

Oct. 15, 1940.

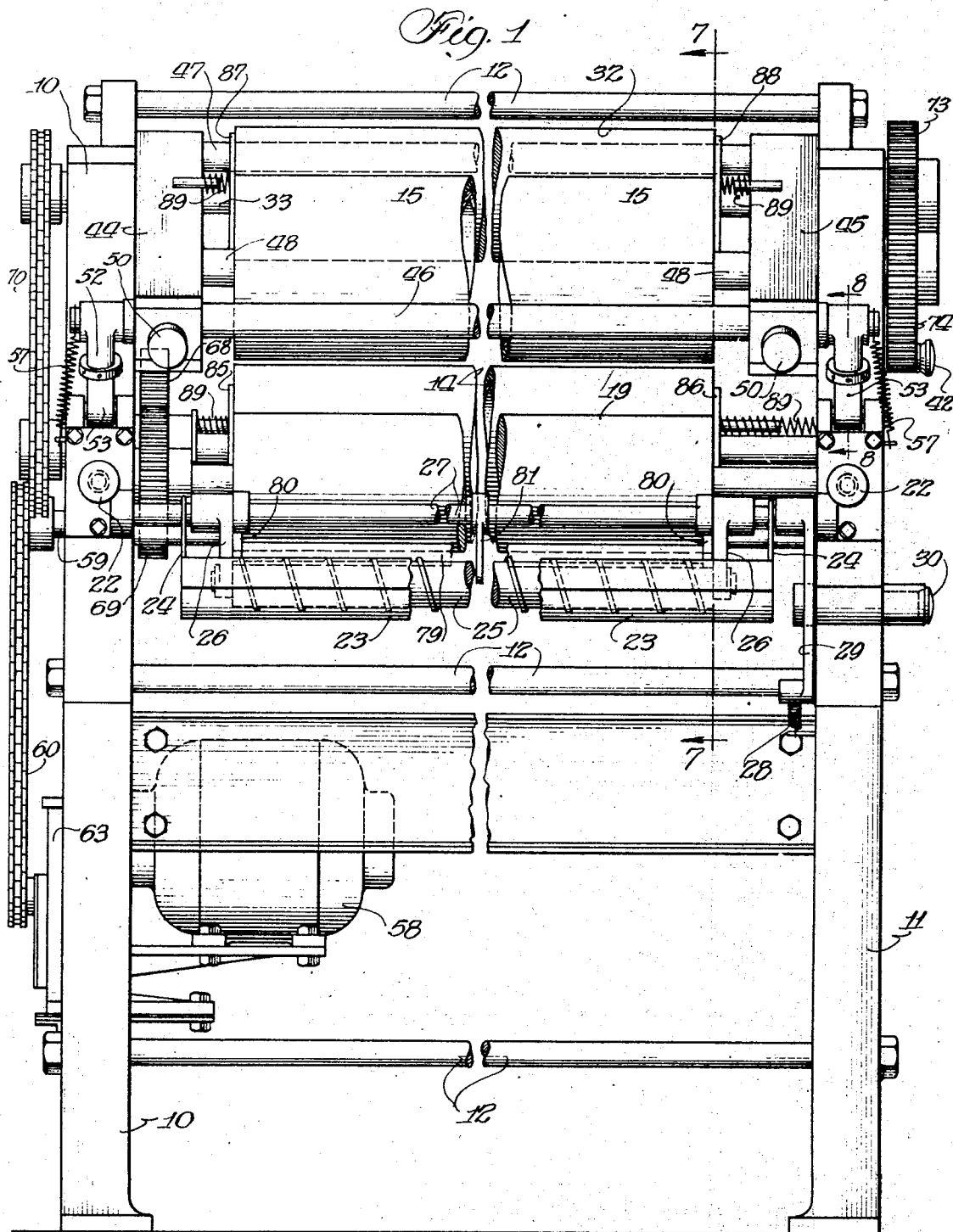
P. C. P. BOOTY ET AL

2,218,129

FILMING MACHINE

Filed Sept. 16, 1937

4 Sheets-Sheet 1



Inventors:
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Oct. 15, 1940.

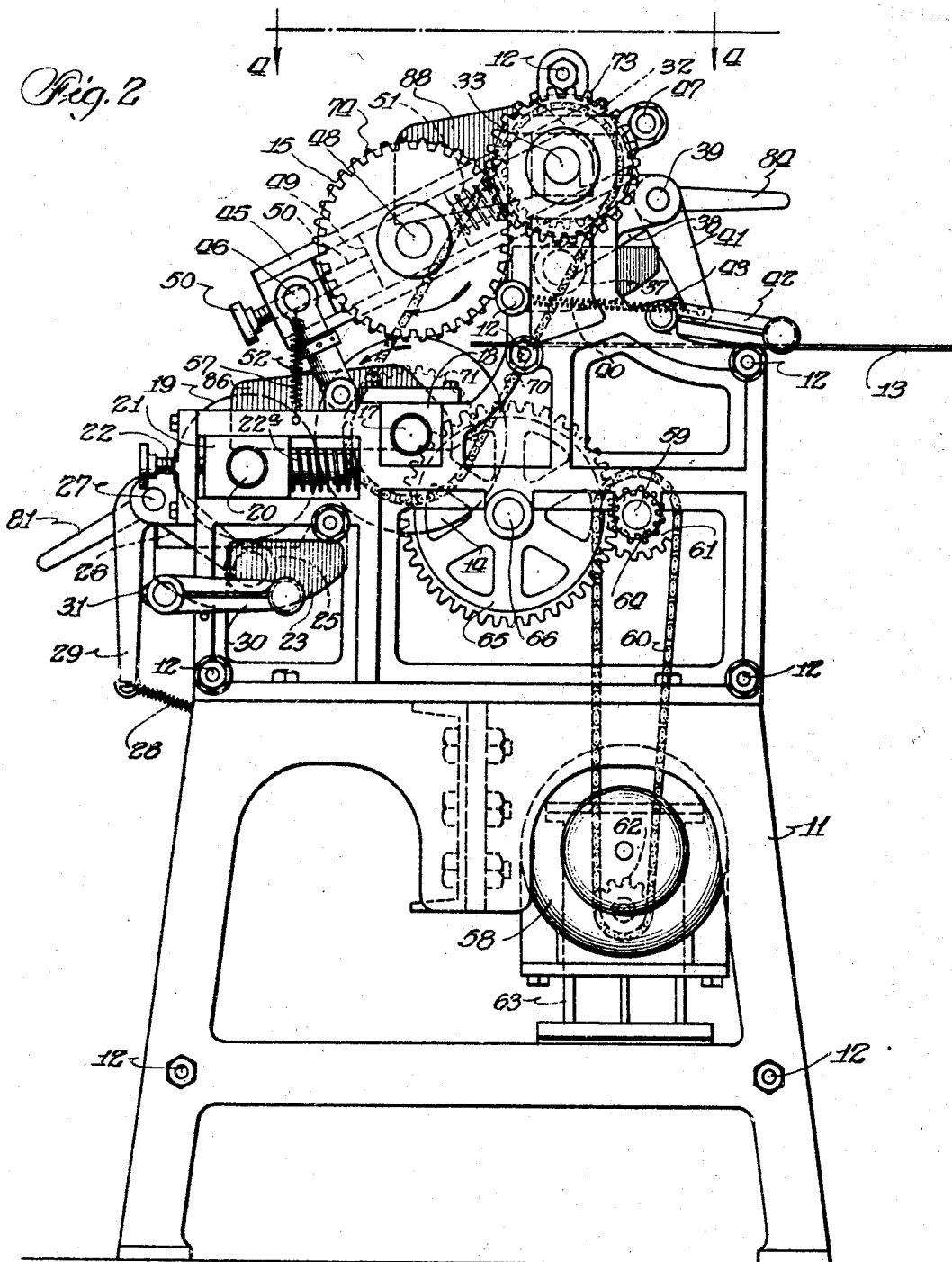
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FILMING MACHINE

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4 Sheets-Sheet 2



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FILMING MACHINE

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4 Sheets-Sheet 3

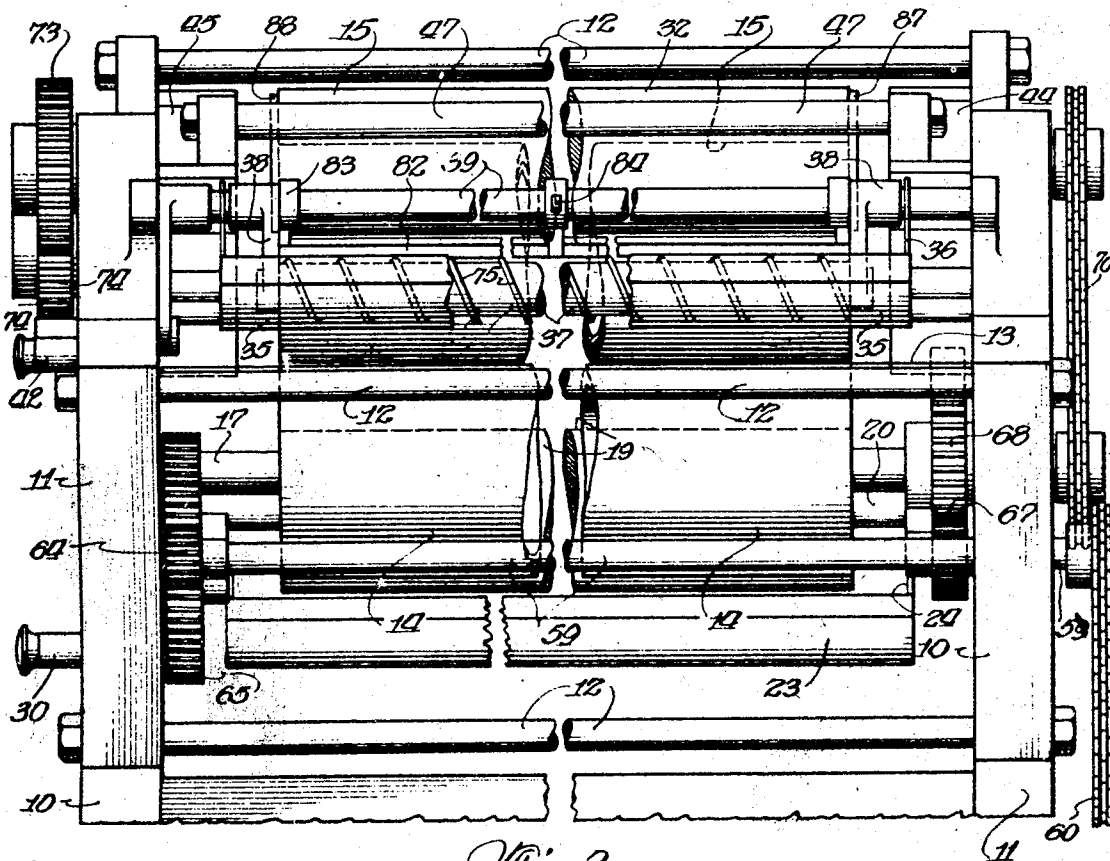


Fig. 3

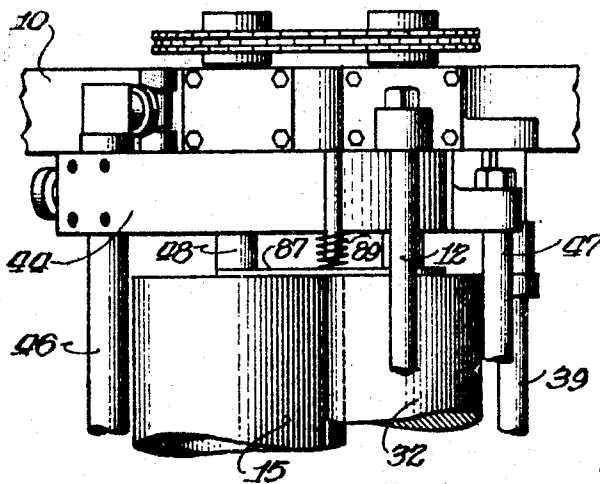


Fig. 4

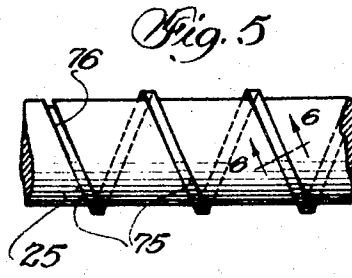


Fig. 5

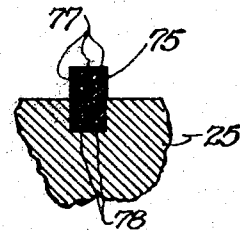


Fig. 6

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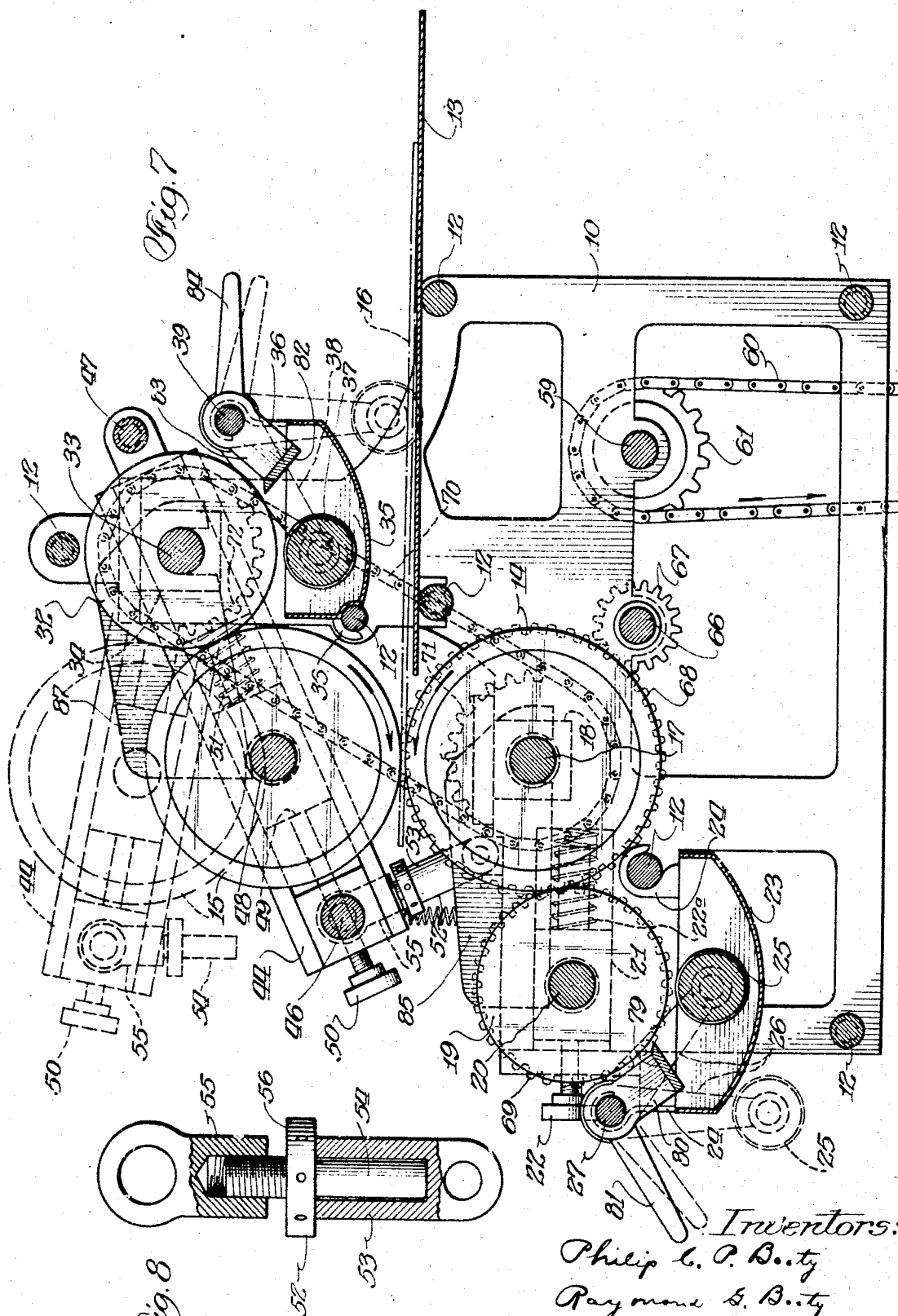
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FILMING MACHINE

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4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

2,218,129

FILMING MACHINE

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Application September 16, 1937, Serial No. 164,152

17 Claims. (Cl. 91—50)

Our invention relates to filming machines, and has for its object the provision of a new and improved form and arrangement of parts for applying a thin coat of synthetic resin upon the face of a panel of wood or the like. To this end, it is one of the objects of our invention to provide improved means for feeding the resin smoothly and evenly to the faces of two oppositely disposed cooperating applying rolls in layers of controlled thickness, such rolls being preferably held normally at an adjusted distance apart to suit panels of different thicknesses. It is particularly one of the objects of our invention to provide improved means for picking up a supply of resin or other glue from a tank or trough for application upon the face of the applying roll, the application of the resin to such applying roll being preferably effected through the medium of an auxiliary roll which is held in adjustable pressure relationship to the applying roll for controlling the thickness of the layer of resin applied.

It is one of the objects of our invention to provide an improved arrangement of pick-up roll mechanism, with such roll located directly in a glue tank so as to apply glue therefrom to the applying roll through the medium of an intermediate auxiliary roll or otherwise, the arrangement preferably to be such that the pick-up roll is adjustable toward its cooperating roll into frictional driving relation therewith for applying resin thereto or adjustable alternatively away from said cooperating roll for terminating the feed of resin thereto. For accomplishing these ends, it is one of the objects of our invention to provide an improved form of pick-up roll for assuring the desired driving relation between such pick-up roll and its cooperating roll for securing the necessary application of resin to said cooperating roll.

It is another object of our invention to provide an improved arrangement of the working parts of our machine whereby the operation of cleaning such working parts may be made as easy as possible, and whereby the surplus resin on the rolls at the end of a period of operation may be fed back into the trough or other receptacle by the operation of the cleaning means. It is another object of our invention to provide an improved arrangement of the cooperating feeding and applying parts whereby the thickness of the film of resin may be regulated with such parts so arranged as to permit the passage of sawdust or other foreign particles of small size through the feeding mechanism for deposit on the panels whereby the accumulation of sawdust and the like in the resin trough or other receptacle may be prevented.

It is another object of our invention to improve machines 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 Letters Patent is set forth in the claims.

In the drawings—

Fig. 1 is a rear elevational view of our improved machine, partly broken away for clearness of illustration;

Fig. 2 is an end view of the machine of Fig. 1 as seen from the right in said figure;

Fig. 3 is a front elevational view of said machine;

Fig. 4 is a top plan view of a fragmentary part of said machine substantially as seen at the line 4—4 of Fig. 2;

Fig. 5 is a face view of a fragmentary portion of our improved pick-up roll;

Fig. 6 is an enlarged detail view, being a cross sectional view taken on an enlarged scale at the line 6—6 of Fig. 5;

Fig. 7 is a vertical sectional view taken at line 7—7 of Fig. 1; and

Fig. 8 is a vertical sectional view taken on an enlarged scale at the line 8—8 of Fig. 1.

Referring now to the several figures of the drawings in which corresponding parts are indicated by the same reference characters, 10 and 11 indicate frame standards held in spaced relation to each other by a plurality of cross bars 12. Near the upper end of the framework at the front of the machine, a table 13 is removably mounted in position upon two of the cross bars 12 extending toward two applicator rolls 14 and 15 rotatably mounted in the framework in position to receive a wooden panel 16 from the table 13 as shown in Fig. 7. The applicator rolls 14 and 15 are driven in opposite directions for carrying the panel 16 rearwardly (toward the left in Fig. 7). Means is provided in connection with each of the applicator rolls 14 and 15 for applying a film of glue of the desired thickness evenly and smoothly upon the face of the applicator roll.

In the arrangement shown, the applicator roll 14 is mounted upon a heavy shaft 17 journaled in a block 18. An auxiliary roll 19 is rotatably mounted upon a shaft 20 which is journaled in blocks 21 adjustable by means of screws 22 toward and from the roll 14 for controlling the pressure of the roll 19 against the roll 14. Springs 22a serve normally to hold the roll 19 in spaced relation to the roll 14. Directly beneath the intermediate roll 19 there is mounted a receptacle 23 adapted to hold a supply of glue, the receptacle being held in position by means of hooks 24. Within the receptacle 23, we have provided a pick-up roll 25 which is journaled between arms 26 fixedly mounted upon a rock 60

shaft 27 which in turn is journaled between the standards 10 and 11 of the framework. A spring 28 is connected with the lower end of an arm 29 rigidly mounted upon the shaft 27 so as to serve normally to hold the pick-up roll 25 in engagement with the intermediate roll 19. As is best shown in Fig. 2, a lever 30 is mounted upon the framework adjacent to the arm 29, having a cam portion 31 thereon adapted by engagement with the arm 29 to give the shaft 27 a rocking movement for moving the roll 25 out of engagement with the intermediate roll 19 against the action of the spring 28. As will be readily understood, when the lever 30 is moved upwardly in counter-clockwise direction in Fig. 2 the cam 31 is carried out of engagement with the arm 29 so as to permit the spring 28 to carry the roll 25 upwardly into engagement with the intermediate roll 19.

Adjacent to the applicator roll 15, we have provided a second intermediate roll 32 mounted upon a shaft 33 journaled in blocks 34 carried by the framework. Beneath the intermediate roll 32, we have provided a receptacle 35 adapted to hold a supply of glue, being removably supported in position by means of hooks 36. Within the receptacle 35, we have mounted a pick-up roll 37 which is journaled between arms 38 rigidly mounted upon a rock shaft 39 journaled between the standards 10 and 11. As is best shown in Fig. 2, a spring 40 connected with the lower end of an arm 41 mounted rigidly upon the shaft 39 serves normally to hold the shaft 39 turned in the direction for holding the roll 37 in engagement with the intermediate roll 32. Means is provided for moving the roll 37 out of engagement with the intermediate roll 32 against the action of the spring 40, such means comprising a lever 42 pivotally mounted adjacent to the arm 41 and having a cam 43 thereon adapted by the stroke of the lever 42 into the position as shown in Fig. 2 to engage the arm 41 and to move it in the direction for carrying the roll 37 out of engagement with the roll 32.

The means for mounting the roll 15 in position comprises a pair of arms 44 and 45 which are pivotally mounted upon the shaft 33 at opposite sides of the machine, the end portions of the arms 44 and 45 being rigidly connected together by means of cross bars 46 and 47. The roll 15 is mounted upon said arms 44 and 45 by means of a shaft 48 journaled in blocks 49 which are adjustable longitudinally of said arms by means of screws 50. Springs 51 serve normally to hold the roll 15 moved toward the left in Fig. 2 out of engagement with the roll 32.

Means is provided for holding the applicator roll 15 in adjusted position with respect to the applicator roll 14. This means comprises two adjustable links 52 at opposite ends of the machine, each of said links in the arrangement shown comprising two parts, one pivotally connected with the supporting arms for the roll 15 and the other part pivotally connected with the framework of the machine. As is best shown in Fig. 8, each of the links comprises a socket member 53 pivotally mounted upon the framework adapted to receive a bolt 54 loosely therein, the bolt 54 being connected by means of screw threads with a socket member 55 pivotally mounted upon one of the arms 44 or 45. Each of the bolts 54 is provided with a turning head 56 thereon for effecting the desired adjustment of the socket member 55 with respect to the socket member 53. As will be readily understood, the

links 52 by suitable adjustment limit the downward movement of the arms 44 and 45 for holding the roll 15 in the desired spaced relation to the roll 14. Springs 57 serve normally to hold the arms 44 and 45 in their lowermost position.

The means for driving the applicator rolls 14 and 15 and their connected parts comprises a motor 58. This motor is connected with a shaft 59 by means of a sprocket chain 60 and sprocket gears 61 and 62, the sprocket gear 62 being connected with the motor through a gear box 63. The shaft 59 is provided with a pinion 64 thereon in mesh with a gear 65 mounted upon a shaft 66 (see Fig. 2) which shaft 66 in turn is provided with a pinion 67 in mesh with a gear 68 fixedly mounted upon the shaft 17 of the applicator roll 14. The arrangement is such that the applicator roll 14 is driven in counter-clockwise direction in Fig. 7. The gear 68 is likewise in mesh with a gear 69 fixedly mounted upon the shaft 20 of the intermediate roll 19.

The shaft 17 is connected with the shaft 33 by means of a sprocket chain 70 cooperating with a sprocket gear 71 on the shaft 17 and a sprocket gear 72 upon the shaft 33. Intermeshing gears 73 and 74 mounted upon the shafts 33 and 48 respectively serve to drive the applicator roll 15 from the roll 32 in the direction for cooperation with the roll 14 for forwarding a panel between the two applicator rolls. The arrangement is such that when the springs 51 are disconnected from the arms 44 and 45 the applicator roll 15 can be swung upwardly away from the applicator roll 14 without disturbing the driving connection between the rolls 15 and 32.

The arrangement is such that the pick-up rolls 25 and 37 are driven by frictional engagement with the intermediate rolls 19 and 32 respectively. For insuring this result, we have provided each of the pick-up rolls with a spiral rib 75 extending a plurality of times around the roll, such rib being mounted within a spiral groove 76, as is best shown in Fig. 5. The rib 75 preferably comprises a plurality of layers of material, in the arrangement shown three layers of rubber 77 and two layers of fabric 78 being employed. We have found in the use of the machine that our pick-up rolls provided with the spiral ribs as described are very effective for picking up a supply of glue from the receptacles in which the pick-up rolls are located so as to apply the glue evenly and smoothly about the intermediate rolls 19 and 32. The arrangement is such that the pick-up rolls are driven effectively by frictional engagement with the intermediate rolls so long as the pick-up rolls are held in their raised position by the springs 28 and 40. Whenever it is desired to stop the feed of glue to the intermediate rolls 19 and 32, this is readily effected by an operative stroke of the levers 30 and 42 to the positions as shown in Fig. 2.

Scraper means is provided in connection with each of the intermediate rolls 19 and 32. This means comprises a scraper bar 79 carried by arms 80 loosely mounted upon the rock shaft 27 (see Fig. 1), such bar being movable by means of a handle 81 revolvably mounted upon said shaft 27. By downward pressure upon the handle 81, the bar 79 is held in engagement with the face of the intermediate roll 19 for cleaning the glue therefrom for delivery to the receptacle immediately below. Upon a plurality of rotations of

the roll 19, both the roll 19 and the applicator roll 14 can be effectively cleaned through the medium of the scraper 79. A similar arrangement is provided in connection with the roll 32, comprising a scraper bar 82 carried by arms 83 loosely mounted upon the rock shaft 39, the movement of the scraper bar 82 being effected through the medium of a lever 84 also loosely mounted upon the rock shaft 39 at its middle point.

With a supply of glue provided in each of the receptacles 23 and 35, and with the applicator rolls 14 and 15 being driven in cooperative relation for carrying a panel between them toward the left in Fig. 7, a panel 16 is pushed forward from the table 13 into the bite of the rolls 14 and 15. Upon the movement of the panel between the applicator rolls 14 and 15, both faces of the panel are covered evenly and smoothly with layers of glue from the applicator rolls, the thickness of the layers of glue being controlled by the adjustment of the intermediate rolls 19 and 32 transversely with respect to the applicator rolls.

In the operation of the machine, the pick-up rolls 25 and 37 are adapted to apply the glue to the faces of the intermediate rolls 19 and 32 much more rapidly than is normally desired for use upon the panels passing through the machine. With each of the pick-up rolls providing a heavy film of glue upon the face of the adjacent intermediate roll, and with the adjustment of the intermediate roll such that only a very limited thickness of film can pass downwardly between the intermediate roll and its cooperating applicator roll, a supply or body of glue is very quickly accumulated in the trough-like receptacle between the upper portion of the intermediate roll and the upper portion of the applicator roll. Under these circumstances, it is necessary that the attendant watch the accumulation of glue in the trough-like receptacle between the rolls and stop the feed of glue to the intermediate roll in time to prevent the delivery of an excessive amount of the glue into such trough-like receptacle. For making the trough-like receptacles between the rolls effective for holding the glue in position, we have provided end closure plates 85 and 86 at the ends of the intermediate roll 19 and end closure plates 87 and 88 at the ends of the intermediate roll 32. Each of these end closure plates bears against the end of an intermediate roll and the end of the adjacent applicator roll, being supported by engagement with the shafts of said rolls, as is shown in Figs. 2 and 7, and being held in position by means of a spring 89. The arrangement is such that the plates can be very easily and quickly removed for cleaning whenever desired.

In the arrangement shown, each of the applicator rolls and its adjacent intermediate roll are located alongside of each other and each of the rolls is driven in the direction to carry its upper portion toward the upper portion of the other roll. As a result of this arrangement, the film of glue upon the applicator roll at the point of engagement between the applicator roll and the panel has passed between the applicator roll and the intermediate roll so as to control the thickness of the film. This is true both in connection with the upper applicator roll which engages the panel at the bottom and the lower applicator roll which engages the panel at the top. In the building and operation of our im-

proved machines we have been mainly concerned with the application of liquid glue to the surfaces of panels and the like. Our machines may be well suited for the application of coatings of other materials. The term "glue" is used, therefore, in our specification and in the claims as representative of the kind of coating materials that may be applied by the use of our machines.

While we prefer to employ the form of arrangement as shown in our drawings and as above described, it is to be understood that our invention is not limited to the arrangement as shown and described except so far as the claims may be so limited, it being understood that changes might well be made in the form and arrangement of the parts without departing from our invention.

We claim:

1. In a machine for applying a film of glue to a panel or the like, the combination of a frame, a feed table supported by the frame, a roll rotatably mounted in said frame, a second roll rotatably mounted in said frame adjacent said first named roll at one side thereof and arranged to engage one face of a panel-like article on the feed table, one of said rolls being adjustably mounted relative to the other roll, end enclosure plate means bearing against the ends of one of said rolls and in sealing engagement with the other roll for forming a trough-like receptacle between the upper portions of said rolls, yielding means for pressing said plate means against the ends of the roll against which they bear, means for supplying glue to said receptacle, and means for driving said rolls in the direction to carry the upper portion of each roll toward the upper portion of the other roll for depositing a film of glue of controlled thickness on the face of the panel-like article.

2. In a machine for applying a film of glue to a panel or the like, the combination of a frame, a feed table supported by the frame, a roll rotatably mounted in said frame, a second roll of the same length as the first named roll rotatably mounted in said frame adjacent the first named roll at one side thereof and arranged to engage one face of a panel-like article on the feed table, one of said rolls being adjustably mounted relative to the other roll, end plates removably secured at opposite end of the rolls for forming a trough-like receptacle between the upper portions of the rolls, yielding means for pressing said plates against the ends of the rolls, means for supplying glue to said receptacle, and means for driving said rolls in the direction to carry the upper portion of each roll toward the upper portion of the other roll for depositing a film of glue of controlled thickness on the face of the panel-like article.

3. In a machine for applying a film of glue to a panel or the like, the combination of a frame, a feed table supported by the frame, a roll rotatably mounted in said frame, a second roll rotatably mounted in said frame adjacent said first named roll at one side thereof and arranged to engage one face of a panel-like article on the feed table, one of said rolls being adjustably mounted relative to the other roll, end closure plate means bearing against the ends of said second roll and in sealing engagement with the first roll for forming a trough-like receptacle between the upper portions of said rolls for a supply of glue, yielding means for pressing said plate means against the ends of the

second roll, and means for driving said rolls in the direction to carry the upper portion of each roll toward the upper portion of the other roll for depositing a film of glue of controlled thickness on the face of the panel-like article.

4. In a machine for applying a film of glue to a panel or the like, the combination of a frame, a feed table supported by the frame, a roll rotatably mounted in said frame, a second roll of the same length as the first named roll rotatably mounted in said frame adjacent the first named roll at one side thereof and arranged to engage one face of a panel-like article on the feed table, one of said rolls being adjustably mounted relative to the other roll, end plates removably secured at opposite ends of the rolls for forming a trough-like receptacle between the upper portions of the rolls, yielding means for pressing said plates against the ends of the rolls, and means for driving said rolls in the direction to carry the upper portion of each roll toward the upper portion of the other roll for depositing a film of glue of controlled thickness on the face of the panel-like article.

5. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a second roll rotatably mounted in said frame adjacent to said first named roll at one side thereof, a receptacle adapted to hold a supply of glue below said second roll, a third roll rotatably mounted in said receptacle in frictional engagement with said second roll adapted by rotary movement upon the rotation of said second roll to apply a film of glue from the receptacle to the face of said second roll and to cause an accumulation of glue in the trough-like receptacle between the upper portions of said first named two rolls, end closure means for said troughlike receptacle, and means for driving said first named two rolls serving to apply a film of glue to said first named roll below the point of engagement of said first named two rolls.

6. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a second roll rotatably mounted in said frame adjacent to said first named roll at one side thereof, a receptacle adapted to hold a supply of glue below said second roll, a third roll rotatably mounted in said receptacle and movable into and out of frictional engagement with said second roll adapted by rotary movement imparted thereto by the rotation of said second roll to apply a film of glue from the receptacle to the face of said second roll and to cause an accumulation of glue in the trough-like receptacle between the upper portions of said first named two rolls, end closure means for said trough-like receptacle, and means for driving said first named two rolls serving to apply a film of glue to said first named roll below the point of engagement of said first named two rolls.

7. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a second roll rotatably mounted in said frame adjacent to said first named roll at one side thereof, closure means for the trough-like receptacle between the upper portions of said two rolls, a second receptacle adapted to hold a supply of glue below said second roll, a third roll rotatably mounted in said second receptacle and movable into and out of frictional engagement with said second roll adapted by rotary movement imparted thereto by the rotation of said second roll to apply a film of glue from the receptacle to the face of said second roll and to cause an accumulation

of glue in said first named receptacle, and means for driving said first named two rolls serving to apply a film of glue from said second roll and said first named receptacle to the face of said first named roll.

8. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a second roll rotatably mounted in said receptacle in frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll, and means for driving said first named roll, said second roll having a spiral rib extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue from the receptacle to the face of said first named roll.

9. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a second roll rotatably mounted in said receptacle in frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll, and means for driving said first named roll, said second roll having a spiral rib comprising a plurality of layers of rubber and fabric extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue from the receptacle to the face of said first named roll.

10. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a second roll rotatably mounted in said receptacle in frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll, and means for driving said first named roll, said second roll being provided with a spiral groove extending a plurality of times about the roll and with a rib member comprising a plurality of layers of rubber and fabric set in said groove adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue from the receptacle to the face of said first named roll.

11. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a second roll rotatably mounted in said receptacle and movable alternatively into and out of frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll when in frictional engagement therewith, means for moving said second roll into and out of engagement with said first named roll, and means for driving said first named roll, said second roll having a spiral rib extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue from the receptacle to the face of said first named roll.

12. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a second roll rotatably mounted in said receptacle and movable alternatively into and out of frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll when in frictional engagement therewith, means

comprising a lever for moving said second roll into and out of engagement with said first named roll and adapted automatically in one position of the lever to hold said second roll out of engagement with the first named roll, and means for driving said first named roll, said second roll having a spiral rib extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue from the receptacle to the face of said first named roll.

13. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a shaft journaled in said frame adjacent to said roll, arms keyed on said shaft at opposite end portions thereof so as to extend radially with respect to the shaft, a second roll rotatably mounted on said arms within said receptacle, yielding means for holding said second roll normally in frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll, and means for driving said first named roll, said second roll having a spiral rib extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue to said first named roll.

14. In a filming machine, the combination of a frame, a roll rotatably mounted in said frame, a receptacle adapted to hold a supply of glue below said roll, a shaft journaled in said frame adjacent to said roll, arms keyed on said shaft at opposite end portions thereof so as to extend radially with respect to the shaft, a second roll rotatably mounted on said arms within said receptacle, yielding means for holding said second roll normally in frictional engagement with said first named roll for applying a film of glue from the receptacle to the face of said first named roll, means for driving said first named roll, and cam means located adjacent to one of said arms adapted by a stroke into operative position to move the arm for carrying the second roll out of operative engagement with the first named roll, said second roll having a spiral rib extending a plurality of times about the roll adapted by engagement with said first named roll to cause said second roll to rotate for applying a film of glue to said first named roll.

15. In a filming machine, the combination of a frame, a roll rotatably mounted on said frame, a second roll rotatably mounted on said frame substantially directly above said first named roll and movable toward and from said first named roll so as to cooperate therewith for forwarding a panel between said rolls, yielding means serving to press said rolls together, adjustable means for holding said rolls in spaced relation to each other against the action of said yielding means, an intermediate roll located adjacent to one of said first named two rolls at one side thereof, a second intermediate roll located adjacent to the other of said first named two rolls at the opposite side thereof, receptacles for glue located directly beneath said intermediate rolls respectively, pick-up rolls rotatably mounted on said frame within said receptacles respectively each adapted by frictional engagement with the adjacent intermediate roll to apply a film of glue from the receptacle to the face of said intermediate roll for transfer to the adjacent one of said first named two rolls, and means for rotating said first named

two rolls and said intermediate rolls for carrying a panel between said first named two rolls and applying a film of glue upon opposite faces of the panel.

16. In a filming machine, the combination of a frame, an applicator roll rotatably mounted on said frame, an intermediate roll rotatably mounted adjacent to said applicator roll at one side thereof, two arms pivotally mounted on a horizontal axis on said frame adjacent to the opposite ends of said applicator roll, a second applicator roll rotatably mounted on said arms in position to be moved into and out of engagement with said first named applicator roll substantially directly above said first named applicator roll, a second intermediate roll rotatably mounted on the axis of said arms in position to engage said second applicator roll at one side thereof, receptacles for glue located directly beneath said intermediate rolls respectively, pick-up rolls rotatably mounted on said frame within said receptacles respectively each adapted by frictional engagement with the adjacent intermediate roll to apply a film of glue from the receptacle to the face of said intermediate roll for transfer to the adjacent applicator roll, and means for rotating said applicator rolls and said intermediate rolls for carrying a panel between the applicator rolls and applying a film of glue upon the opposite faces of the panel.

17. In a filming machine, the combination of a frame, an applicator roll rotatably mounted on said frame, an intermediate roll rotatably mounted adjacent to said applicator roll at one side thereof, two arms pivotally mounted on a horizontal axis on said frame adjacent to the opposite ends of said applicator roll, a second applicator roll rotatably mounted on said arms in position to be moved into and out of engagement with said first named applicator roll substantially directly above said first named applicator roll, yielding means serving normally to press said second applicator roll toward said first named applicator roll, adjustable links pivotally mounted on said arms adapted to hold said second applicator roll in adjusted spaced relation to said first named applicator roll against the action of said yielding means, a second intermediate roll rotatably mounted on the axis of said arms in position to engage said second applicator roll at one side thereof, receptacles for glue located directly beneath said intermediate rolls respectively, pick-up rolls rotatably mounted on said frame within said receptacles respectively each adapted by frictional engagement with the adjacent intermediate roll to apply a film of glue from the receptacle to the face of said intermediate roll for transfer to the adjacent applicator roll, means for driving said first named two rolls, means for driving said second intermediate roll in the same direction as that in which said first named applicator roll is driven, and intermeshing gears connecting said second applicator roll and said second intermediate roll so as to permit said second applicator roll to be moved upwardly on said arms in continued driving relation to said second named intermediate roll, the arrangement being such that the applicator rolls when driven are adapted to carry a panel between them for the application of a film of glue upon opposite faces of the panel.

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