S. G. GOSS AND E. J. SMITH.
CHANGE WEB ROLL MECHANISM.
APPLICATION FILED NOV. 29, 1916.

1,316,708.

Patented Sept. 23, 1919.

3 SHEETS—SHEET 1.

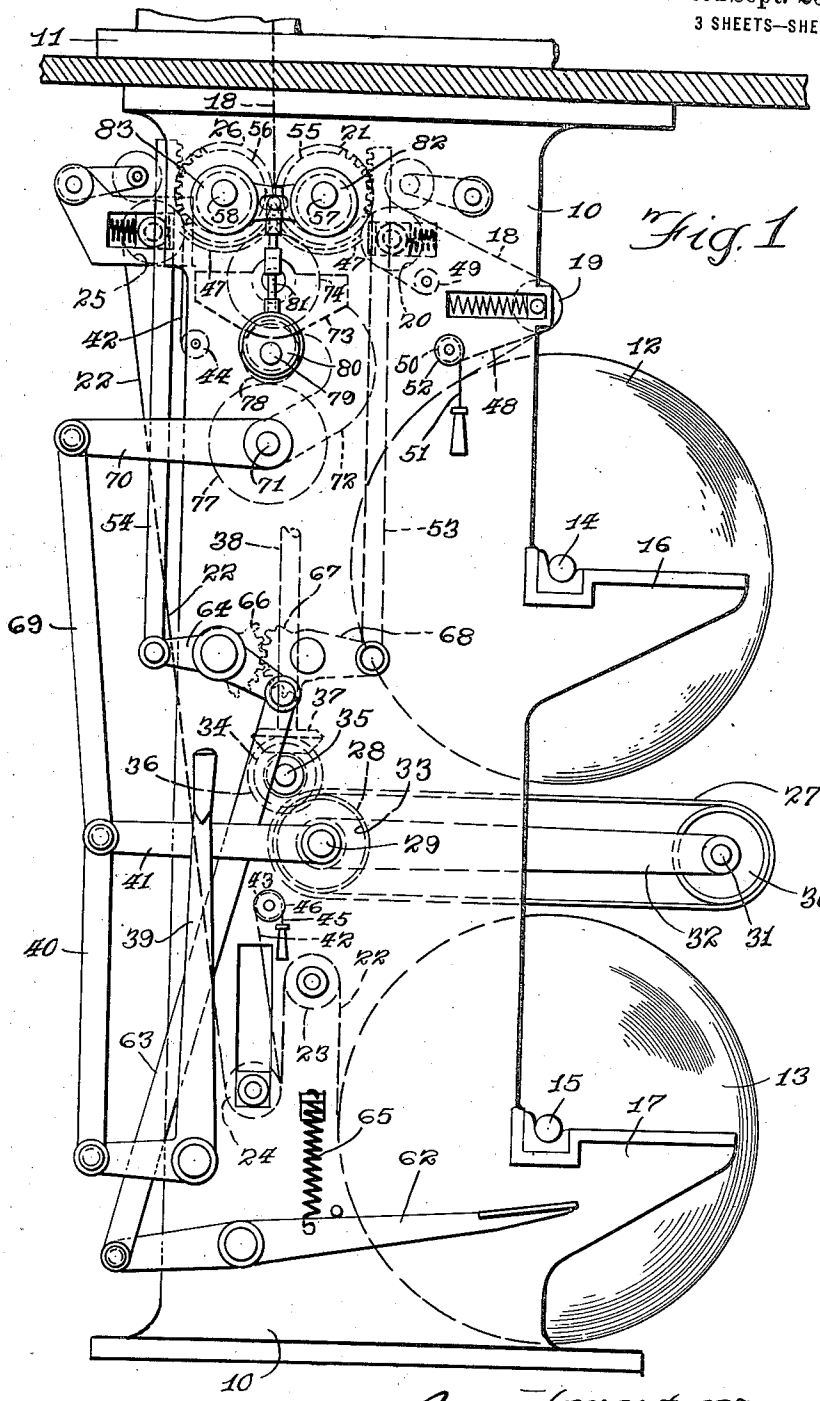

Fig. 1

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3 SHEETS—SHEET 2.

Fig. 3

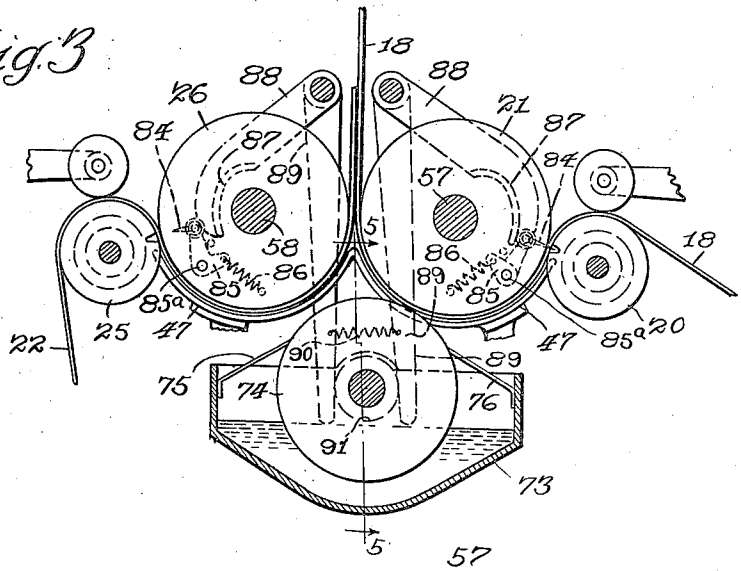
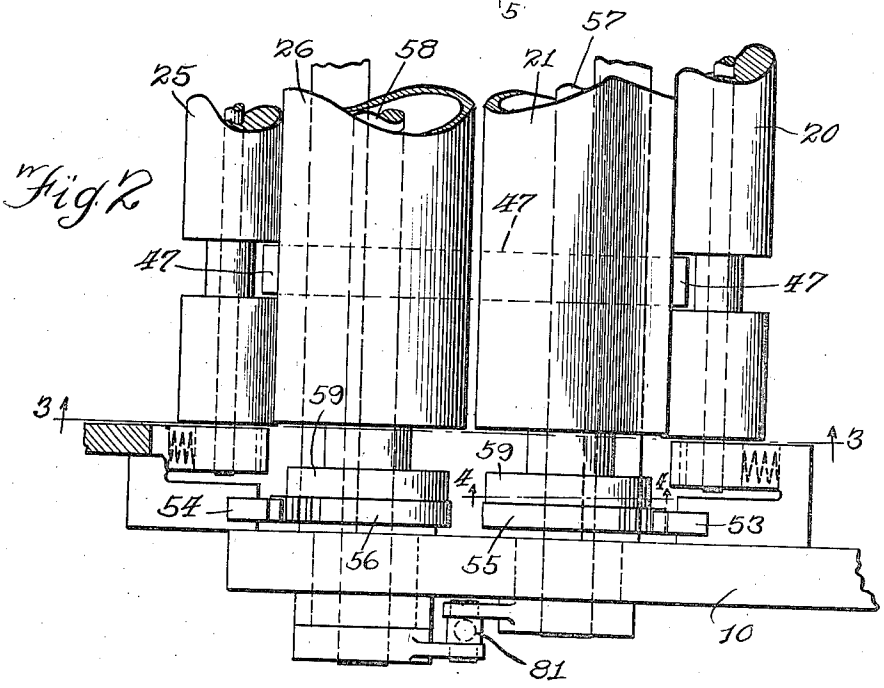


Fig 2



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3 SHEETS—SHEET 3.

Fig. 6

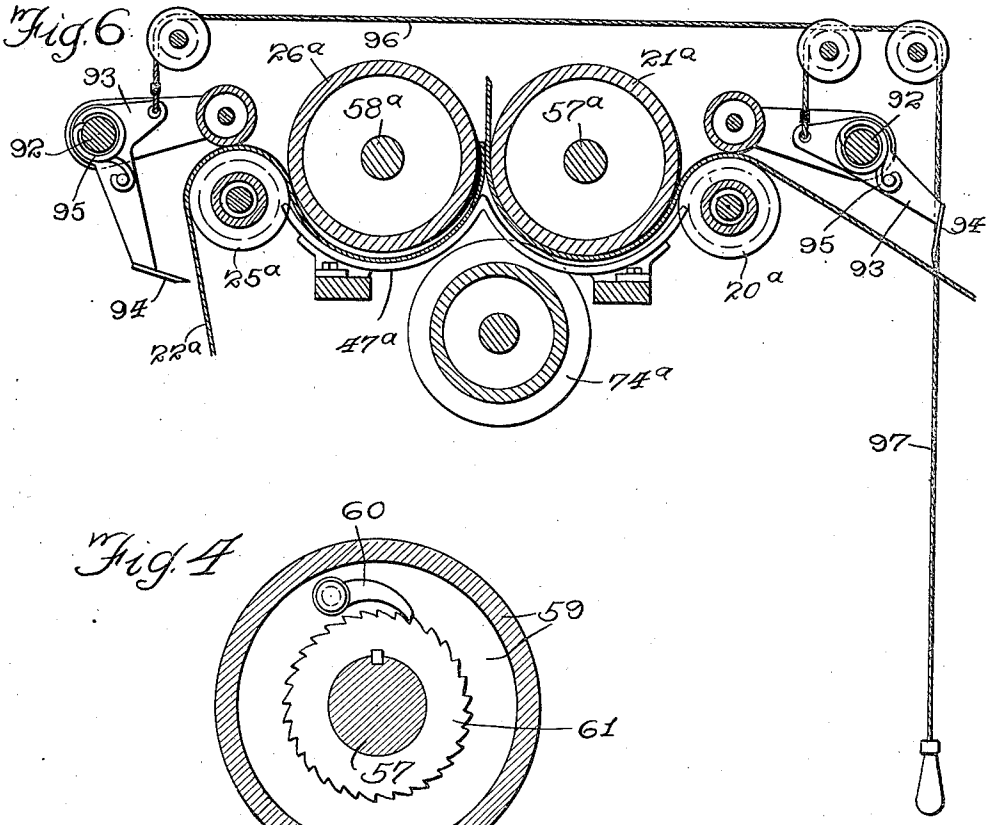
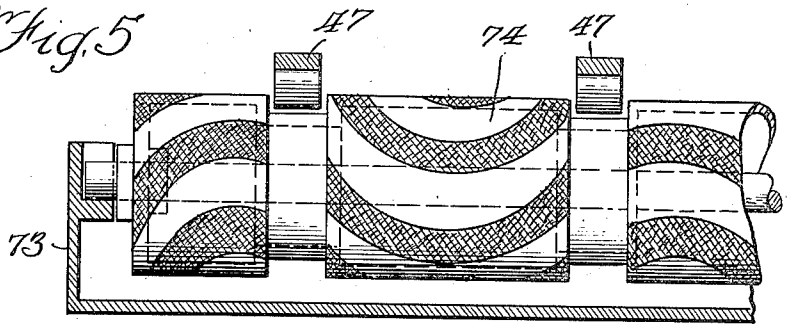


Fig. 4

Fig. 5



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UNITED STATES PATENT OFFICE.

SAMUEL G. GOSS, OF GLENCOE, AND ERNEST JAMES SMITH, OF CHICAGO, ILLINOIS, ASSIGNORS TO THE GOSS PRINTING PRESS COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CHANGE WEB-ROLL MECHANISM.

1,316,708. Specification of Letters Patent. Patented Sept. 23, 1919.

Application filed November 29, 1916. Serial No. 134,165.

To all whom it may concern:

Be it known that we, SAMUEL G. GOSS, a citizen of the United States, and a resident of Glencoe, in the county of Cook and State of Illinois, and ERNEST JAMES SMITH, a subject of the King of England, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Change Web-Roll Mechanisms, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to change web roll mechanisms for printing presses or other web machines and it has for its principal object the provision of a new and improved form and arrangement of mechanism by which the web from a fresh roll in normal operative position upon its framework may be spliced to the web being fed to the press from another roll in another operative position upon the framework. To this end it is one of the objects of our invention to provide new and improved means for bringing the end of the web from a fresh roll into contact with the web running from the other roll, being first preferably given a surface speed equal to that of the running web. It is another object of our invention to provide a new and improved form of pasting mechanism adapted to coöperate with the remaining parts to apply glue or other adhesive material in proper timed relation so as to effect a splicing operation in the desired manner. It is another object of our invention to improve mechanisms of this type in sundry details hereinafter pointed out. The preferred means by which we have accomplished our several objects are illustrated in the drawings and are hereinafter specifically described. That which we believe to be new and desire to cover by this application is set forth in the claims.

In the drawings:—

Figure 1 is a side view of our improved mechanism, looking toward the ends of the web rolls;

Fig. 2 is a top view of the end portions of the impression rolls between which the splicing operation is accomplished;

Fig. 3 is a vertical section through the parts shown in Fig. 2 and the parts immediately thereunder, being substantially a section taken on line 3—3 of Fig. 2;

Fig. 4 is a vertical section taken on line 4—4 of Fig. 2 showing the form of clutch mechanism employed for driving one of the impression rollers;

Fig. 5 is a side view of the gluing roller in position in the glue-pot, being substantially a vertical section taken on line 5—5 of Fig. 3;

Fig. 6 is a view similar in a general way to Fig. 3, but showing a modified form of web-severing mechanism.

Referring to Figs. 1 to 5 is which corresponding parts are indicated by the same reference characters,—

10 indicates a frame located in a compartment or room below that in which a printing press 11 is located. Rolls of papers 12—13 are supported by spindles 14—15, respectively, mounted in suitable bearings in arms 16—17, respectively, extending from the framework 10. The web from the roll 12, indicated by 18, is shown extending about a spring-seated roller 19, from which it extends over a second spring-seated roller 20 by which it is pressed into contact with the impression roller 21 which is movably mounted as hereinafter described. When the web is being fed to the press 11 from a roll in position upon either of the spindles 14—15, a fresh roll is placed in position upon the other spindle. The web from the fresh roll is threaded through the mechanism preparatory for use with the press, but the splicing operation for putting the new web into use is not effected until the web is substantially exhausted from the old roll. With the web 18 running to the press from the roll 12, the web 22 from the roll 13 would be fed over a roller 23, under a tensioning roller 24 and over a spring-seated roller 25 by which the web is pressed into contact with a roller 26 which is movably mounted as hereinafter described. The rollers 21—26 are adapted normally to stand slightly out of contact with each other, means being provided as hereinafter described for moving the rollers toward each other as desired. Means is provided, adapted to coöperate with the means for moving the rollers 21—26 toward each other, for applying a coating of paste or glue to the

running web passing upward between the rollers 21—26, such glue or paste being adapted to join the end of the fresh web to the web running from the substantially-exhausted roll. In order to accomplish this result effectually, means is provided for setting the fresh roll into rotation at the same surface speed as that of the running web. The means for setting a fresh roll in rotation, the means for moving the rollers 21—26 into contact with each other, and the means for applying a coating of adhesive material to the running web are all coördinated and timed relative to each other whereby an effective splicing operation is secured.

The means for setting a fresh roll into rotation and bringing it up to the same surface speed as that of the web running from the other roll comprises an endless belt 27 supported at one end by a sheave 28 revolubly mounted upon a shaft 29 extending across the frame 10. The opposite end of the endless belt is supported by a sheave 30 mounted upon a shaft 31 supported by arms 32 fixed upon the shaft 29. The sheave 28 is driven by means of a gear 33 suitably connected therewith, the gear 33 in turn being driven by a gear 34 fixed upon a shaft 35 extending across the frame. The shaft 35 in turn is driven by means of bevel gears 36—37 from a shaft 38 which is connected up with any suitable portion of the press 11. The shaft 38 is driven at such a speed as to drive the endless belt 27 at the same surface speed as that of the web running through the press. The belt 27 is adapted to be thrown into contact with a fresh roll in position upon either of the spindles 14—15 by means of a hand lever 39 which is connected by means of a link 40 with arm 41 fixedly mounted upon the shaft 29.

The means for threading the web from a fresh roll through the mechanism into position for the splicing operation comprises a plurality of tapes 42 which have their ends wound about spring rollers 43—44, the tapes extending from the spring roller 43 downward about the roller 24, thence upward about the roller 25, to the roller 44. The spring which actuates the roller 44 is stronger than that actuating the roller 43, whereby the tapes 42 are adapted when released to carry the tapes from the roller 43 to the roller 44. Any suitable means is provided for retracting the tapes 42 into position upon the roller 43, such means in the construction shown comprising a cord 45 reversely wound about a drum 46. As will be readily understood, when the web from the roll 13 is led about the roller 23 and is connected by any suitable means to the tapes 42 while such tapes are held in their retracted position, upon the release of the tapes 42 such tapes will tend to carry the web upward about the roller 25. The tapes will not have such an effect, however, until the roll 13 is rotated by hand so as to permit the web to go forward with the tapes. When the forward end of the web reaches the point where the rollers 25 and 26 contact each other, it is necessary to rotate such rollers for carrying the web between them. The rollers 25 and 26 are adapted to be rotated by the means hereinafter described, serving to carry the end of the web between the rollers and into contact with guides 47 which serve to release the end of the web from the tapes 42 after which the end of the web is directed into position between the rollers 21 and 26. The new web is then in position for the splicing operation.

When the web is being drawn from the roll upon the spindle 15 for use in the press, a fresh roll is placed in position upon the spindle 14. The web from this fresh roll is fed through the mechanism by means of tapes 48 which carry the web to the point of contact of the rollers 20—21, these rollers being rotated as hereinafter described to carry the end of the web into contact with the guides 47 which direct the end of the web between the spaced rollers 21—26, in which position the web is ready for a splicing operation. The tapes 48 are supported by spring rollers 49—50 which are adapted normally to wind the tapes upon the roller 49 for carrying the web forward when the web roll is rotated so as to permit such movement of the web. The tapes 48 are wound upon the roller 50 which is rotated in clockwise direction in Fig. 1 by its spring, this being accomplished against the action of the spring roller 49 by means of a cord 51 reversely wound upon a drum 52.

The rollers 21—26 are adapted to be rotated, in the direction for carrying the web from the fresh roll forward as above described, by means of rack-bars 53—54 which mesh with segmental gears 55—56, respectively, which are connected with the shafts 57—58 of the rollers 21—26. The connection between each of the segmental gears 55—56 and its shaft 57—58 comprises a drum 59 (see Fig. 4) connected with the roller, said drum being connected with the shaft by means of a pawl 60 pivotally mounted upon the drum at about its uppermost point and meshing with a ratchet wheel 61 fixed upon the shaft. By this construction, downward movement of the rack-bars 53—54 is adapted to turn the rollers 21 and 26 in the desired direction, while at the same time permitting such rollers to rotate independently in the same direction under the frictional influence of the running web which contacts one or the other of said rollers. The rack-bar 54 is actuated by means of a foot-lever 62 which is connected to the said bar 54 by means of a link 63 and a lever 64, a downward

stroke of the lever 62 against the action of the spring 65 serving to move said bar downward. The lever 64 is connected by means of segmental gears 66—67 with an arm 68 which in turn is connected with the rack-bar 53, the arrangement being such that upon a downward stroke of the lever 62 the rack-bar 53 is also moved downward. Since it will be understood that the lever 62 is to be operated for rotating one of the rollers 21—26 while the other roller is rotating under the influence of the running web, it will be understood that care must be taken to move the lever 62 at such a speed as to rotate the segmental gears 55—56 at a slower speed of rotation than that of the roller 21—26 in contact with the running web, so as to prevent a speeding up of such roller relative to the web with which it is in frictional contact. It will be understood that so long as the speed of the gears 55—56 is kept below that of the rotating roller 21—26, such rotation of the gear will have no effect upon the operation of the press 11 or the delivery of the web thereto.

Rising from the outer end of the link 41 is another link 69 to the upper end of which is connected an arm 70 fixed upon a transversely-extending shaft 71. Fixed upon the shaft 71 at its ends are two arms 72 which carry at their upper ends a glue-pot 73 of any suitable type in which is revolubly mounted a gluing roller 74. The roller 74 is provided with scrapers 75—76 at opposite sides adapted to scrape the surplus glue from the surface of the roller in which ever direction the roller may be rotated. As will be seen from an inspection of Fig. 1, when the arm 41 is moved upward to bring the endless belt 27 into contact with the roll 13, the link 69 will be given an upward movement, serving to rotate the shaft 71 in clockwise direction in said figure for carrying the roller 74 into contact with the web 18 upon the roller 21. When the belt 27, on the other hand, is given an upward movement by a proper manipulation of the lever 39 the link 69 is moved downward, serving to move the gluing roller 74 into contact with the web in position about the roller 26.

The means for moving the rollers 21 and 26 into contact with each other at the time when the belt 27 and the gluing roller 74 are moved into operative position comprises a gear member 77 carried by the shaft 71 meshing with a gear 78 fixed upon a shaft 79 extending transversely of the frame 10. The shaft 79 is connected by means of eccentrics 80 at its ends with links 81, the arrangement of the eccentrics being such that upon rotation of the shaft 79 in either direction the links 81 are given a downward movement. The link 81 at each side of the machine is connected with eccentrics 82—83 in which the shafts 57—58 of the rollers 21—26 are journaled, the arrangement being such that upon the downward movement of the links 81 the rollers 21—26 are moved toward each other, while upon an upward movement of said links said rollers are moved away from each other.

With the web from a fresh roll upon one of the spindles threaded through the mechanism as above described with its forward end in position between the rollers 21—26 spaced normally away from each other, when the web is substantially exhausted from the old roll the lever 39 is to be given a movement in the appropriate direction to bring the endless belt 27 into operative contact with the fresh roll for setting such roll into rotation. At the same time the rollers 21—26 are moved into operative gripping relation with each other, and the gluing roller is brought into contact with the running web. The result is that the two webs are brought into contact with each other between the rollers 21—26, one of such webs being provided with a suitable supply of adhesive material for causing the two webs to be very firmly secured to each other.

The movement of the gluing roller 74 toward one side brings into action a web-severing blade carried by the impression roller 21—26 at that side for severing the tail end portion of the old web. As is shown in Fig. 3, each of the rollers 21 is provided with a web-severing blade 84 mounted between bell-crank levers 85 fixed upon a longitudinally-extending shaft 85ª revolubly mounted in the ends of the roller. Springs 86 are connected with said bell-crank levers 85 tending to hold the blades 84 in a retracted position as shown at the left in Fig. 3. Means is provided for moving the severing blades outward into the position shown at the right in Fig. 3 against the action of the springs 86, such means comprising cams 87 carried by arms 88 which are adapted to be swung by means of arms 89 connected thereto. As is best shown in Fig. 3, the arms 89 are yieldingly connected by means of a spring 90 which holds such arms in contact with a suitable collar 91 carried by the glue-pot 73. By reason of this construction, when the glue-pot is moved toward either side the arm 88 at that side is moved outward, bringing the cam 87 into such position as to engage a suitable portion of the blade 84 for forcing such blade outward into operative position for severing the web. The rollers 20 and 25 are suitably recessed to provide for the operative outward movement of the blades 84, the rollers 20—25 in the construction shown having a two to one relation and being provided with suitable intermeshing gears for maintaining a proper relationship between such rollers.

As is best shown in Figs. 2 and 5, the

rollers 20, 25 and 74 are provided with circumferential grooves for receiving the guides 47 whereby such guides may be placed in position for properly controlling the movement of the forward end of the fresh web. As is shown in Fig. 5, the roll 74 has a portion of its surface depressed whereby a smaller amount of glue is applied to the web than would otherwise be applied.

In Fig. 6 which illustrates a modified form of construction, the parts corresponding to those already described are indicated by the same reference characters but with the addition of an exponent *a*. In this construction the web-severing blades are mounted independently of the rollers 21—26. At each side of the rollers 21^a—26^a is mounted a shaft 92 having revolubly mounted thereon bell-crank levers 93 between which is mounted a severing blade 94. Each of the bell-crank levers 93 is provided with a spring 95 tending to turn such bell-crank in the direction to carry the blade 94 outward away from the rollers 21^a—26^a. One of the bell-cranks 93 mounted upon the shaft 92 at one side of the machine is provided with a cord 96 by a pull upon which the blade 94 at that side of the machine is adapted to be brought into the path of the adjacent web for severing it. One of the bell-crank levers 93 at the opposite side of the rollers 21^a—26^a is provided with a cord 97 by which the blade 94 at that side can be moved against the action of its spring 95 into the path of the adjacent web for severing it.

What we claim as our invention and desire to secure by Letters Patent, is—

1. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, driving means arranged to alternatively drive a fresh roll in either of said positions at approximately the same surface speed as that of the web in use, means for operatively connecting said driving means with the roll to be driven thereby, and means for attaching the leading end portion of the fresh web to the web in use.

2. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, driving means arranged to drive a fresh roll in either of said positions at approximately the same surface speed as that of the web in use, means for operatively connecting said driving means with the roll to be driven thereby, means for applying adhesive material to one of said webs, and means for pressing said webs together to effect a splice.

3. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, driving means arranged to drive a fresh roll in either of said positions at approximately the same surface speed as that of the web in use, means for operatively connecting said driving means with the roll to be driven thereby, and coincidently actuated means for pressing said webs together to effect a splice.

4. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, driving mechanism controlled independently of the tension of the webs for driving the fresh roll in each position at approximately the same surface speed as that of the web in use, lever mechanism for controlling the operation of said driving mechanism, and means operated by said lever mechanism for pressing said webs together to effect a splice.

5. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever to rotate a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means actuated by the same stroke of said lever for applying adhesive material to the running web, and means for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

6. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means actuated by the same stroke of said lever for applying adhesive material to the running web, and means adapted upon the same stroke of said lever for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

7. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the

roll in the other position, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever in one direction for rotating a fresh roll in one of said two positions and adapted upon a stroke of said lever in the other direction for rotating a fresh roll in the other of said two positions, means adapted upon a stroke of said lever for rotating a fresh roll in either position to apply adhesive material to the web running from the roll in the other position, and means for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

8. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever in one direction for rotating a fresh roll in one of said two positions and adapted upon a stroke of said lever in the other direction for rotating a fresh roll in the other of said two positions, means adapted upon a stroke of said lever for rotating a fresh roll in either position to apply adhesive material to the web running from the roll in the other position, and means adapted upon a stroke of said lever in either direction for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

9. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever in one direction for rotating a fresh roll in one of said two positions and adapted upon a stroke of said lever in the other direction for rotating a fresh roll in the other of said two positions, means adapted upon a stroke of said lever for rotating a fresh roll in either position to apply adhesive material to the web running from the roll in the other position, two rollers normally spaced a short distance apart and movable toward each other, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

10. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, a lever, means adapted upon a stroke of said lever in one direction for rotating a fresh roll in one of said two positions and adapted upon a stroke of said lever in the other direction for rotating a fresh roll in the other of said two positions, means adapted upon a stroke of said lever for rotating a fresh roll in either position to apply adhesive material to the web running from the roll in the other position, two rollers normally spaced a short distance apart and movable toward each other, and means actuated by a stroke of said lever in either direction for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

11. In a change web roll machanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, said rollers being rotated one by the web running from the roll in one position and the other by the web running from the roll in the other position, means for rotating said rollers independently of the running web, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

12. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, said rollers being rotated one by the web running from the roll in one position and the other by the web running from the roll in the other position, means for rotating said

rollers in one direction independently of the running web but adapted to permit either roll to rotate more rapidly in the same direction under the influence of the running web, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

13. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, said rollers being rotated one by the web running from the roll in one position and the other by the web running from the roll in the other position, a foot-lever adapted by an operative stroke to rotate said rollers in one direction independently of the running web but adapted to permit either roller to rotate more rapidly in the same direction under the influence of the running web, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

14. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, said rollers being rotated one by the web running from the roll in one position and the other by the web running from the roll in the other position, a pair of rack-bars one for each of said rollers, connections between each rack-bar and its roller actuated by a longitudinal movement of the bar to rotate said roller in one direction independently of the running web but adapted to permit said roller to rotate more rapidly in the same direction under the influence of the running web, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

15. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, means coöperating with each roller adapted to grip a web for forwarding it upon the rotation of said roller, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

16. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, two other rollers movably mounted adjacent to said first-named two rollers respectively, yielding means tending to hold each of said second-named rollers in operative contact with its coöperating first-named roller for gripping a web therebetween, and means for bringing said first-named rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

17. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, means coöperating with each roller adapted to grip a web for forwarding it upon the rotation of said roller, means for rotating said rollers in one direction independently of the running web but adapted to permit either roller to rotate more rapidly in the same direction under the influence of the running web, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

18. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for ro-

tating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers normally spaced a short distance apart and movable toward each other, means coöperating with each roller adapted to grip a web for forwarding it upon the rotation of said roller, guiding means adapted to direct the leading end of a web fed forward by one of said rollers into position between said two rollers, and means for bringing said rollers together for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

19. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use; means adapted to be thrown into operation for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers normally spaced a short distance apart, with one of which rollers the web from the roll in one position runs in contact and with the other of which rollers the web from the roll in the other position runs in contact, and a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with either.

20. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means adapted to be thrown into operation for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers normally spaced a short distance apart, with one of which rollers the web from the roll in one position runs in contact and with the other of which rollers the web from the roll in the other position runs in contact, a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with either, and means actuated upon a movement of said gluing roller in either direction for bringing said first-named two rollers into operative engagement.

21. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means adapted to be thrown into operation for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers normally spaced a short distance apart, with one of which rollers the web from the roll in one position runs in contact and with the other of which rollers the web from the roll in the other position runs in contact, a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with either, and means actuated when said roll-rotating means is thrown into operation to move said gluing roller into contact with the running web.

22. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means adapted to be thrown into operation for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers normally spaced a short distance apart, with one of which rollers the web from the roll in one position runs in contact and with the other of which rollers the web from the roll in the other position runs in contact, a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with either, means actuated when said roll-rotating means is thrown into operation to move said gluing roller into contact with the running web, and means actuated simultaneously to move said first-named two rollers into operative engagement with each other for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

23. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, means for applying adhesive material to the running web, two rollers mounted in eccentrics journaled in said frame, and means for rotating said eccentrics in unison for moving said rollers toward each other for pressing the web from the fresh roll into contact with the portion of the running web upon which the adhesive material is applied for effecting a splicing operation.

24. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers mounted in eccentrics journaled in said frame, two rods one at each side of the frame connected

with said eccentrics and adapted upon longitudinal movement to rotate said eccentrics for moving said rollers toward each other for pressing the web from the fresh roll into contact with the running web, a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with the web running about either of said rollers, and means actuated by the movement of said gluing roller toward either of said first-named rollers adapted to move said rods longitudinally for bringing said rollers together for pressing said webs together for effecting a splicing operation.

25. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, means for rotating a fresh roll in either of said two positions at substantially the same surface speed as that of the web running from the roll in the other position, two rollers mounted in eccentrics journaled in said frame, two rods one at each side of the frame connected with said eccentrics and adapted upon longitudinal movement to rotate said eccentrics for moving said rollers toward each other for pressing the web from the fresh roll into contact with the running web, a gluing roller movably mounted adjacent to said two rollers and adapted to be moved into contact with either, and other eccentrics connected with said rods adapted to be rotated by the movement of said gluing roller toward either of said first-named rollers and adapted upon rotation in either direction to move said rods longitudinally in the direction for bringing said rollers together.

26. In a change web roll mechanism, the combination of a frame, means for supporting two web rolls revolubly in position upon said frame for alternative use, an endless belt swingingly mounted on said frame and adapted to be swung into operative contact with a fresh roll in either of said two positions for rotating such rolls alternatively in the same direction without reversing the direction of revolution of the belt, and means for carrying the web from the fresh roll when so rotated into contact with the web running from the other roll for a splicing operation.

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