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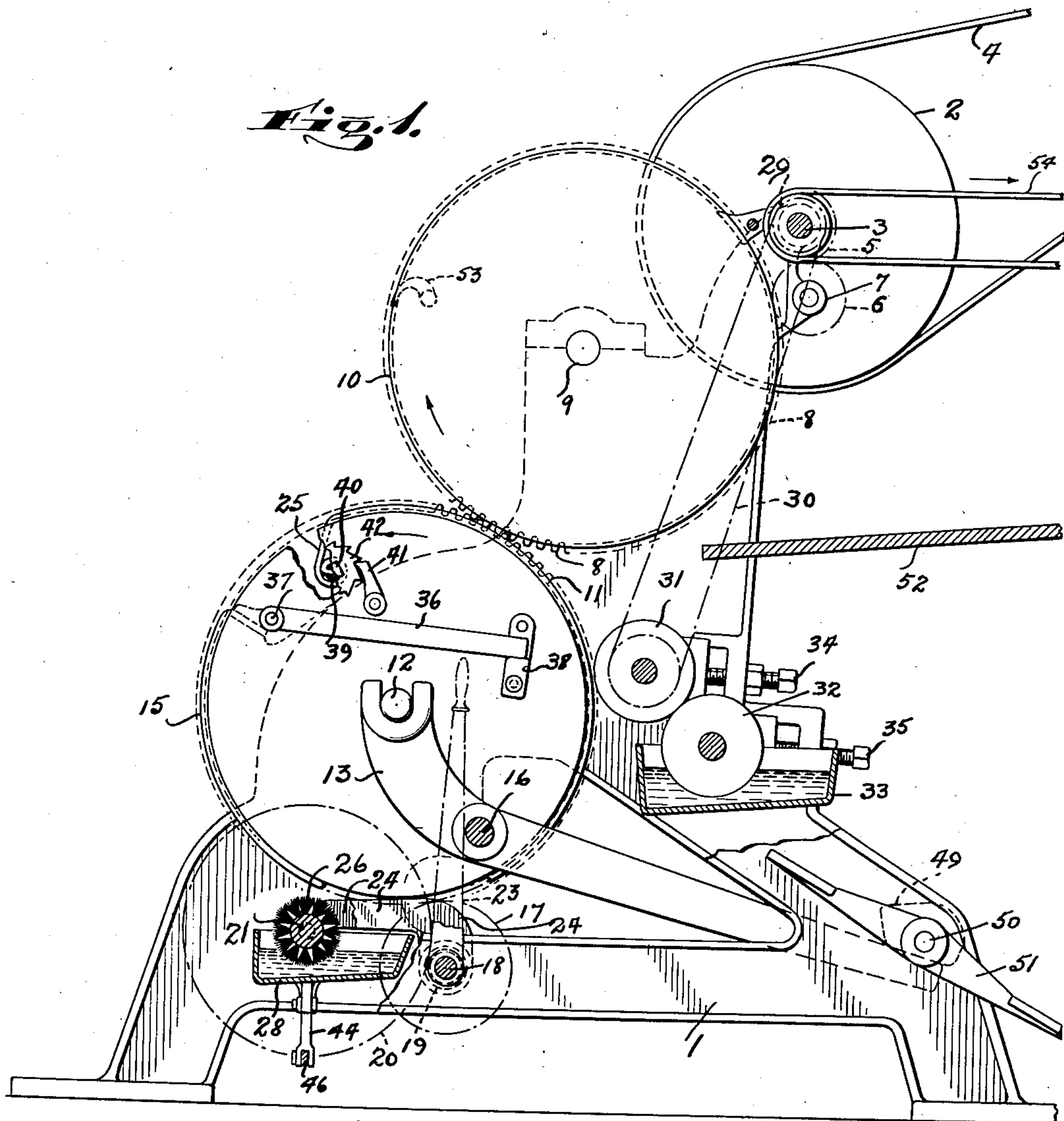
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MACHINE FOR HANDLING STRIP MATERIAL

Filed April 24, 1936

2 Sheets-Sheet 1



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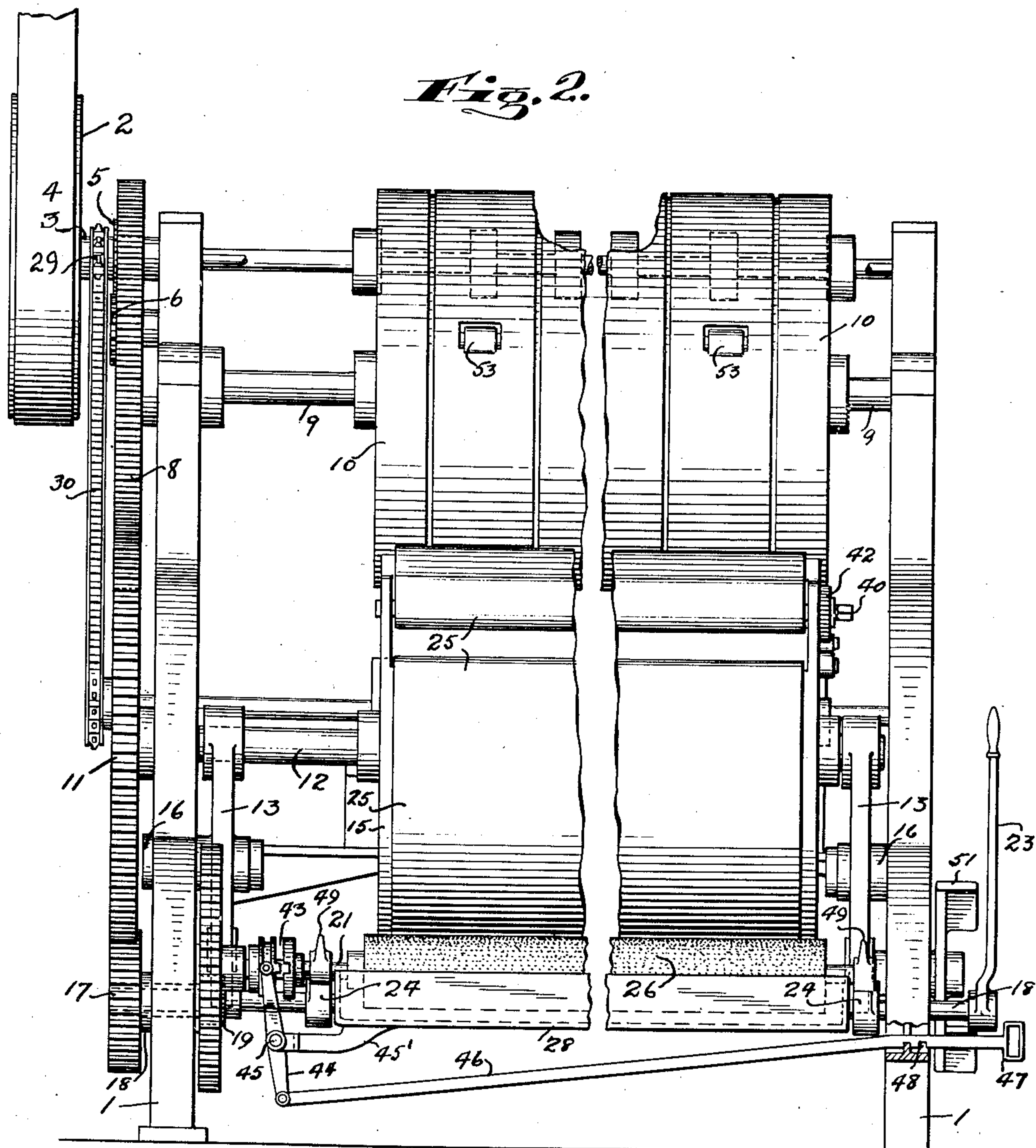
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MACHINE FOR HANDLING STRIP MATERIAL

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13 Claims. (Cl. 91—18)

This invention relates to machines for applying adhesive material, such as glue, varnish and the like to the face of paper or other material fed through the machine.

In machines of this character trouble is experienced in keeping the face of the blanket roller in good condition, the glue, varnish or other material used being quick drying so that when the machine stands idle the adhesive dries up and owing to the difficulty in removing this dried material there is sometimes long delay before the machine can again be operated.

It is one of the objects of the present invention to provide a construction wherein the disadvantages above referred to are eliminated by the provision of a blanket roller, for applying adhesive to the strips, which can be moved away from the roller which applies the adhesive to the blanket roller when the machine is not in use, and when so positioned a brush or other roller carrying a solvent for the adhesive is brought into contact with the blanket roller thereby to dissolve the adhesive material thereon and place the same in condition for the next cycle of operation.

Other objects of my present invention will be manifest from the following description and the accompanying drawings, in which drawings:

Fig. 1 is a sectional elevation of my improved device; and

Fig. 2 is a plan view of the same.

Referring to the drawings in detail, 1 designates a frame or support for the device, the upper end of which is provided with a pulley 2 mounted on shaft 3 and driven from a suitable source of power (not shown) through belt 4.

The shaft 3 carries a pinion 5 meshing with pinion 6 mounted on shaft 7 on the machine frame. This pinion 6 engages a gear 8 mounted on shaft 9, the shaft 9 also carrying a feed roller 10.

The gear 8 meshes with a gear 11 mounted on shaft 12, this shaft also carrying blanket roller 15. The shaft 12 is supported in the forked ends of arms 13 pivotally mounted on stub shafts 16 in the frame of the machine so that the blanket roller 15 may be moved away from the feed roller 10, as will be hereinafter pointed out.

The gear 11 meshes with a gear 17 mounted on a shaft 18, this shaft also carrying a pinion 19 meshing with gear 20 on a shaft 21.

Mounted on the shaft 18 is a hand lever 23, this shaft also carrying spaced arms 24 which constitute supports or bearings for a shaft 21.

The shaft 21 carries a roller or rotary brush 26

rotating in an adhesive solvent contained in a solvent tank 28. It will be obvious that when the hand lever 23 is manipulated the arms 24 will be raised and lowered thereby raising and lowering the brush 26 into and out of contact with the blanket roller 15. In this movement of the brush it will be appreciated that the gear 20 will move about the axis of shaft 18 or, in other words, will roll around the pinion 19 so that the drive is not interrupted. The shaft 21 and consequently the brush 26 is driven through gear 20 meshing with pinion 19.

The blanket roller 15 carries a removable blanket one end of which is secured to the roller by means of a clamp 36 pivoted at 37 and latched in clamping position by the latch 38. The other end of the blanket is wound about a rod or roller 39, and tightened by means of nut 40, reverse rotation of which is prevented by pawl 41 and ratchet 42.

The shaft 3 heretofore referred to also carries a sprocket 29 which receives a chain 30 for driving the adhesive applying roller 31. This roller receives adhesive, such as glue or varnish, from roller 32 which is immersed in a tank 33 of the adhesive, and applies the same to the blanket 25 of the roller 15 when strips are being fed through the machine, the blanket in turn transferring the adhesive to the strip of material in a well known manner. The adhesive-applying roller 31 and the tank 33 are provided with the usual adjusting nuts 34 and 35, respectively.

It will be appreciated that the brush 26 is to be rotated only when it is desired to clean the blanket of the blanket roller and when no strips are being fed to the machine. To provide for such operation a clutch 43, carried on the shaft 21, is adapted to be manipulated through lever 44, pivotally mounted at 45 on an arm 45' attached to the bottom of the tank 28, one end of this lever being attached to the clutch and the other end to a transverse lever 46. This lever 46 is provided at its outer end with a handle 47 and notches 48 adapted to lock the clutch in and out of clutching position, as will be obvious.

The free ends of the arms 13 which support the blanket roller 15 and gear 11 are adapted to be engaged by cam 49 fixed to shaft 50, this shaft being rocked through the medium of a double foot pedal 51. It will be obvious that as this pedal is rocked the blanket roller 15 and the gear 11 will be raised and lowered slightly. The teeth on the gears 8 and 11 are cut slightly deeper than usual to permit of this movement of the gear 11 without the gear becoming entirely dis-

engaged from the gear 8. It will be appreciated that in raising and lowering the blanket roller 15 the same follows an arcuate path about the fulcrum 16 so that the blanket roller 15 will be moved into and out of contact with the adhesive-applying roller 31.

Although the operation of my improved device will be readily understood from the foregoing description of the apparatus, I will nevertheless for the purpose of clarity here briefly describe the same.

As the strips are fed to the machine from the table 52 the same will be received between the feed roller 10 and blanket roller 15, the forward end of the strip being engaged by grippers 53 on the feed roller in the usual manner. As the strip passes between the rollers 10 and 15 it receives adhesive from the blanket of roller 15, the adhesive having first been transferred to the roller 15 from the tank 33 by the adhesive-applying roller 31. The strips are then discharged upon a conveyor belt 54 for delivery from the machine in the usual manner.

After the desired number of strips have passed through the machine the operator steps on the foot pedal 51 to rock the same clockwise thereby permitting the shaft 12 carrying the blanket roller to be lowered to disengage the blanket roller from the adhesive-applying roller. At the same time the operator manipulates the hand lever 23 to raise the brush roller 26 into engagement with the blanket. The operator then throws in the clutch 43 to drive the brush roller, the periphery of which when it engages the roller 15 traveling in the opposite direction to the roller 15, thereby applying a solvent to the blanket to dissolve and remove the adhesive therefrom.

It will be understood that my device has manifold uses such as, for example, in spot varnishing and other adhesive applying machines. It is also to be understood that various changes and modifications may be made in the device herein illustrated and described without departing from the spirit and scope of my invention.

What I claim is:—

1. In a machine for handling strip material the combination of a blanket roller for applying adhesive to strips fed to the same, an adhesive-applying roller for applying adhesive to said blanket roller, said blanket roller being adapted to be moved into and out of contact with said adhesive-applying roller, a cleaning roller, means for moving said cleaning roller into engagement with the periphery of said blanket roller, means for rotating said cleaning roller, the peripheral contacting portions of the blanket roller and cleaning roller moving in opposite directions, thereby cleaning the surface of the blanket roller when the same is out of contact with the adhesive-applying roller.

2. In a machine for handling strip material the combination of a blanket roller for applying adhesive to strips fed to the same, a pair of spaced arms comprising bearings for said blanket roller, an adhesive-applying roller for applying adhesive to said blanket roller, means for rocking said arms to move said blanket roller into and out of contact with said adhesive-applying roller.

3. In a machine for handling strip material the combination of a blanket roller for applying adhesive to strips fed to the same, an adhesive-applying roller for applying adhesive to said blanket roller, said blanket roller being mounted for movement in an arcuate path toward and

away from said adhesive-applying roller, and a cleaning roller adapted for movement in an arcuate path into and out of engagement with said blanket roller for cleaning the surface thereof when the blanket roller is out of contact with the adhesive-applying roller.

4. In a tape machine for handling strip material the combination of a blanket roller for applying adhesive to strips fed to the same, an adhesive-applying roller for applying adhesive to said blanket roller, a pair of pivotally mounted arms for supporting said blanket roller, means for pivoting said arms to move said blanket roller into and out of contact with said adhesive-applying roller, a cleaning roller, and means for moving said cleaning roller into engagement with said blanket roller for cleaning the surface of the same when the blanket roller is out of engagement with the adhesive-applying roller.

5. In a machine for handling strip material the combination of a blanket roller, a roller brush for cleaning the surface of said blanket roller, a drive for said brush, a drive shaft, a clutch between said drive and brush on said shaft, and means for moving said shaft in an arcuate path without interrupting said drive to carry said brush into and out of contact with said blanket roller.

6. In a machine for handling strip material the combination of a blanket roller, an adhesive-applying roller for applying adhesive to said blanket roller, means for moving said blanket roller into and out of contact with said adhesive-applying roller, a driven brush roller adapted to be moved into and out of contact with said blanket roller for cleaning the same, a clutch for connecting and disconnecting the drive for said brush, and means for latching said clutch in either connecting or disconnecting position.

7. A machine for applying adhesive to strips of material comprising in combination a feed roller, a blanket roller cooperating therewith to feed strips of material, a pair of spaced arms comprising bearings for said blanket roller, an adhesive-applying roller immersed in a bath of adhesive for applying adhesive to said blanket roller, means for rocking said arms to move said blanket roller into contact with said adhesive-applying roller when strips are being fed to the machine and for moving the same out of contact when no strips are being fed, a cleaning roller immersed in a solvent for said adhesive for dissolving and removing the adhesive from said blanket roller, and manually operable means for moving said cleaning roller into and out of contact with said blanket roller while the latter is out of contact with the adhesive-applying roller and while maintaining the cleaning roller in the bath of solvent.

8. In a strip handling machine the combination of a blanket roller for applying adhesive to strips fed to the same, a pair of pivotally mounted spaced arms comprising bearings for said blanket roller, an adhesive-applying roller for applying adhesive to said blanket roller, a pedal for rocking said arms to move said blanket roller into and out of contact with said adhesive applying roller, and a cam operated by said pedal for maintaining said blanket roller in contact with said adhesive-applying roller.

9. In a strip handling machine the combination of a blanket roller for applying adhesive to strips fed to the same, an adhesive-applying roller for applying adhesive to said blanket roller, said

blanket roller being mounted on a shaft, a pair of pivotally mounted spaced arms for supporting said shaft, manually operable means for rocking said arms in an arcuate path to move said blanket roller toward and away from said adhesive-applying roller, a cleaning roller, and means for moving said cleaning roller in an arcuate path into and out of engagement with said blanket roller for cleaning the surface thereof.

10. In a strip handling machine the combination of a driven blanket roller, a removable blanket carried thereby, a roller brush for cleaning the surface of said blanket, a trough of cleaning material in which said brush is immersed, a drive shaft for said brush, a manually operable clutch on said drive shaft between said drive and brush, a pair of arms supporting said brush, and a hand lever connected to said arms for rotating the same in an arcuate path without interrupting said drive to carry said brush into and out of contact with said blanket roller.

11. In a strip handling machine the combination of a blanket roller for applying adhesive to strips fed to the same, an adhesive-applying roller for applying adhesive to said blanket roller, a pair of pivotally mounted arms for supporting said blanket roller, a two-way foot pedal for pivoting said arms to move said blanket roller into and out of contact with said adhesive-applying roller, a cam operated by said foot pedal for locking said arms in position to retain said blanket roller and adhesive-applying roller in contact, a rotary brush, a drive for said brush, a clutch for connecting and disconnecting said drive and brush, a manually operable lever for said clutch, and a pair of arms for supporting said brush and adapted to be rocked in an arcuate path to move the brush into and out of contact with said blanket roller to clean the same.

12. A machine for applying adhesive to strips of material comprising in combination a feed roller, a blanket roller cooperating therewith to feed strips of material, a blanket carried by said roller, means for removably securing the same thereto, an adhesive applying roller immersed in a bath of adhesive for applying adhesive to said blanket roller, pivotally mounted arms for supporting said blanket roller, manually operable means for rocking said arms in an arcuate path to move said blanket roller into contact with said adhesive-applying roller when strips are being fed to the machine and for moving the same out of contact when no strips are being fed, a cleaning roller immersed in a solvent for said adhesive for dissolving and removing the adhesive from said blanket roller, a pair of pivotally mounted spaced arms supporting said cleaning roller, a hand lever connected to said arms for rotating the same about their pivot to move said cleaning roller into contact with said blanket roller when said blanket roller is out of contact with said adhesive-applying roller while maintaining the cleaning roller in the bath of solvent.

13. A machine of the class described comprising in combination a blanket roller, an adhesive-applying roller for applying adhesive to said blanket roller, a cleaning roller for removing adhesive from said blanket roller, a gear train constituting a driving connection for the blanket roller and cleaning roller, means for moving the blanket roller into and out of contact with said adhesive-applying roller without disconnecting said driving connection and means for moving said cleaning roller into contact with said blanket roller when the blanket roller is out of contact with said adhesive-applying roller without disconnecting the said driving connection.

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