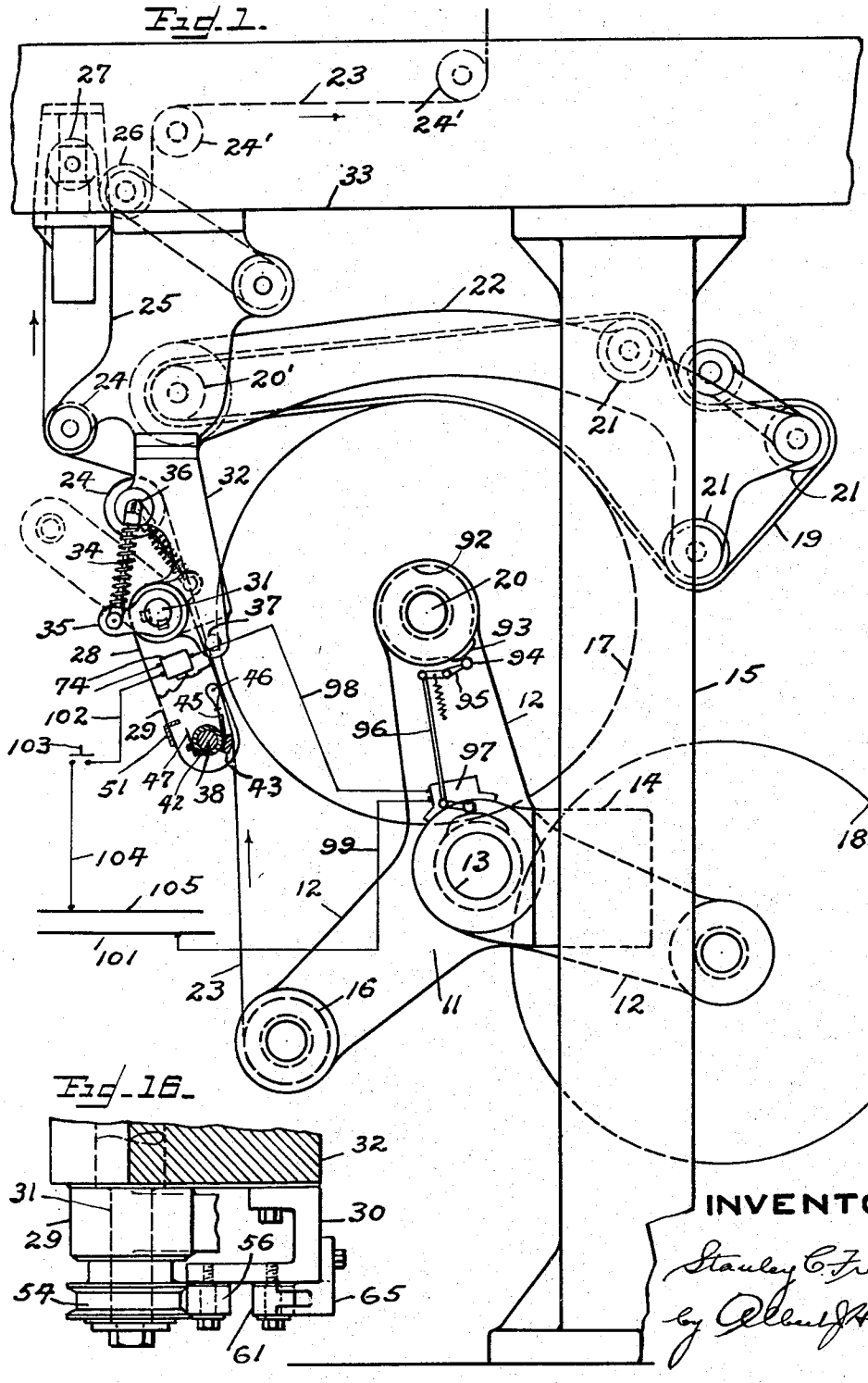



Fig. 1a.




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WEB FEEDING MECHANISM

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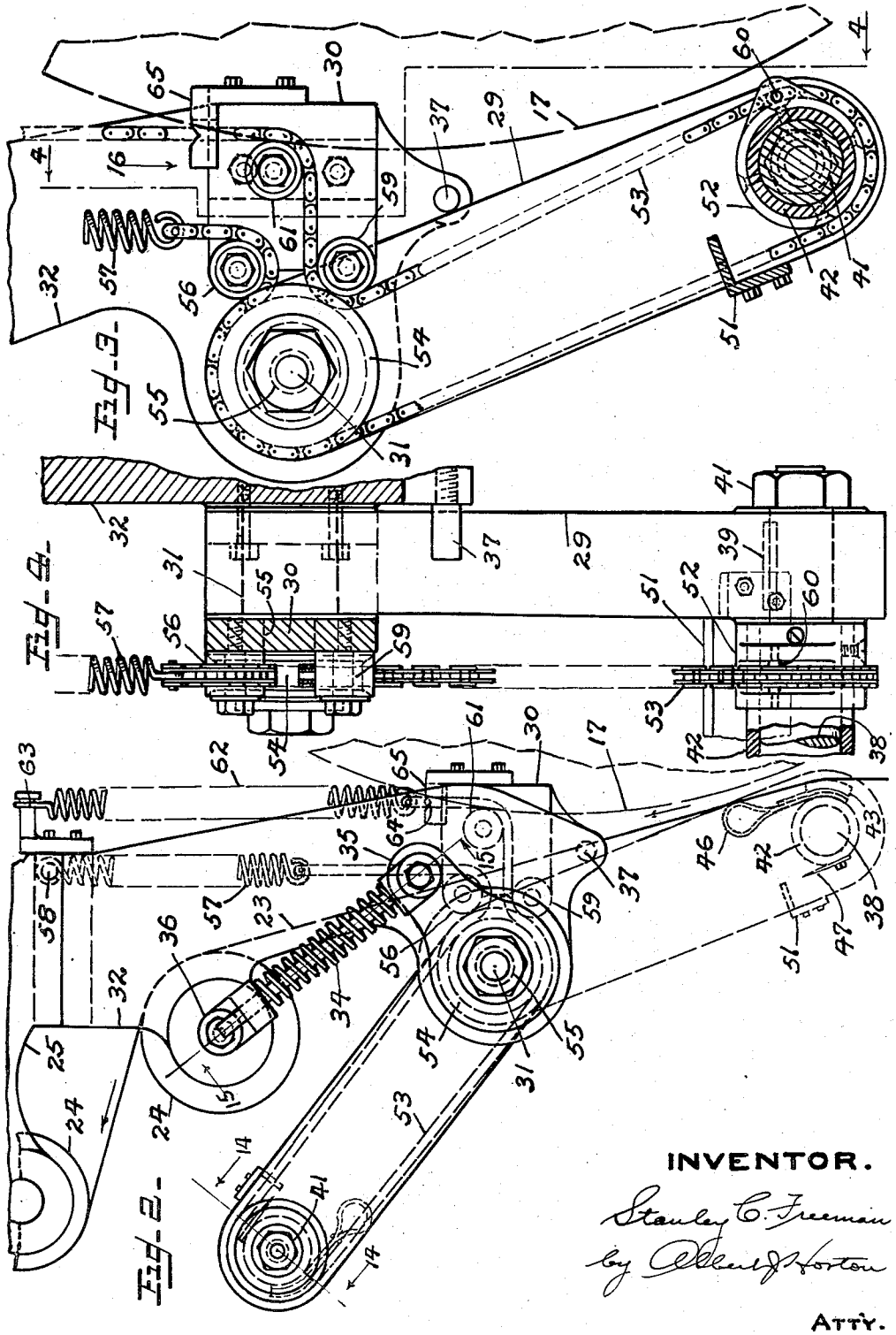


Fig. 2.

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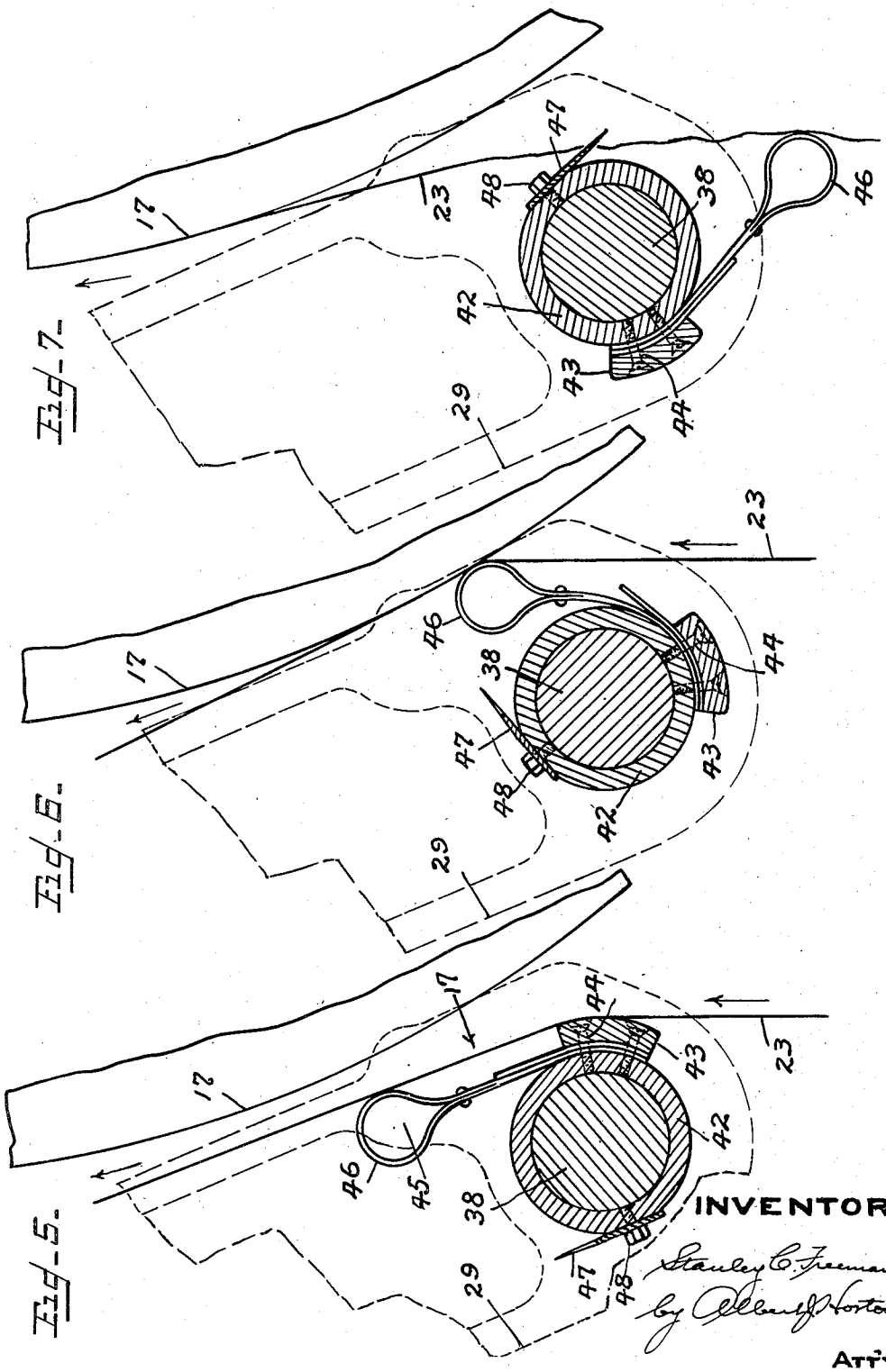
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WEB FEEDING MECHANISM

Filed Dec. 8, 1936 6 Sheets-Sheet 3




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WEB FEEDING MECHANISM

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Fig. 10.

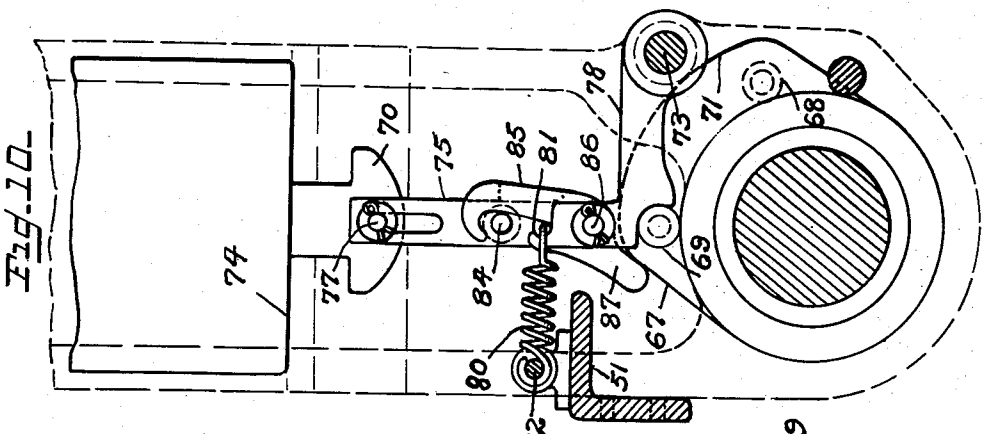



Fig. 9.

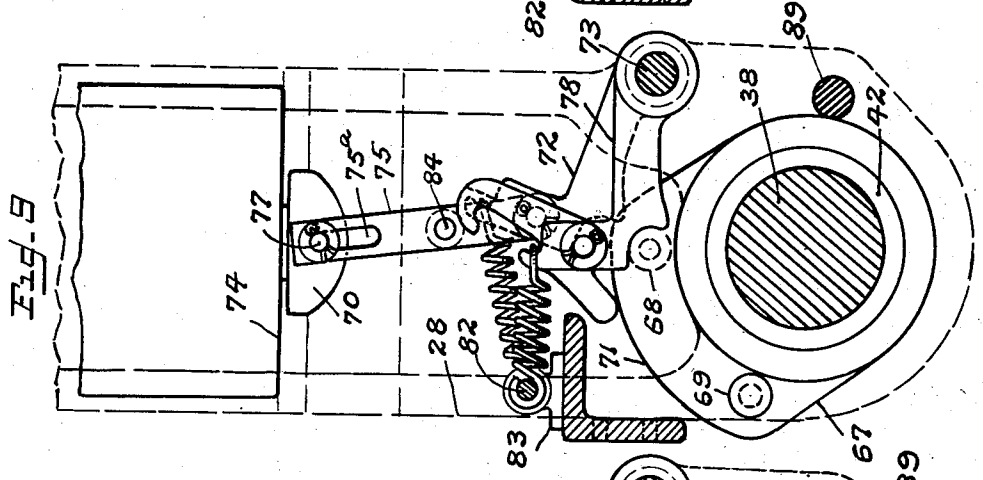
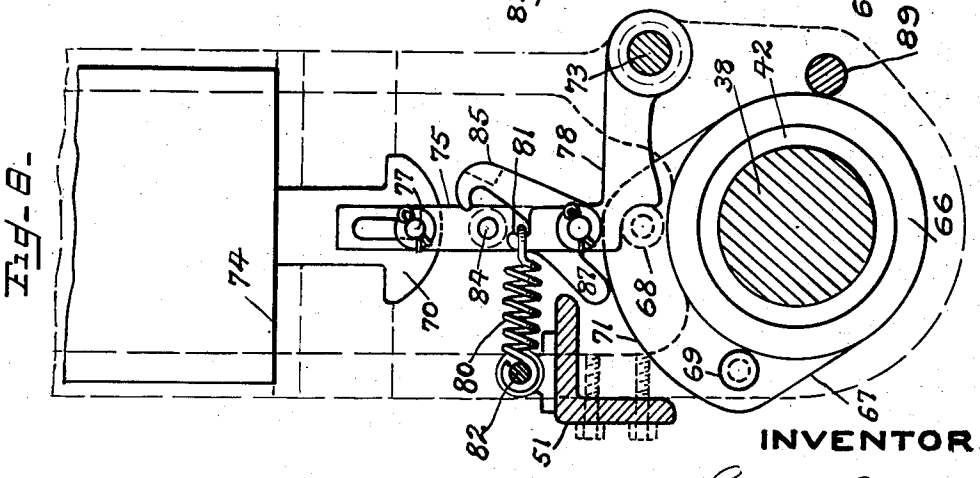



Fig. 8.




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WEB FEEDING MECHANISM

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Fig. 12

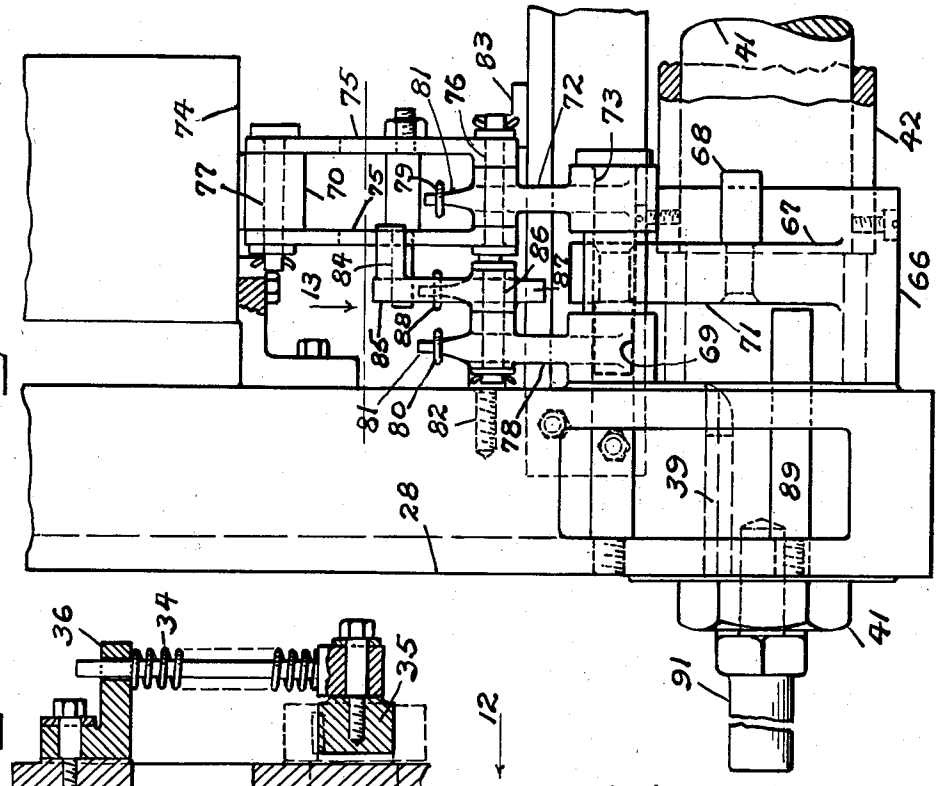
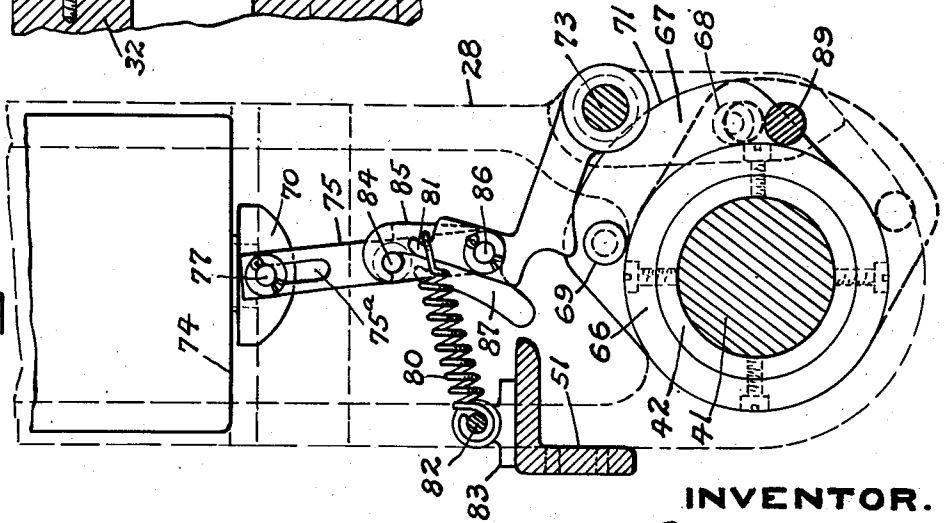



Fig. 15.




Fig. 11.




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WEB FEEDING MECHANISM

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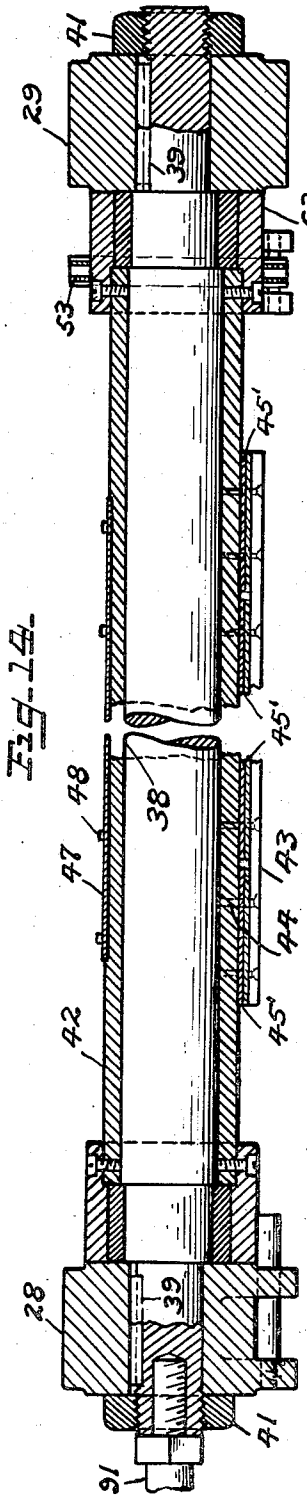


Fig. 14.

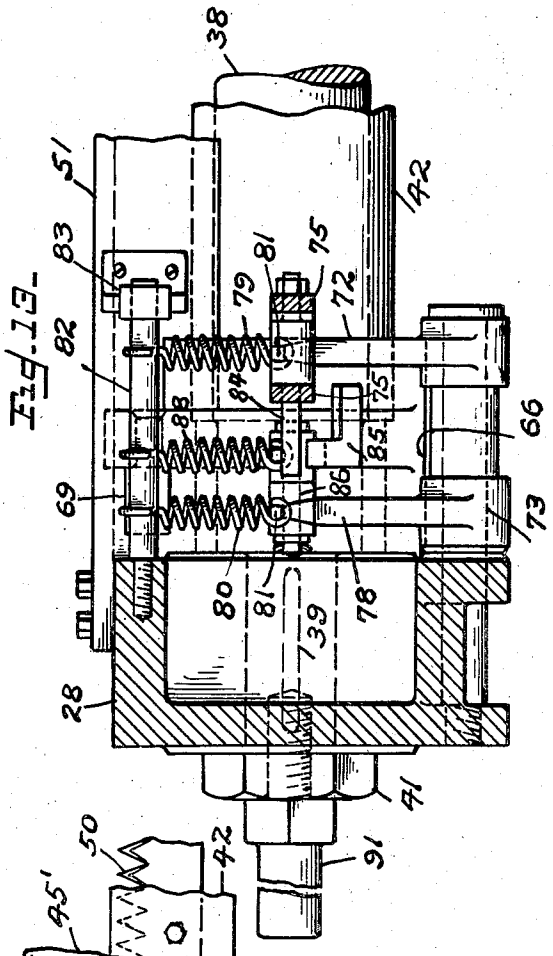


Fig. 13.

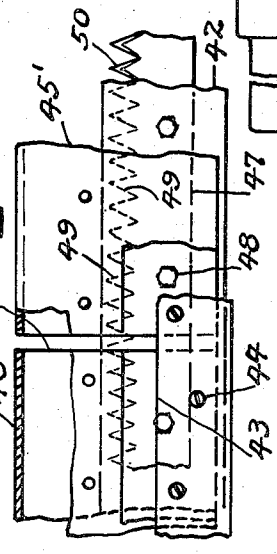


Fig. 17.

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Patented Oct. 15, 1940

2,217,897

# UNITED STATES PATENT OFFICE

2,217,897

## WEB FEEDING MECHANISM

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Application December 8, 1936, Serial No. 114,763

21 Claims. (Cl. 242—58)

This invention relates to web supply mechanism for a printing, or other machine operating upon a web drawn from a web roll, and more particularly to improvements in web deflecting and severing devices for use in such mechanisms to facilitate the joining of the web of a replacement roll to the web running from an expiring web roll without stopping the machine.

This invention especially contemplates the provision of means mounted for rotative movement whereby it is adapted to cause in sequence the operation of pressing together the webs to be joined and then sever the web of the expiring web roll, and to provide means to control the start of such a sequence of operations in timed relation with the rotation of the replacement roll.

One object of this invention is to provide an improved web deflecting and severing mechanism.

Another object is to provide in a mechanism of the above nature releasable means to restrain the action of the web deflecting and severing mechanism when it has been disposed in an operative position and means to release the same in timed relation with the rotation of the replacement roll.

Still another object is to provide a latching device which is operable to release the web deflecting and severing mechanism to permit a web deflecting action and then to again release the same to cause a web to be severed.

A further object is to provide an actuating device for a web deflecting and severing mechanism which is adapted to be placed in actuating condition upon disposing the mechanism in operative position in respect to the webs.

A still further object is to provide means in cooperative relation with the mechanism actuating device of the above nature, to restrain its action until the webs are in the proper relative positions and which is then operable, to release the actuating device and permit its operation, in timed relation with the running speed of the webs.

It is also an object of this invention to provide a web supply mechanism of generally improved construction, whereby the same will be simple, durable and inexpensive in construction, as well as convenient, practical, serviceable and efficient in its use.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts, and in the details of construction hereinafter described and claimed, it being understood that various changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a partial end view in elevation of a web supply mechanism embodying the features of this invention, the web deflecting and severing mechanism thereof being shown in operating or web prejoining position;

Figure 2 is an enlarged end view of the web deflecting and severing mechanism shown in Figure 1 with the same disposed in its inoperating position;

Figure 3 is an enlarged side view of one of the supporting members or arms for the web deflecting and severing mechanism disposed in operating position;

Figure 4 is a rear face view of the parts shown in Figure 3 looking along the line indicated by arrows 4—4;

Figures 5, 6 and 7 are views illustrating the different positions assumed by the web engaging member and the web severing knife respectively of the web deflecting and severing mechanism, during its opration to join the running web from an expiring web roll to the web of a replacement web roll and severing the expiring web;

Figures 8, 9, 10 and 11 constitute a series of views illustrating the operations of a latching device which, under the control of timing means, releases the web deflecting and severing mechanism and permits its actuation to perform the operations shown in Figures 5, 6 and 7;

Figure 12 is a rear face view of the parts shown in Figures 8–11 inclusive looking in the direction of arrow 12 in Figure 11;

Figure 13 is a top plan view of the parts shown in Figure 12 looking in the direction of arrow 13 in Figure 12;

Figure 14 is a section on line 14—14 of Figure 2;

Figure 15 is a section on line 15—15 of Figure 2;

Figure 16 is a top view of certain parts shown in Figure 3 looking in the direction of arrow 16 in Figure 3; and

Figure 17 is a detail side view of various parts, as seen from the direction of the arrow 17 on Figure 5.

The web supply mechanism illustrated in the

drawings, the principal associated elements of which are shown in Figure 1, and which embodies the features of this invention, generally includes a rotatable reel or web roll supporting member 11 comprising a spaced apart plurality of arms 12 mounted on a shaft 13 journaled in bearing brackets 14 secured on each side frame 15 of the printing machine. Each pair of arms 12 is adapted to rotatably support a web roll herein shown as an expiring roll 16, a replacement roll 17, and a spare roll 18 upon suitable supports 20. A driven belt 19 wrapped about a plurality of pulleys 21, mounted on a swingable frame 22, is adapted to contact the surface of the web roll constituting the replacement roll 17 when it is in the position shown, and is driven by a pulley 20' operably connected to a shaft driven by the machine, to be able to bring the roll 17 up to speed before joining its web to the web 23 running into the machine and by means of suitable controls (not shown) to control its speed thereafter. The running web 23 is shown running from the expiring roll 16 over suitable guide rollers 24, a floating tension controlling roller 26, and an equalizer roller 27 is provided over which the web runs before being fed into the machine over other guide rollers 24'.

The improved web deflecting and severing device of this invention includes a pair of spaced apart arms 28 and 29, each secured to a stud shaft 31, each of which is journaled for free rotation at each end in a bracket 32 secured to the roller supporting bracket 25, which in turn is mounted upon a longitudinal frame 33 of the machine. In view of the above described mounting, the arms 28 and 29 are adapted to swing from the dotted position shown in Figure 1 to the full line position. A compression spring 34 acting between a lever arm 35 secured upon the shaft 31 and an abutment 36 provided on the bracket 32 is adapted to constantly urge the arms 28 and 29 toward the replacement roll 17 when they are disposed in the full line position and to maintain the arms in the dotted position when they are so disposed. A stop pin 37 mounted in each bracket 32 is positioned to be engaged by the respective arm to limit its movement toward the replacement roll 17, preventing its engagement therewith.

The arms 28 and 29 are connected together at their outer ends for movement in unison by a shaft 38 which is keyed and secured to each arm by a key 39 and nut 41, see Figures 4 and 12, to respectively prevent rotation and axial movement of the shaft 38 relatively to the arms. Rotatably mounted upon the shaft 38 is an elongated sleeve or tube 42 which extends substantially from one arm to the other, it being understood that the arms 28 and 29 are spaced apart sufficiently to permit the web 23 to freely run between them. A web engaging bar 43 is provided and secured to the sleeve 42 by screws 44. The bar 43 serves as a web guiding and positioning member to engage and press the web 23 toward the replacement roll 17 into a determined spaced relation therewith when the arms 28 and 29 are swung into web prejoin position, as shown in full lines in Figure 1 and in Figure 3. The bar 43 also serves as clamping means for a web deflector 45, which is also designed and intended to serve as a "static preventer," as will appear hereinafter, the said deflector consisting of a plurality of members 45' (Figures 14 and 17), each of which may be formed of relatively heavy spring metal and providing deflecting shoes 46, loop shaped in cross-section. The members 45' are arranged to extend longitudinally in alignment along the sleeve 42 sufficiently to be adapted to engage the web 23 over its entire width and due to their form and arrangement constitute a web deflector having a hard but substantially flexible surface which engages the web by only a line contact, thus insuring a minimum of pressure imposed on the web to cause the required deflection thereof, thereby materially reducing friction. Substantially opposite the bar 43, a knife blade 47, constituting the web severing means, is secured upon the sleeve 42 by bolts 48. The blade 47 is also extended longitudinally along the sleeve 42 sufficiently to be adapted to engage and cut the web 23 across its entire width. Preferably, the knife blade is provided with serrations or teeth along its cutting edge 49 as indicated at 50 in Figure 17. An angle bar 51 is secured to, and extends between, the arms 28 and 29 to connect the same and act as a guard for the knife 47.

When replacing the web of an expiring roll with the web of a replacement roll without interrupting the operation of the machine, the free end of the web on the replacement roll is generally prepared by forming it in a desired manner and applying an adhesive thereon. The web 23 is deflected into engagement with this area by a web deflector 45, moved in suitably timed relation with the movement of the said area past the deflector, whereupon the web is then drawn from the replacement roll 17. Substantially simultaneously with the above operation, the web running from the expiring roll 16 is severed. In accordance with the features of this invention means is provided to partially turn the sleeve 42 at one revolution of the roll 17 to cause the deflector 45 to deflect the web 23 against the roll 17 and to further turn the sleeve 42 at the next revolution of the roll 17 to cause the blade 47 to sever the web below the join thus made.

The means herein shown for performing the above noted operations of joining the webs and severing the web from the expiring roll includes a pulley 52, see Figures 3 and 4, to which a chain 53 is secured at an intermediate point along its length by a pin 60. One end of the chain 53 is directed upwardly and over a pulley 54 mounted on an extension 55 of, and which is rotatable concentric with, the shaft 31, which supports one of the arms 28 and 29, in this instance, arm 29, and then run over a pulley 56 and connected to the lower end of a spring 57, the other end of which is secured to the bracket 25 at 58. The other end of the chain 53 is extended upwardly from the pulley 52, run over pulleys 59 and 61, and is connected to one end of a spring 62, the other end of which is secured to the bracket 25 at 63. The springs 57 and 62 are so tensioned that the latter one, 62, is capable of, and used for, maintaining the chain taut while the former one 57, is increased in tension when the connected arms 28 and 29 are swung into web prejoin position, as shown in Figures 1 and 3, and thereby is adapted to, and herein forms the means to rotate the sleeve 42 through the pulley 52 secured thereto by the pin 60. The arrangement is such that the compression springs 34 overcome any tendency of the spring 57 to move the arms away from the prejoin position when they are so disposed. The arrangement of the above described means is also such, that on movement of the arms 28 and 29 backwardly and upwardly into their inoperative position as shown in Figure 2, the chain 53, acting on the pulley 52, will reversely rotate the sleeve 42 and return the deflector 45 and blade 47 to their inoperative position as shown. A stop

pin 64 extending through the chain 53 adjacent the connection of the end of the same with the spring 62 is adapted to engage a bracket arm 65 secured to the bracket 30 which in turn is secured to the bracket 32, to insure resetting of the web deflector 45 and knife blade 47 as above described, by preventing the movement of the chain beyond a determined limit.

Figures 5, 6 and 7 illustrate the three positions assumed by the web deflector 45 and the blade 47 during the operation of the web deflecting and severing device of this invention to join the webs of the expiring and replacement roll 16 and 17 respectively. As above referred to, these positions are obtained by rotation or rocking of the sleeve 42 upon the shaft 38, the first one, Figure 5, being the normal inoperative position after the arms 28 and 29 have been disposed in prejoin position, the second, Figure 6, after the sleeve 42 has been rotated by the spring 57 to cause the deflector 45 to deflect and join the webs, and the third, Figure 7, after the sleeve 42 has been further rotated by the spring 57 to cause the knife blade 47 to sever the web from the expiring roll 16.

To control the action of the spring 57 upon the sleeve 42, whereby the web deflector 45 and knife blade 47 will be actuated in the sequence as above described, in timed relation with the rotation of the replacement roll 17, and to insure that the web deflector 45 will not deflect the web until the adhesive covered area on the web of the replacement roll 17 is in proper position relative thereto, the multiple catch mechanism shown in Figures 8–13 inclusive as herein shown is provided. This multiple catch mechanism includes a collar member 66 secured to the sleeve 42 and having a segmental flange 67 extending therefrom, in which catch pins 68 and 69 are mounted in a determined relation about the member 66 and extend parallel to the axis of the sleeve 42. The periphery 71 of the flange 67 is adapted to act as a cam member for a purpose to be hereinafter described.

Referring to Figures 8, 12 and 13, the pin 68 is engaged by a catch member 72 rotatably supported on the stud 73 which is secured to the arm 28, to hold the sleeve 42 against rotation under urge of the spring 57. The catch 72 is connected to the movable core 70 of a solenoid 74 by links 75, pins 76 and 77 respectively passing through the catch 72 and the core 70 and through the links 75. At the pin 77, the links 75 are slotted, as at 75*a* to provide a lost motion action between it and the pin 77. Energization of the solenoid 74 will lift the catch 72, as shown in Figure 9, and release it from engagement with the pin 68 permitting the sleeve 42 to rotate or rock under urge of the spring 57 to cause the web deflector 45 to move into the postion shown in Figure 6 and deflect and press the web 23 into contact with the web of the replacement roll 17. Rotation of the sleeve 42 also rotates the collar member 66 and causes another catch 78 to be engaged by the pin 69 to stop further rotation of the sleeve 42 and collar member 66, as shown in Figure 10, as the solenoid 74 is de-energized and the core 70 is released and drops. The catch 78 is also rotatably supported on the stud 73. Springs 79 and 80 are provided to return the catches 72 and 78 respectively to their normal pins 68 and 69 respectively engaging positions. The springs extend between the catches at 81 and a pin 82 mounted in and extending between a bracket 83, secured to the angle bar 51 and the arm 28.

When in the position shown in Figure 10, the links 75 are also lowered and a pin 84 extending laterally therefrom is engaged by a hook 85 pivoted at 86 to the catch 78. The hook 85 is provided with an extension 87 which, by cooperative engagement with the cam surface 71, has been held out of pin engagement as shown in Figures 8 and 9. When the parts assume the position shown in Figure 10, due to the actuation of the same by the solenoid 74 as above described, the hook extension 87 rides off the surface 71 and permits the hook 85 to engage the pin 84 under urge of a spring 88 connected thereto and between it and the pin 82 mounted in the bracket 83. Another energization of the solenoid 74 causes its core 70 to be raised and through the links 75, pin 84 and hook 85, pivoted thereto at 86, it raises the catch 78 releasing the pin 69 and permitting the sleeve 42 to rotate or rock under further urge of spring 57 into the position shown in Figure 7, whereby the knife blade 47 will sever the web 23 from the expiring roll 16. The above described multiple catch mechanism is now in the position shown in Figure 11, the pin 69 engaged with a pin 89 provided on the arm 28 whereby further rotation of the sleeve 42 is prevented. As referred to above, after the web join and cut has been made, the arms 28 and 29 are swung backwardly and upwardly by means of a handle 91 whereupon the sleeve 42 is reversely rotated causing the cam member 66 and with it the pins 68 and 69 to assume their normal inoperative position as shown in Figure 8, and the web deflector 45 and blade 47 to assume the position as shown in Figure 5, the springs 79 and 80 permitting the catches 72 and 78 to swing away as the pins 68 and 69 pass thereby during this reverse rotation of the sleeve 42 and collar 66 with its flange 67.

The solenoid 74 is energized to actuate the catches 72 and 78 in timed relation with the rotation of the replacement roll 17 (refer now to Figure 1) by means of a cam 92 mounted on and rotatable with the support 20 of this roll, and which is provided with a camming surface 93 which is engaged by a roller 94 carried by a pivoted lever 95, the camming surface 93 being disposed to agree with the adhesive covered area on the web of roll 17. The lever 95 through suitable links and levers generally indicated at 96 actuates a switch 97 mounted on the bearing bracket 14 in which the reel shaft 13 is journaled. One terminal of the winding of the solenoid 74 is connected by a conductor 98 to one terminal of the switch 97, the other terminal of the switch 97 being connected by a conductor 99 to a conductor 101 of a source of electrical energy. The other terminal of the solenoid 74 is connected by a conductor 102 to a terminal of a push button 103, the other terminal of which is connected by a conductor 104 to the other main conductor 105 of the source of electrical energy.

After setting the arms 28 and 29 into the prejoin position, as shown in Figures 1 and 3 by swinging the same by means of the handle 91, the operator actuates, or presses, the push button 103 closing the electrical contacts thereof and holds the button in such position until the replacement roll 17 has made at least two revolutions. The first revolution of the roll 17 causes the cam 92 through its camming surface 93 to actuate the switch 97 to close the electrical contacts thereof and complete the circuit to the solenoid 74 whereupon it is energized and actuates the catch 72 to release it from the pin 68 permitting rotation of the sleeve 42 and with it the web deflector 45, whereby the web 23 is pressed against the adhesive covered area on the web of

the roll 17 to join them together. The next revolution of the roll 17 causes the same action of the cam 92 to take place, whereupon the switch 97 is again closed and the solenoid 74 energized to release the catch 78 from the pin 69 permitting the rotation of the sleeve 42 and with it the knife blade 47, whereby the web 23 is severed. Release of the button 103 prevents further action of the solenoid 74. During the period between revolutions of the roll 17 when the cam 92 is inoperative, the catches 72 and 78 and the hook 85 assume their respective operative positions as above described. The respective webs from the expiring roll 16 and the replacement roll 17 have now been joined without interruption in the operation of the machine, and the arms 28 and 29 may be swung back into their inoperative position as shown in dotted lines in Figure 1, and in full lines in Figure 2, whereupon the catches 72 and 78 and the web deflector 45 and knife blade 47 assume their respective reset and inoperative positions as described above.

Heretofore, during the process of making a web join, where the web pressing member has been a brush, a soft surfaced roll, or anything composed of insulating material, the short time during which the said pressing member remained in contact with the traveling web, under certain conditions sufficed to generate sufficient static electricity to interfere with the web renewing operation.

By the means hereinbefore described, which includes the provision of a metallic web deflector or one having electric conducting properties, no appreciable amount of static electricity will be generated and if any is, it will be discharged imperceptibly through the intermediary of the connected metallic members and the frame of the machine.

From the foregoing description, it is obvious that an improved web deflecting and serving device has been provided in a web supply mechanism whereby the latter will be of greatly improved construction and particularly efficient in use for joining the webs of an expiring and replacement roll together and that the above noted objects and advantages among others, have been realized.

It will be understood that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, and it will be further understood that each and every novel feature and combination present in or possessed by the mechanism herein disclosed forms a part of the invention included in this application.

What I claim is:

1. In a web supply mechanism adapted to join the webs of an expiring roll and a replacement roll, a web deflector, a web severing member, a rotatable part carrying said deflector and member, means to rotate said part, releasable means to restrain said part rotating means, and means to release said restraining means in timed steps to permit rotation of said part at different sequential times.

2. In a web supply mechanism adapted to join a running web to the web of a replacement roll, a rotatable part, a web deflector and a web severing means mounted on said rotatable part and adapted to individually act upon the running web, when rotated with said part, and controlled means to rotate said part at timed intervals to successively actuate said web deflector and said severing means.

3. In a web supply mechanism adapted to join a running web to the web of a replacement roll, a rotatable part, a web deflector and a web severing means mounted on said rotatable part and adapted to individually act upon the running web when rotated with said part, means to rotate said part, means to releasably restrain said part rotating means, and means to actuate said restraining means at timed intervals to permit rotation of said part to cause actuation of said web deflector and said severing means in sequence.

4. In a web supply mechanism adapted to join a running web to the web of a replacement roll, means to rotate said replacement roll, a rotatable part, a web deflector and a web severing member mounted on said part and adapted to act individually upon the running web when rotated with said part, means to rotate said part, releasable means to restrain said part rotating means, and means rotatable with said replacement roll adapted to cause release of said restraining means.

5. In a web supply mechanism of the type described, a replacement web roll rotating means, a rotatable part adapted to be moved adjacent the periphery of the replacement roll, a web deflector and a web severing member mounted on said part and adapted to act individually upon a web running adjacent to the replacement roll when rotated with said part, means to rotate said part, releasable means to restrain said part rotating means, said part rotating means being set in part rotating condition by the movement of said part into its position adjacent the replacement roll, and means rotatable with the replacement roll adapted to cause release of said restraining means.

6. In a web supply mechanism of the type described, a replacement web roll rotating means, a rotatable part adapted to be moved adjacent the periphery of the replacement roll, a web deflector and a web severing member mounted on said part and adapted to act indivdually upon a web running adjacent to the replacement roll when rotated with said part, means to rotate said part, releasable means to restrain said part rotating means, said part rotating means being set in part rotating condition by the movement of said part into its position adjacent the replacement roll, means to actuate said restraining means at timed intervals to permit rotation of said part to cause actuation of said web deflector and said severing means is sequence, and means rotatable with the replacement roll adapted to control the operations of the actuating means for said restraining means.

7. In a web supply mechanism of the type described, a roll supporting reel adapted to rotatably support an expiring web roll and a replacement web roll, means to rotate said replacement roll, a rockable part extending across the replacement roll, a web deflector and a web severing member mounted on said part and adapted to be actuated in sequence when said part is rotated, means to rock said part at intervals, and means to control said part rocking means to permit its operation at successive revolutions of the replacement roll.

8. In a web deflecting and severing device for a web supply mechanism, spaced apart supporting arms, a rotatable part supported by and between said arms, a web deflector mounted on said part, a web severing member mounted on said part, a

releasable part rotating means adapted to be set in operable condition while said arms are being swung into one position, and means to release said part rotating means at spaced intervals to rotate said part and cause actuation of the web deflecting and the web severing means in sequence.

9. In a web deflecting and severing device for a web supply mechanism, spaced apart supporting arms, a rotatable part supported by and between said arms, a web deflector mounted on said part, a web severing member mounted on said part, a releasable part rotating means adapted to be set in operable condition while said arms are being swung into one position, a releasable first catch member to hold said part against rotation, a second releasable catch member to stop rotation of said part when released by said first catch member and means to release said catches at spaced intervals to permit rotation of said part and cause actuation of the web deflecting and the web severing means in sequence.

10. In a web deflecting and severing device for a web supply mechanism, spaced apart swingably mounted arms, a shaft extending between said arms, a sleeve rotatably supported on said shaft and having a web deflector member and web severing member mounted thereon, and means to rotate said sleeve upon said shaft including a spring member tensioned for actuation upon the swinging of said arms into one position and released when said arms are swung into another position.

11. In a web deflecting and severing device for a web supply mechanism, a web deflecting member, a web severing member, a part mounted for rotation and movable for disposition adjacent a running web, said part carrying said members, and controlled means to rotate the part at timed intervals to cause said members to act in sequence upon the running web.

12. In a web supply mechanism of the type wherein a rotating replacement web roll is disposed adjacent a running web, a web deflecting and web severing device including a web deflector and a web severing member mounted upon a rockable part, said part being movable toward and away from the running web, means to rock said part to cause said web deflector and said web severing member to successively act to first deflect the running web into contact with the replacement roll and then to sever the running web, and control means for said part rocking means actuated in timed relation with the rotation of the replacement roll.

13. In a web supply mechanism of the type wherein a rotating replacement web roll is disposed adjacent a running web, a web deflecting and web severing device including a web deflector and a web severing member mounted upon a rockable part, said part being movable toward and away from the running web, means to rock said part to cause said web deflector and said web severing member to successively act to first deflect the running web into contact with the replacement roll and then to sever the running web, and control means for said part rocking means actuated in timed relation with the rotation of the replacement roll, said part rotating means being set in actuating condition by the movement of said part toward said running web.

14. In a web deflecting and severing mechanism for a web supply mechanism, a rockable member mounted for movement toward and away from a running web, a web engaging and deflecting member and a web severing member mounted on said rockable member, means to rock the rockable member, said means being set in actuating condition by movement of the rockable member toward the running web, a first releasable catch to restrain said rockable member, a second releasable catch to limit the rocking movement of the rockable member when it is released from the first catch and to restrain it against further rocking movement, an electrical solenoid for actuating said catches, and means to energize the solenoid to release the catches in sequence to permit rocking of the rockable member at intervals whereby the web deflecting member and the web severing member will be presented in sequence to the running web to operate thereon.

15. In a web supply mechanism adapted to join the webs of an expiring roll and a replacement roll, a web deflector, a web severing member, a support for said deflector and member, and means to actuate said support to move the deflector into engagement with the web of the expiring roll, and then to move the deflector out of engagement with the expiring web and to move the severing member into engagement with the expiring web.

16. In a web deflecting and severing device for a web supply mechanism, a part mounted for rotation and movable for disposition adjacent a running web, a web deflecting member and a web severing member carried by said part, and spring means to rotate said part, said spring means being tensioned for actuation by the movement of said part toward the running web.

17. In a web deflecting and severing device for a web supply mechanism, a part mounted for rotation and movable for disposition adjacent a rotatable replacement web roll, a web deflecting member and a web severing member mounted on said part to engage a web running adjacent the roll in sequence when said part is rotated, and spring means, tensioned when said part is moved to its position adjacent the roll, to rotate said part.

18. In a web deflecting and severing device for a web supply mechanism, a part mounted for rotation and movable for disposition adjacent a rotatable replacement web roll, a web deflecting member and a web severing member mounted on said part to engage a web running adjacent the roll in sequence when said part is rotated, and spring means, tensioned when said part is moved to its position adjacent the roll, to rotate said part, releasable means to restrain said part against the action of said springs, and means to release said restrained means in timed relation with the rotation of said replacement roll.

19. In a web supply mechanism of the type described, a replacement web roll rotating means, a rotatable part adapted to be moved from an inoperative position, toward the periphery of the replacement roll to an operating position, a member carried by said part and adapted to operably engage a web running adjacent to the replacement roll when said part is rotated, driving means to rotate said part, a tensioned spring to actuate said driving means, said spring being arranged to be increasingly tensioned by the driving means when the rotatable part is moved to operating position, and means to time the actuation of said driving means by said spring.

20. In a web supply mechanism of the type described, a replacement web roll rotating means, a rotatable part adapted to be moved from an inoperative position, toward the periphery of the replacement roll to an operating position, a web

severing blade having a cutting edge carried by said part and adapted to have its cutting edge pressed against a web running adjacent to the replacement roll to sever it when said part is rotated, driving means to rotate said part, a tensioned spring to actuate said driving means, said spring being arranged to be increasingly tensioned by the said driving means when the rotatable part is moved to operating position, and means to time the actuation of said driving means by said spring.

21. In a web supply mechanism, a replacement web roll rotating means, a rotatable part adapted to be moved from an inoperative position, toward the periphery of the replacement roll to an operating position, a curved surfaced member carried by said part and adapted to engage a web running adjacent to the replacement roll to deflect it toward the roll when said part is moved toward the replacement roll and to be moved out of engagement with the running web when said part is rotated, a flexible loop carried by said part and adapted to engage the running web to press it against the replacement roll when said part is rotated, driving means to rotate said part, a tensioned spring to actuate said driving means, said spring being arranged to be increasingly tensioned by the driving means when the rotatable part is moved to operating position.

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