

July 7, 1925.

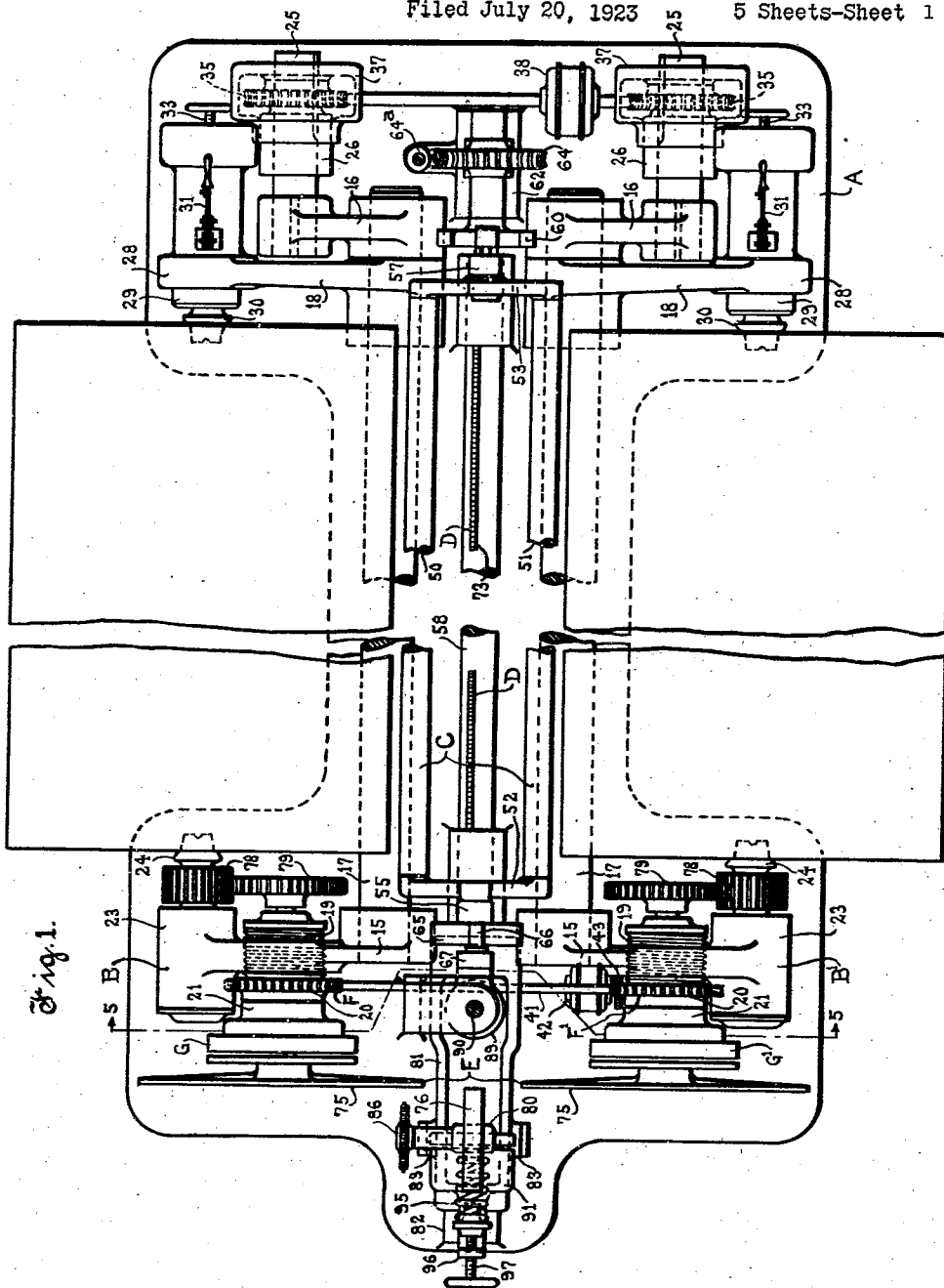
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MECHANISM FOR FEEDING MATERIAL FROM ROLLS

Filed July 20, 1923

5 Sheets-Sheet 1



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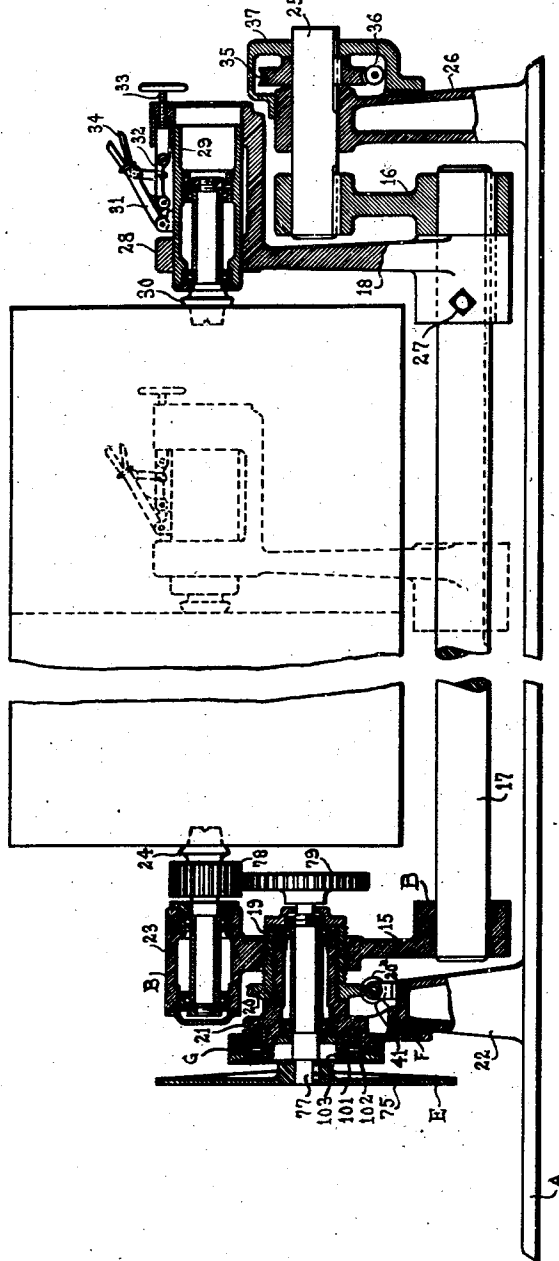
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MECHANISM FOR FEEDING MATERIAL FROM ROLLS

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Fig. 2.



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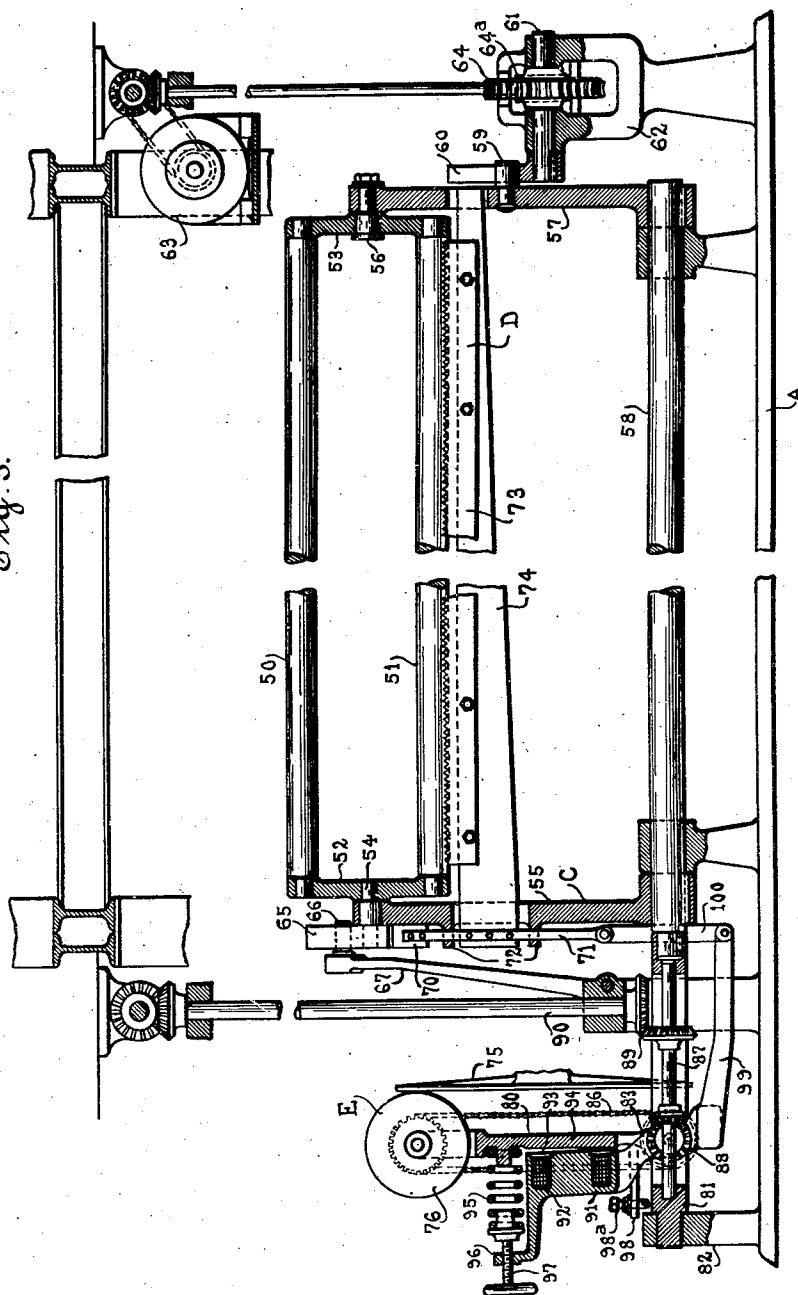
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MECHANISM FOR FEEDING MATERIAL FROM ROLLS

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Fig. 3.



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MECHANISM FOR FEEDING MATERIAL FROM ROLLS

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Fig. 4.

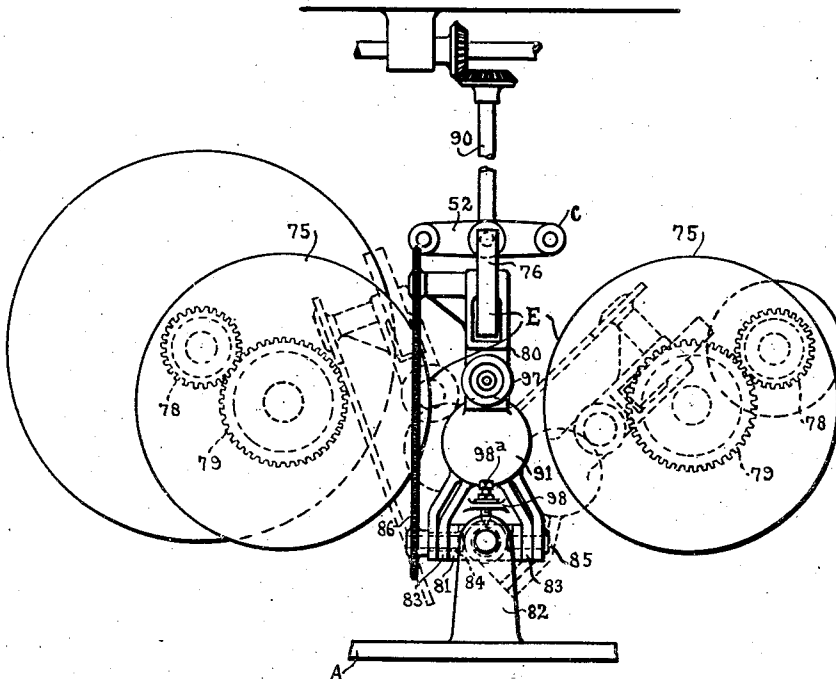
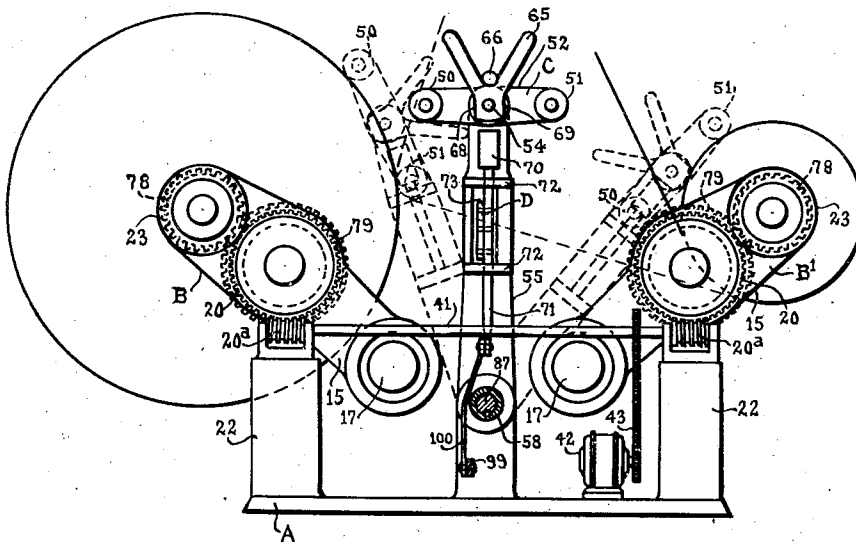


Fig. 5.



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Fig. 6.

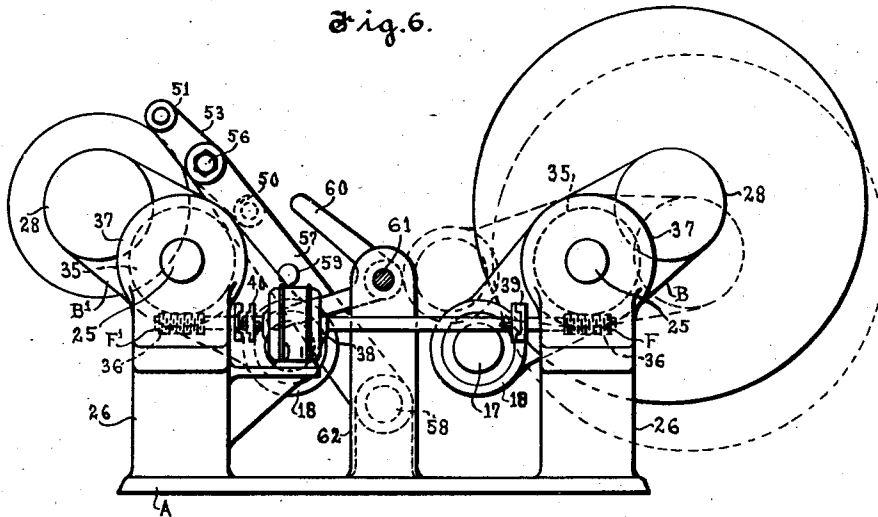


Fig. 7.

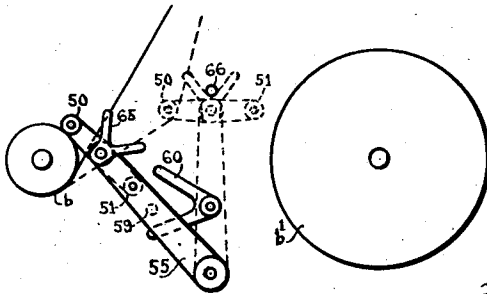


Fig. 8.

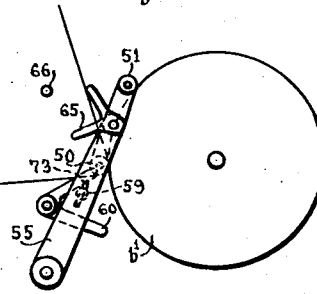
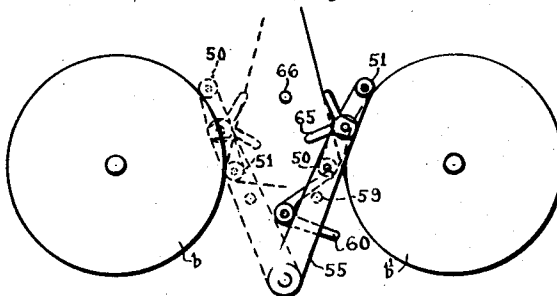


Fig. 9.



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# UNITED STATES PATENT OFFICE

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## MECHANISM FOR FEEDING MATERIAL FROM ROLLS.

Application filed July 20, 1923. Serial No. 652,706.

*To all whom it may concern:*

Be it known that I, JOHN S. COLDWELL, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Mechanisms for Feeding Material from Rolls, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

This invention relates to mechanisms for feeding material from rolls to receiving machines and more particularly to web feeding mechanisms for printing presses.

The invention has among its objects to provide a mechanism of the aforesaid character which is adapted to effect quick connection of the web of an active roll, prior to exhaustion thereof to the web of a reserve roll while maintaining said rolls in fixed axial position.

Another object is to provide a mechanism of the aforesaid character having improved tensioning means associated therewith, for maintaining a substantially constant tension on the web as the same proceeds into the press.

Another object is to provide tensioning means of the aforesaid character which can be readily adjusted to vary the tension on the proceeding web.

Another object is to provide a mechanism of the aforesaid character including separate roll supporting frames for supporting the active and reserve web rolls such frames being movable to facilitate installation of the rolls thereon.

Another object is to provide improved means for effecting margin adjustments of the rolls.

Another object is to provide means for braking the rolls during quick stopping of the press.

Various other objects and advantages of the invention will hereinafter appear.

The accompanying drawings illustrate an embodiment of the invention which will now be described it being understood that the embodiment illustrated is susceptible of modification without departing from the scope of the appended claims.

In the drawings:

Figure 1, is a plan view of a device embodying the invention.

Fig. 2, is a side view partly in section of one of the roll supporting frames.

Fig. 3, is a side view partly in section of the web renewing mechanism.

Fig. 4, is an end elevational view of the tensioning mechanism.

Fig. 5, is an end elevational view of the web renewing mechanism taken substantially on line 5—5 of Fig. 1.

Fig. 6, is an end elevational view of certain of the parts as viewed from the right hand end of Fig. 1, and,

Figs. 7, 8 and 9 are diagrammatic views illustrating the operation of the web renewing mechanism.

Referring to the drawings and particularly to Fig. 1 the same illustrate a web renewing and tensioning mechanism including a bed plate A having roll supporting frames B and B' mounted thereon either of said frames being adapted to support an active web roll and the other a reserve web roll. A web renewing mechanism C is provided for sealing the web of the active web roll prior to exhaustion thereof to the web of a substitute roll and a cutoff device D is associated with said mechanism to sever the web of the former roll upon sealing thereof with the latter. The mechanism also includes a tensioning mechanism E including parts to rotate with the rolls and a co-operating part to be driven from the press; margin adjusting devices F and F' associated with frames B and B' respectively, and brakes G and G' each for braking a roll mounted on one of said frames.

### *Roll supporting frames.*

The roll supporting frames B and B' are arranged to support a pair of web rolls in a parallel relation, and each of the same is provided with spindles to be inserted in opposite ends of a core member fixed within the roll, to support the roll and to rotate therewith. The frames B and B' are of similar construction and as shown in Fig. 2, each includes arms 15 and 16 having their lower ends fixed to opposite ends of a shaft 17 and an arm 18 having its lower end splined to said shaft. Arm 15 is provided with a screw threaded opening intermediate its ends for receiving a screw threaded hub 19 on a worm wheel 20, said worm wheel being rotatably mounted upon a bracket 21 fixed to a pedestal 22 on bed plate A and serving as hereinafter set forth to effect

margin adjustments of the frame. The upper end of arm 15 is provided with an enlarged head 23 having an opening therein for receiving a spindle 24 said spindle being supported within said opening by suitable ball bearings. Arm 16 has an outwardly projecting shaft 25 fixed thereto, said shaft having its axis arranged in alignment with the axis of worm wheel 20 and being supported within a suitable bearing 26 on bed plate A. Arm 18 is adjustable on shaft 17 between the positions shown in full and dotted lines, and is provided with a screw 27 for fixing the same against movement thereon. The upper end of arm 18 is provided with an enlarged head 28 having an opening therein for receiving a sleeve 29. Sleeve 29 has a spindle 30 rotatably supported therein by suitable ball bearings, the axis of said spindle being aligned with the axis of spindle 24 and said sleeve has a toggle mechanism associated therewith for sliding the same within head 28. Said toggle mechanism includes a lever 31 pivotally connected to sleeve 29 and a link 32 having one end pivotally connected to said lever and its opposite end pivotally connected to a block slidable within an opening in head 28 by an adjusting screw 33. The toggle members 31 and 32 are adapted to be held in their set position by a latch 34 pivoted to the former and adapted to lock with a pin on the latter.

From the foregoing it will be observed that each of the frames B and B' is adapted to rotate upon an axis common to the worm 20 and shaft 25 thereof and as will now be set forth such rotative movement of the frames facilitates mounting of the web rolls thereon. In installing a web roll upon a frame the same is moved into position between the spindles thereof by means of a truck or other suitable device and the frame is rotated so as to bring the spindles on a level with the axis of the roll. The roll is then moved to bring the core member thereof into engagement with spindle 24 and spindle 30 is forced into the opposite end of the core member under the action of the aforescribed toggle mechanism and the screw 33 associated therewith. Upon securement of the roll between the spindles the frame is rotated to the position shown in Fig. 6 to lift the web roll from the truck.

Power means is provided for rotating frames B and B' such means including worm wheels 35 splined to shafts 25 and co-operating worms 36 supported by suitable brackets 37 fixed to bearings 26. The worms 36 are adapted to be separately driven in opposite directions by a reversible motor 38 (Fig. 1) the worm 36 associated with frame B' being releasably connected to said motor through the medium of a releasable jaw clutch 39 and the worm asso-

ciated with frame B being releasably connected to said motor through the medium of a releasable jaw clutch 40.

As before stated arm 15 of each of the frames is mounted upon a screw threaded hub 19 of a worm wheel 20, and it will thus be observed that rotative movement of the worm wheels 20 will cause longitudinal movement of the frames B and B' and the rolls carried thereby. The worm wheels 20 are provided with driving worms 20<sup>a</sup> connected by a shaft 41 (Figs. 1 and 5) and said shaft is adapted to be driven by a reversible motor 42 through the medium of a chain and sprocket drive 43 (Fig. 5).

#### *Web renewing mechanism.*

The web renewing mechanism includes a pair of rollers 50 and 51 arranged in a parallel relation and supported at opposite ends by members 52 and 53 (Figs. 1 and 3). Member 52 has a pin 54 fixed thereto intermediate the ends thereof, said pin being rotatably mounted in the upper end of a lever 55, shown in Fig. 3. Member 53 is pivoted intermediate its ends on a pin 56 fixed to the upper end of a lever 57 and levers 55 and 57 are fixed to a shaft 58 supported within suitable bearings on bed plate A. Means is provided for swinging levers 55 and 57, in opposite directions between the frames B and B' such means including a pin 59 fixed to lever 57 and a co-operating V shaped cam member 60 fixed to a shaft 61 rotatably mounted within a suitable bearing bracket 62 on bed plate A. Shaft 61 is adapted to be driven in opposite directions by means of a reversible motor 63 said motor being operatively connected to said shaft through suitable driving connections including a worm wheel 64 fixed to said shaft and a co-operating driving worm 64<sup>a</sup> suitably supported upon bearing bracket 62. During swinging movement of the levers 55 and 57 in opposite directions between frames B and B' rollers 50 and 51 are rotated in opposite directions about the axis of pivot pins 54 and 56. Such rotative movement is effected by means of a V shaped cam member 65 fixed to pin 54 (Figs. 3 and 5) and a co-operating stationary pin 66 supported by a suitable bracket 67 extending upwardly from bed plate A (Fig. 3). Referring now to Fig. 5 it will be observed that cam member 65 is provided with flattened faces 68 and 69 on opposite sides of pivot pin 54 to be engaged selectively by a reciprocable locking member 70 fixed to a rod 71 (Fig. 3) slidable within bearing lugs 72 on lever 55 and as herein-after set forth said locking member is biased upwardly to engage the cam member 65 and is movable downwardly out of engagement therewith by an electro-magnetic operating device associated with the tensioning mecha-

nism. As shown in Fig. 5 when the web renewing mechanism is located on opposite sides of its vertical position the locking member 70 cooperates with the faces 68 and 69 of cam member 65 to lock the latter in positions wherein the end members 52 and 53 associated with the rollers 50 and 51 are maintained in substantial alignment with the levers 55 and 57. When the web renewing mechanism is located to the left of its vertical position the same tends to move in a counter-clockwise direction under the action of gravity and upon locking of the cam member 65 roller 50 rides on the periphery of the roll mounted in supporting frame B while roller 51 is held out of engagement therewith. When the web renewing mechanism is located to the right of its vertical position the same tends to move in a clockwise direction under the action of gravity and upon locking of the cam member 65 roller 51 rides on the periphery of the roll mounted in frame B' while roller 50 is held out of engagement therewith.

The cut-off device D includes a knife member 73 carried by a bracket 74 (Fig. 3) said bracket being slidable within vertical recesses in arms 55 and 57 and being fixed to the rod 71 associated with locking member 70.

The function and operation of the afore-described web renewing mechanism will now be more fully described in connection with Figs. 7 to 9 inclusive. With an active web roll *b* mounted on supporting frame B and shown in Fig. 7, the web renewing mechanism occupies the position shown in full lines. It will be observed that the roller 50 rides on the periphery of roll *b* and the web in proceeding from said roll passes upwardly between roller 50 and the roller 51. While the material is being drawn from the active roll *b* into the receiving machine a reserve roll *b'* is mounted on the frame B' said roll being arranged so that when the web thereof is drawn upwardly the same will proceed therefrom on the side adjacent the active web roll as shown in Fig. 8. An adhesive is applied to the web extremity of the reserve roll *b'* and prior to exhaustion of the active web roll *b* the press is stopped and the web renewing mechanism is moved from the position shown in Fig. 7 towards the position shown in full lines in Fig. 8 the rod 71 having first been moved downwardly by means of the aforementioned electro-magnetic device. Such movement of the web renewing mechanism is effected by operating motor 63 in a direction to bring the left hand prong of the V-shaped cam member 60 into engagement with pin 59 on lever 57 and during movement of the web renewing mechanism through the vertical position shown in dotted lines in Fig. 7. The left

hand prong of cam member 65 is brought into engagement with stationary pin 66 to rotate the end members 52 and 53 in a counterclockwise direction. Such rotative movement of the end members 52 and 53 causes the roller 50 to engage the web proceeding from the active web roll *b* and upon movement of the web renewing mechanism beyond its vertical position cam member 65 is moved out of engagement with the pin 66 and rollers 50 and 51 are pressed against the reserve roll *b'*. The press is then started and the web in proceeding between roller 50 and web roll *b'* causes the latter to rotate in a clockwise direction so as to bring the adhesive web extremity thereof into engagement with the web proceeding from the roll *b*. Upon sealing of the web of the reserve roll to the web of the active roll the aforementioned electro-magnetic operating device associated with the tensioning mechanism is deenergized and the rod 71 is moved upwardly. During such upward movement of said rod the knife 73 is brought into engagement with the web proceeding from roll *b* to sever the same and locking member 65 engages cam 66 to move roller 50 out of engagement with the periphery of web roll *b'* as shown in Fig. 9. Prior to exhaustion of the web roll *b'* the web thereof is connected to the web of a reserve roll installed on the frame B by returning the web renewing mechanism to the position indicated in dotted lines in Fig. 9. During such movement the end members 52 and 53 are rotated in a clockwise direction and the roller 51 acts on the web of roll *b'* to seal the same to the web of the reserve roll on frame B.

In connection with the foregoing it should be noted that during web renewing operations the cam member 60 is always rotated between the extreme position indicated in full lines in Fig. 7 and the extreme position indicated in full lines in Fig. 9. The web renewing mechanism is thus always free to move under the action of gravity towards the spindle of the active web roll as the diameter of such roll decreases. Furthermore it should be noted that during movement of the cam members 60 between the aforesaid extreme positions the same acts to ease rollers 50 and 51 into engagement with the reserve web rolls.

#### *Tensioning mechanism.*

The tensioning mechanism includes a pair of friction discs 75 each to be driven from one of the spindles 24 and a co-operating friction wheel 76 to be driven from the press and adapted to engage said discs alternately upon movement of the web renewing mechanism in opposite directions between the web rolls carried by frames B and B'. As best shown in Figs. 1 and 2 the friction discs

75 are fixed to shafts 77 said shafts being supported by suitable ball bearings within central openings in brackets 21 and each of said discs is driven at a reduced speed from its respective spindle 24 through the medium of an elongated pinion 78 and a gear wheel 79. Friction wheel 76 is carried by an arm 80 (Fig. 3) which is fixed to shaft 58 to move therewith, and the same is arranged in a plane common to the axis of rollers 50 and 51 when the latter are locked through engagement of locking member 70 with cam member 65. Also as best shown in Fig. 4 the radial distance of the axis of friction wheel 76 from the axis of shaft 58 is substantially the same as the radial distance of the axis of either of the friction discs from the axis of said shaft. It should now be noted that during unwinding of a web roll mounted on either of the supporting frames, the friction wheel always moves with the web renewing mechanism towards the axis of the friction disc 75 associated with the active roll and that the radial distance of the friction wheel from the axis of such disc will always be proportional to the web roll diameter. Friction wheel 76 is driven from the press at a speed whereby the same acts through the friction discs to impose a drag on the active web roll, such drag being adjustable as hereinafter set forth, by means of a spring pressure device adapted to vary the pressure of said wheel on said discs. Assuming that the dragging effect of wheel 76 on the discs is constant it is apparent that variation of the position of said wheel with respect to the axis of the discs as above set forth, will produce a substantially constant tension on the material proceeding from the active web roll.

The construction of the tensioning mechanism will now be more fully set forth. The supporting member 80 for friction wheel 76 is pivotally connected to a yoke member 81 (Figs. 1 and 3) said yoke member having one end fixed to the shaft 58 and having its opposite end supported in a bearing 82 in axial alignment with said shaft. The lower end of the member 80 is provided with downwardly projecting lugs 83 (Fig. 4) to engage the yoke member 81 on opposite sides thereof and the left hand lug 83 is pivotally secured to one side of the yoke member by sleeve 84 while the right hand lug is pivotally secured to the opposite side of said yoke member by a pin 85. The friction wheel 76 is driven through the medium of a chain and sprocket connection 86 from a pin located within sleeve 84, said pin being driven from a shaft 87 (Fig. 3) through the medium of bevel gears 88. Shaft 87 is supported at opposite ends by bearings in yoke member 81, and the same is driven from the press through bevel gears 89 and a shaft 90. During movement of the transfer mecha-

nism in opposite directions friction wheel 76 is moved out of the plane of the friction discs 75 by means of electromagnet 91, (Figs. 3 and 4) said magnet having a field member 92 provided with downwardly extending projections pivotally connected to the yoke member 81 by sleeve 84 and pin 85. Field member 92 has an annular recess therein for receiving an electromagnetic winding 93 and the member 80 is provided with an armature portion 94 to be attracted by said winding. Supporting member 80 and field member 91 are biased in opposite directions by a coil spring 95 held under compression between said supporting member 80 and a lug 96 on said field member and the compression of said spring is adjustable by means of the screw device 97 threaded into lug 96. Member 80 is provided with a projecting arm 98 which carries an adjustable stop 98<sup>a</sup> for engaging the upper face of yoke member 81 and field member 91 is provided with an arm 99 below the pivot point thereof, said arm having its free end thereof connected by a link 100 to the rod 71 associated with the locking member 70.

From the foregoing it will be noted that upon energization of winding 93 supporting member 80 is attracted to move the friction wheel 76 outwardly with respect to the faces of the friction discs 75 such movement being limited by engagement of the stop 98<sup>a</sup> with yoke member 81. Upon arrest of the supporting member 80 field member 91 moves towards the same and arm 99 then acts through link 100 and rod 71 to disengage locking member 70 from cam member 65 and to move knife member 73 downwardly. Winding 93 is always energized during web renewing operations and upon completion of such operations the same is de-energized. Spring 95 then acts to move the field member 91 and supporting member 80 in opposite directions and such movement brings the friction wheel 76 into engagement with one of the friction discs 75 and also moves the knife member 73 and cam block 70 upwardly to obtain the results described in connection with the web renewing mechanism.

During stopping of the press, friction wheel 76 brakes the disc 75 associated with the active web roll but upon quick stopping of the press such braking action of the wheel 76 is insufficient to prevent over-running of the active web roll. To provide for quick stopping of an active web roll mounted on either of the supporting frames, the supporting bracket 21 of each of the frames is recessed, as shown in Fig. 2 to receive an electromagnetic winding 101, and each of the friction discs 75 has a spring disc 102 fixed thereto which carries an armature member 103. Each of the armature members 103 is adapted to be attracted by its

respective winding 101 against a friction face on the associated bracket 21 whereby either of the friction discs 75 can be braked to provide for quick stopping of an active web roll.

### *Résumé of operation.*

The operation of the aforescribed web renewing and tensioning mechanism as a whole, will now be briefly set forth. Assume that an active web roll is mounted on either of the supporting frames and that a reserve web roll has been installed on the other. Prior to exhaustion of the active web roll the press is stopped and the active web roll is brought to rest with the press through braking of the associated friction disc 75 by friction wheel 76 or if necessary by energization of winding 103 of the associated brake. Winding 93 is then energized and upon energization thereof friction wheel 76 is moved out of the plane of the friction discs 75, cam 65 is released and knife 73 is moved downwardly. Immediately thereafter the web renewing mechanism is operated by motor 63 to bring the web of the active roll into engagement with the periphery of the reserve roll. The press is then slowly started and the web of the reserve roll adheres to the proceeding web of the active roll and is drawn into the press therewith. As soon as the web of the reserve roll is drawn into the press winding 93 is deenergized and the press is brought up to speed. Upon deenergization of winding 93 friction wheel 76 is brought into engagement with the disc 75 associated with the reserve web roll, knife 73 is moved upwardly to sever the web proceeding from the active web roll, and cam member 65 is locked. The tensioning mechanism then functions to maintain a substantially constant tension on the proceeding web.

What I claim as new and desire to secure by Letters Patent is:

1. In a mechanism for tensioning material drawn from a supply roll into a receiving machine, in combination, a friction disc associated with the roll to rotate therewith, a friction member engaging said disc to brake the same and thereby tension the material proceeding from the roll, said latter member being adjustable transversely with respect to said friction disc to vary the braking effect thereof and automatic control means for said friction member including a follow-up member to ride on the periphery of the roll, said follow-up member being adapted to vary the position of said friction member with respect to the axis of said disc to maintain a substantially constant tension on the material proceeding from the roll.

2. In a mechanism for tensioning material drawn from a supply roll into a receiving

machine, in combination, a friction disc associated with the roll to rotate therewith, a co-operating friction wheel driven by the receiving machine at a speed proportional thereto, said friction wheel tending to brake said disc and being adjustable transversely with respect to the axis of said disc for variation of the braking effect thereof and means for automatically varying the position of said friction wheel with respect to the axis of said disc to maintain a substantially constant tension on the material proceeding from the roll.

3. In a mechanism for tensioning material drawn from a web roll into a receiving machine in combination a friction disc associated with the roll to rotate therewith, a friction wheel arranged in a plane at substantially right angles to the plane of said disc and adapted to engage said disc at varying distances from the axis thereof, said friction wheel being driven from the receiving machine at a speed whereby the same tends to retard said disc, and control means for said friction wheel including a follow-up member adapted to ride on the periphery of the roll, said member being adapted to vary the position of said wheel with respect to the axis of said disc in accordance with variations in the roll diameter to maintain a substantially constant tension on the material proceeding from the roll.

4. In a tensioning mechanism for a material drawn from a supply roll into a receiving machine, in combination, a member to rotate with the roll a part frictionally engaging said member to retard the same and thereby tension the material proceeding from the roll means for varying the pressure of said part on said member to vary the retarding effect thereof and automatic control means for said part adapted to vary the position thereof with respect to the axis of said member to maintain a substantially constant tension on the material proceeding from the roll.

5. In a mechanism for tensioning material drawn from a supply roll into a receiving machine, in combination, a friction disc to rotate with the roll, a friction wheel engaging said disc, said wheel being driven from the receiving machine at a speed whereby the same tends to retard said disc to tension the material proceeding from the roll, means for varying the pressure of said wheel on said disc to vary the tension on the material proceeding from the roll and automatic control means for said friction wheel adapted to vary the position thereof with respect to the axis of said disc to maintain a substantially uniform tension on the material proceeding from the roll.

6. In a mechanism for tensioning material drawn from a web roll into a receiving machine, in combination a friction disc to rotate

with the roll, a friction wheel engaging said disc, and arranged in a plane at substantially right angles to the plane thereof, said friction wheel being driven from said receiving machine at a speed tending to retard said disc and being adapted to move towards the axis of said disc as the roll diameter decreases and means for maintaining the plane of said wheel substantially tangent to the periphery of the roll as the roll diameter decreases to produce a substantially constant tension on the proceeding web.

7. In a mechanism for tensioning material drawn from a web roll into a receiving machine, in combination a friction disc to rotate with the roll, a friction wheel engaging said disc, and arranged in a plane at substantially right angles to the plane thereof, said friction wheel being driven from said receiving machine at a speed tending to retard said disc and being adapted to move towards the axis of said disc as the roll diameter decreases and means for maintaining the plane of said wheel substantially tangent to the periphery of the roll as the roll diameter decreases to produce a substantially constant tension on the proceeding web, and means for varying the pressure of said wheel on said disc to vary the tension on the proceeding web.

8. In a mechanism of the character described in combination a pair of spindles either being adapted to support an active web roll and the other a reserve web roll, means for imposing a frictional drag on said spindles alternatively for tensioning of the material proceeding from the active web roll and automatic control means associated with said former means to render dragging effect thereof a function of variations in the diameter of the active roll.

9. In a machine of the character described in combination a pair of spindles either being adapted to support an active web roll and the other a reserve web roll, means for imposing a frictional drag on said spindles alternatively for tensioning of the material proceeding from the active web roll and automatic control means for said former means adapted to vary the dragging effect thereof in accordance with variations in the diameter of the active roll, said control means including a pair of follow-up members, one to ride on the periphery of an active web roll mounted on one of said spindles and the other to ride on the periphery of an active web roll mounted on the other of said spindles.

10. In a mechanism of the character described, in combination, a pair of supporting spindles either being adapted to support an active web roll and the other a reserve web roll, means for imposing a frictional drag on said spindles alternatively for tensioning of the material proceeding from the

active web roll, said means including a friction disc associated with each of said spindles and adapted to rotate therewith and a cooperating friction member for engaging said discs alternatively.

11. In a mechanism of the character described in combination a pair of spindles either being adapted to support an active web roll and the other a reserve web roll, means for imposing a frictional drag on said spindles alternatively for tensioning of the material proceeding from the active web roll, said means including a pair of friction discs each to rotate with one of said spindles and a co-operating friction wheel to be driven from the receiving machine at a speed proportional thereto, said friction wheel being adapted to engage said friction discs alternatively; and control means for said friction wheel adapted to automatically vary the position thereof with respect to the axis of either of said discs to maintain a substantially constant tension on the web proceeding from the active roll.

12. In a mechanism of the character described in combination, a pair of roll supporting spindles having their axis arranged in a parallel relation, a friction disc associated with each of said spindles to rotate therewith, said discs having friction faces arranged in a common plane, a friction member movable between said discs and adapted to engage the same alternatively to tension the material proceeding from an active roll mounted on either of said spindles, and means for moving said friction member out of the plane of the friction faces on said discs to permit free movement thereof between said discs.

13. In a mechanism of the character described, in combination of a pair of web roll supporting spindles having their axes arranged in a parallel relation, a friction disc associated with each of said spindles to rotate therewith, said discs having friction faces arranged in a common plane, a friction wheel movable between said discs and adapted to engage the same alternatively to tension the material proceeding from an active web roll, and means for bringing the web of an active roll mounted on either of said spindles into engagement with the periphery of a reserve roll mounted on the other of said spindles for sealing of the web of the former to the web of the latter and for simultaneously moving said wheel out of engagement with the disc associated with the active roll and into engagement with the disc associated with the reserve roll.

14. In a mechanism of the character described in combination a pair of spindles either being adapted to support an active web roll and the other a reserve web roll having an adhesive applied to the web extremity thereof and means for sealing the

web of the former to the adhesive extremity of the latter, said means including a pair of members movable in opposite directions between said spindles, and adapted during such movements to rotate about an axis intermediate the same. 35

15. In a web renewing mechanism, for a pair of web rolls supported in a parallel relation, either of said rolls being active and the other being in reserve, in combination a pair of members between said rolls to have the web of the active roll pass therebetween, and means for moving said members in opposite directions between said rolls and for causing the same during such movement to rotate about an axis intermediate the same. 40

16. In a web renewing mechanism for a pair of web rolls supported in a parallel relation, either of said rolls being active and the other being in reserve, in combination a pair of rollers between said rolls to have the web of the active roll pass therebetween, and means for moving said rollers in opposite directions between the web rolls and to cause said rollers to move in intersecting paths during movement from one web roll to the other. 45

17. A mechanism of the character described including separate frames for sup- 50

porting a pair of web rolls in a parallel relation, each of said frames being provided with aligned spindles for receiving a web roll therebetween and being movable about an axis parallel to said spindles to facilitate installation of a web roll thereon. 55

18. A mechanism of the character described in combination separate frames for supporting a pair of web rolls in a parallel relation, each of said frames being provided with aligned spindles for receiving a web roll therebetween, means for moving each of said frames about an axis parallel to the spindles thereof to facilitate installation of a web roll thereon, and means associated with said frames for effecting axial adjustments of the rolls mounted thereon. 60

19. In a mechanism of the character described, in combination a pair of spindles, either being adapted to support an active web roll and the other a reserve web roll, means for imposing a frictional drag on said spindles alternatively for tensioning of the material proceeding from the active web roll and an electro-magnetic brake associated with each of said spindles, for effecting quick stopping of an active web roll. 65

In witness whereof, I have hereunto subscribed my name,

JOHN S. COLDWELL.