July 15, 1941. J. M. MINKOW 2,249,024

GLUING MACHINE

Filed June 21, 1939 3 Sheets-Sheet 1

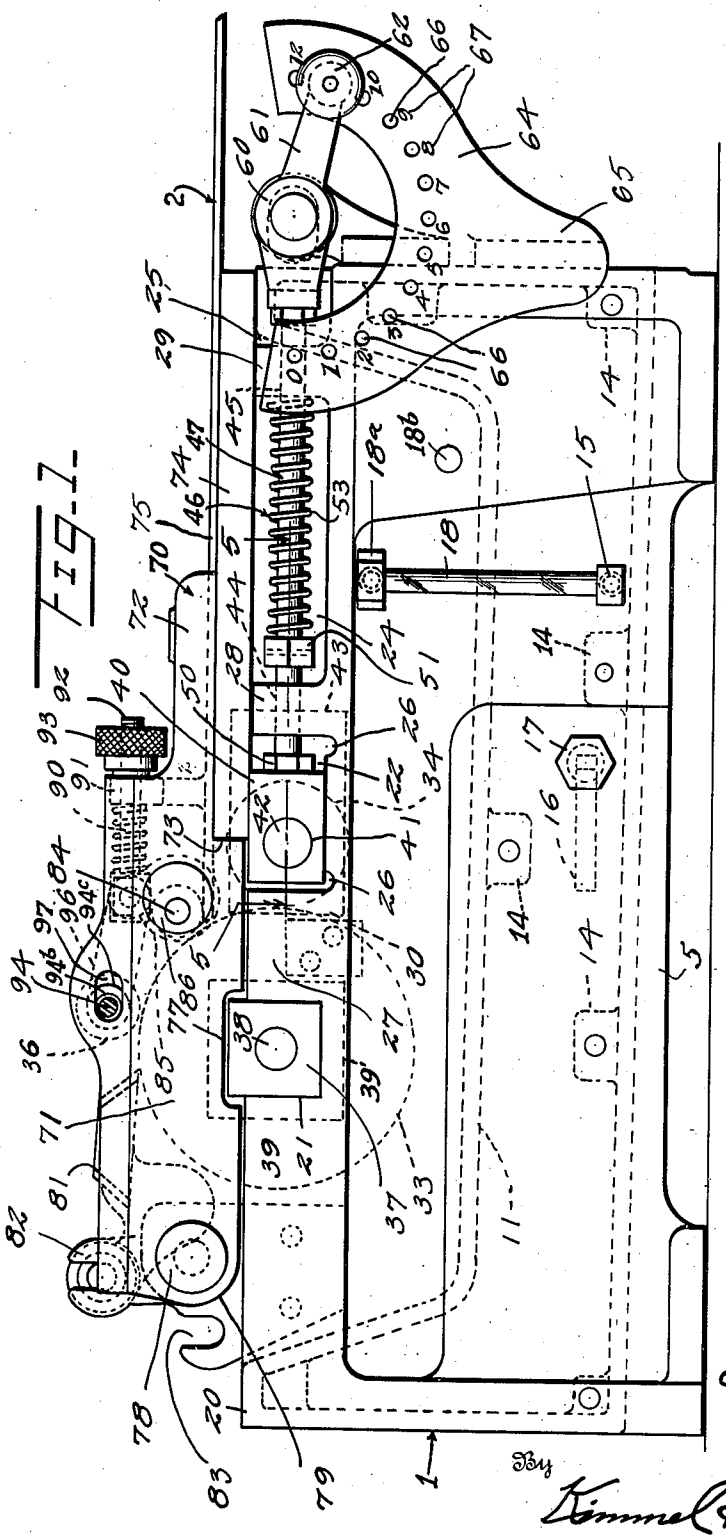


FIG. 1.

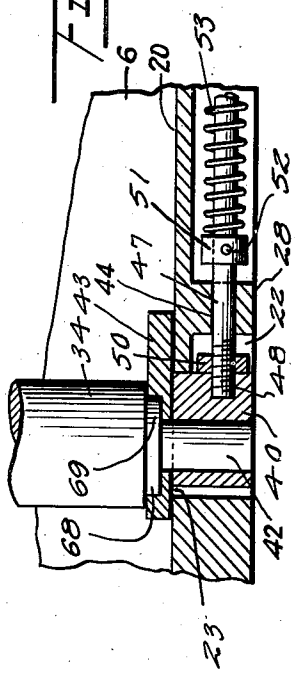


FIG. 5.

Inventor
J. M. Minkow

By Kimmel & Crowell Attorneys

July 15, 1941. J. M. MINKOW 2,249,024

GLUING MACHINE

Filed June 21, 1939 3 Sheets-Sheet 2

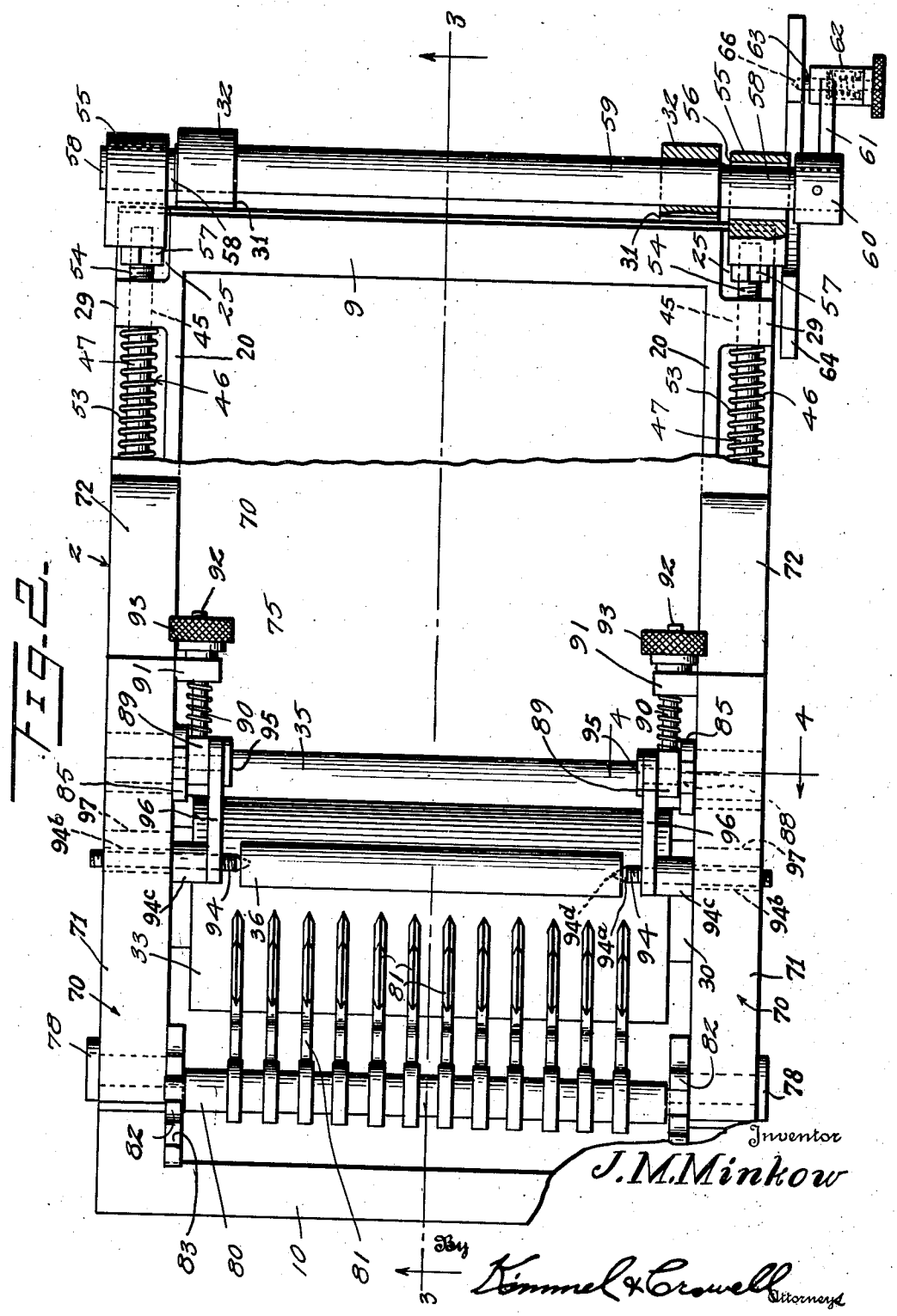


FIG. 2.

Inventor
J. M. Minkow

By Kimmel & Crowell Attorneys

July 15, 1941. J. M. MINKOW 2,249,024

GLUING MACHINE

Filed June 21, 1939 3 Sheets-Sheet 3

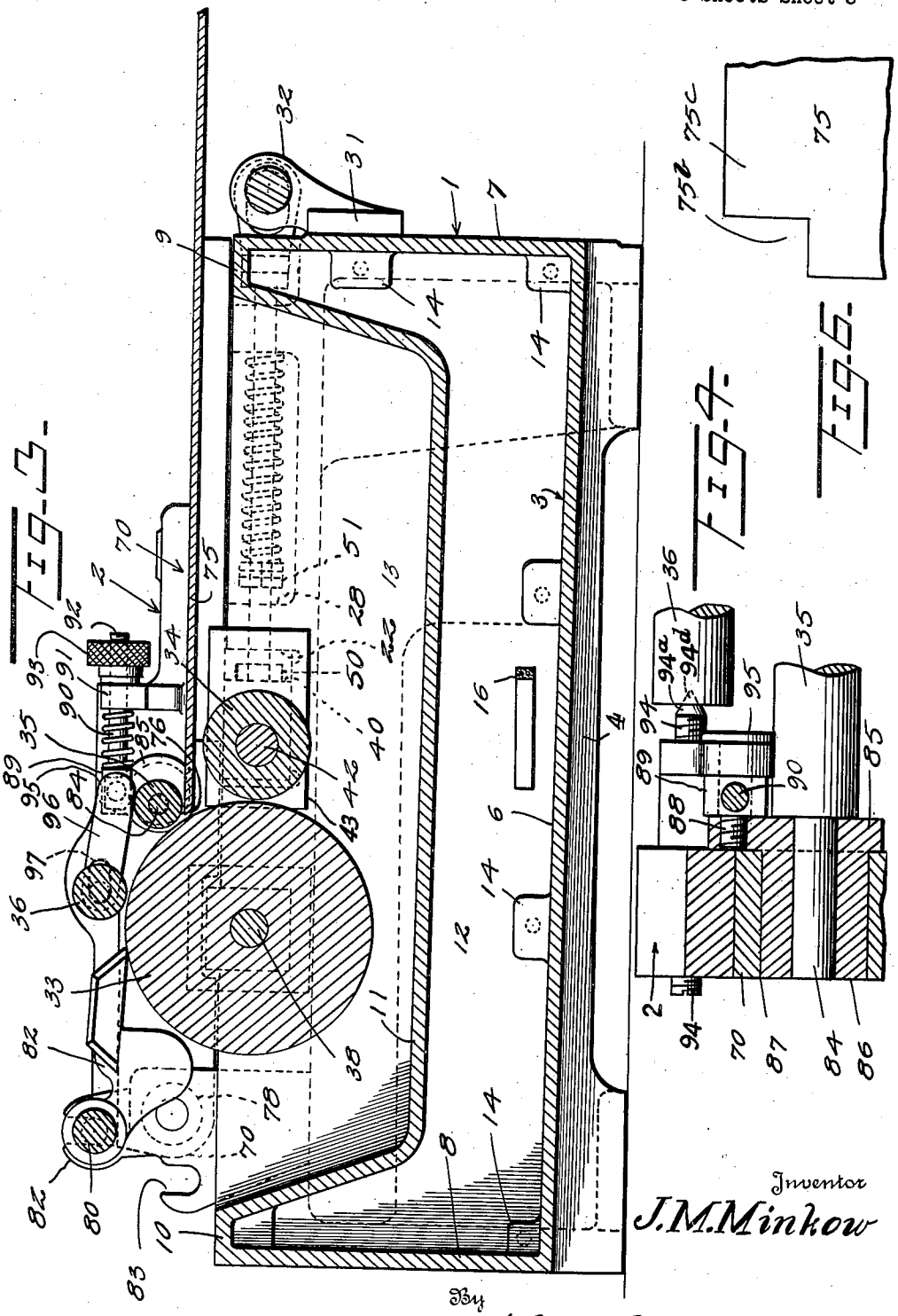


FIG. 4.

FIG. 5.

Inventor
J. M. Minkow

By
Kimmel & Crowell Attorneys

Patented July 15, 1941 2,249,024

UNITED STATES PATENT OFFICE

2,249,024

GLUING MACHINE

Julius M. Minkow, New York, N. Y., assignor to Minco Products Corporation, New York, N. Y., a corporation of New York

Application June 21, 1939, Serial No. 280,393

10 Claims. (Cl. 91—51)

This invention relates to a gluing machine of that type including glue applying, glue wiping and coated material guide rolls for correlation with pick-ups, but more particularly to a gluing machine embodying improvements upon the form of gluing machine disclosed by Letters Patent 2,053,730, granted September 8, 1936.

One of the objects of the invention is to provide, in a manner as hereinafter set forth, a new and improved adjusting means for the glue wiping roll.

A further object of the invention is to provide, in a manner as hereinafter set forth, a machine with a pair of guide rolls for the coated material and an adjusting means for one of the guide rolls coupled with the other of the guide rolls.

A further object of the invention is to provide, in a manner as hereinafter set forth, a base structure forming an open top glue compartment and a water heating compartment arranged below and for heating the glue within the glue compartment.

A further object of the invention is to provide, in a manner as hereinafter set forth, a pair of adjusting structures of like form for the wiping roll and a combined adjusting and latching means common to said structures.

A further object of the invention is to provide, in a manner as hereinafter set forth, a machine of the class referred so constructed and arranged to enable convenient access to the glue applying, glue wiping, material guide rolls and material pick-up elements, whereby they may be expeditiously and thoroughly cleaned when occasion requires.

A further object of the invention is to provide, in a manner as hereinafter set forth, a machine of the class referred to capable of efficiently applying an adhesive or other coating to canvas, buckrum, leatherettes, vellum, cardboard, sheets of paper, etc., whether thin, thick, smooth, embossed or pebbled.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a gluing machine which is comparatively simple in its construction and arrangement, strong, durable, compact, thoroughly efficient in its use, readily assembled and comparatively inexpensive to manufacture.

Embodying the objects aforesaid and others which may hereinafter appear, the invention consists of the novel construction, combination and arrangement of parts as will be more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications may be resorted to which fall within the scope of the invention as claimed.

In the drawings—

Figure 1 is a side elevation of the machine,

Figure 2 is a top plan view partly in section,

Figure 3 is a section on line 3—3, Figure 2,

Figure 4 is a section on line 4—4, Figure 2,

Figure 5 is a section on line 5—5, Figure 1, and

Figure 6 is a fragmentary view in plan illustrating the form of the inner corners of the table.

With reference to the drawings, the machine includes a base structure 1 and a super-structure 2, the latter is mounted upon and pivotally connected to the former.

The base structure 1 comprises a horizontally disposed hollow body portion 3 and a pair of upstanding side cheeks 4, 5. The body portion 3 is open at each side and the said cheeks not only provide closures for the open sides of said body portion 3, but also for supporting and suspending said body portion therebetween.

The body portion 3 includes a flat bottom part 6, a vertical front part 7, a vertical rear part 8, a rearwardly extending flange 9 integral with and extending at right angles to the upper end of the front part 7, a forwardly extending flange 10 integral with and disposed at right angles to the upper end of the rear part 8, and a depending flared trough-like part 11 which merges at the upper ends of its front and rear into the rear and forward ends of the flanges 9, 10 respectively. The part 11 coacts with the parts 6, 7, 8, flanges 9, 10 and side cheeks 4, 5 to form a closed compartment 12 for the reception of water to be heated. The part 11 in connection with the cheeks 4, 5 form an open top compartment 13 for the glue or other coating. The compartment 13 is of less height and of less length than the compartment 12. The portion 3 has integral therewith, at suitable points lugs 14 formed with threaded openings for engagement by holdfast means, not shown for the purpose of anchoring said body portion to, between and in suspended relation with respect to the side cheeks. The holdfast means are to extend through the side cheeks and engage in the threaded openings of the lugs 14.

A water inlet 15 is provided for the compartment 12. The latter has arranged therein an electric heater 16 for the purpose of heating the water within such compartment and said heater has associated therewith a controlling

means 17 of any suitable form for regulating the heater. The heating circuit is not shown, but it will be connected to the controlling means 17. A combined water filling pipe and gage element 18 is correlated with the compartment 12 and opens at its lower end into the water inlet 15. The upper end of element 18 is formed with a closable water intake 18^a of any suitable form. A drain 18^b is provided for the compartment 13. The inlet 15, heater 16, controlling means 17, element 18 and drain 18^b are suitably secured with one of the side cheeks.

The side cheeks 4, 5 have their upper terminal portions of greater thickness than the remaining portions thereof and such upper terminal portions are indicated at 20 and are of like form. Each portion 20 is formed with a squared cut-out 21 entirely therethrough and which opens into the compartment 13, a rectangular cut-out 22 forwardly of the cut-out 21 and having a portion thereof indicated at 23 (Figure 5) opening into the compartment 13, a rectangular cut-out 24 forwardly of and of greater length than the cut-out 22 and which opens only at the outer side and the top of the portion 20, and a squared cut-out 25 forwardly of the cut-out 24 which does not open into the compartment 13, but opens at the outer side and front end of the portion 20. The cut-outs 21, 22 and 25 also open at the top of the portion 20. The cut-out 22 is provided at each end of its bottom with a groove 26. The cut-out 21 is spaced from the cut-out 22 by a part 27 of the portion 20 and which constitutes a partition. The cut-out 24 is spaced from the cut-out 22 by a part 28 and which constitutes a partition, and the cut-out 25 is spaced from the cut-out 24 by a part 29 of the portion 20 and which constitutes a partition. Secured to the inner face of the part 27 is a block 30 for a purpose to be referred to. The front of the base structure 1, which is provided by the part 7 of the body portion 3 has secured to its outer face a pair of spaced upstanding brackets 31 which are arranged in alignment, are of like form and each provided at its upper end with an annular bearing 32. The purpose of the bearings 32 will be referred to.

The machine includes a coating or glue applying roll 33, a wiping roll or doctor 34 for the roll 33 which is arranged forwardly of and in proximity to the roll 33, a lower coated material guide roll 35 arranged above the roll 34 and in proximity to the roll 33, and an upper coated material guide roll 36 arranged over and in proximity to the roll 33. The rolls 33, 34 are supported from the base structure 1. The rolls 35, 36 are supported from the super-structure 2.

Mounted in the cut-outs 21 of the portions 20 of the side cheeks 4, 5 are bearing blocks 37 for the shaft 38 of the roll 33. The inner ends of the blocks 37 have secured thereto squared plates 39 extending laterally from the blocks and opposing the inner faces of the portions 20 to prevent the blocks shifting outwardly from the side cheeks. The blocks 37 extend above the upper surfaces of the side cheeks. The roll 33 carried by the shaft 38 is of materially greater diameter than the rolls 34, 35, 36. The diameter of the roll 33 is such as to extend materially above the base structure and into the super-structure. The bearing blocks 38 are stationary. Slidably mounted on the bottoms of the cut-outs 22, as well as being of less length than the length of such cut-outs are bearing blocks 40 formed with openings 41 between their vertical medians and their rear ends. The shaft for the wiping roller 34 is indicated at 42 and it is journaled in the openings 41 of the blocks 40. The inner end of the blocks 40 are formed with rectangular plates 43 of greater height and length than the blocks 40. The plates 43 are positioned against the inner faces of the portions 20 of the side cheeks and arrest the outward shifting of the blocks 40 relative to the cut-outs 22. The blocks 40 are arranged between rollers 33, 34 and the said side portions 20 and act to scrape the glue from the ends of the said rollers.

The parts 28, 29 of the portions 20 of the side cheeks are provided respectively with openings 44, 45. There is associated with each block 40 a structure for the shifting of the blocks lengthwise of the side cheeks, in opposite directions for the purpose of moving the roll 34 to and from the roll 33, or for adjusting the roll 34 relative to the roll 33. The said structures are of like form and generally indicated at 46 and each consists of a rod 47 which is mounted in the cut-outs 22, 24, 25 and extends through the openings 44, 45. Each block 40 has a right hand threaded socket 48 in its forward face (Figure 5) and engaging with the wall of such socket is a threaded inner end 49 of the rod 47. A lock nut 50 is carried by the rod 47 and abuts the forward surface of the block 40. The rod 47 in proximity to the part 28 of a portion 20 carries a collar 51 secured stationary on the rod 47 by a set screw 52. Surrounding the rod 47 and interposed between the collar 41 and the part 29 of a portion 20 is a coiled controlling spring 53 for the rod 47. That end of the rod arranged in the cut-out 25 is threaded left-hand, as at 54 and engaging therewith is a coupling head 55 formed with an oval-shaped opening or slot 56. The coupling 55 extends forwardly from the cut-out 25. A lock nut 57 is mounted on the part 54 of the rod 47. The purpose of the right hand and left hand threads on opposite ends is to align the wiping roll with the glue roll on assembling or adjusting the machine. The couplers 55 are arranged in alignment and act as bearings for trunnions 58, which extend from the ends of an adjusting shaft 59. The trunnions 58 are eccentrically disposed with respect to the axis of the shaft 59. The latter is mounted in the bearings 32 at the upper ends of the brackets 31. One of the trunnions 58 is extended laterally from a coupler 55 and has fixed thereon a collar 60 provided with a crank handle 61 carrying at its outer end a latching structure 62 including a spring controlled latching pin 63. Fixed to one of the side cheeks and correlated with the latching pin 63 is an upstanding substantially semi-circular plate 64 having a depending extension 65. The outer face of the plate 64 is formed with a circular row of spaced designated sockets 66 which are adapted to selectively receive the pin 63 and latch the shaft 59 in its adjusted position. The indicia which associates with the sockets 66 is designated at 67, and it is for the purpose of determining the degree of adjustment of the roller 34 with respect to the roller 33. After the desired adjustment has been had by the swinging of the handle 61 in the desired direction and to the desired extent the pin 63 is positioned in a selected socket 66 and the roll 34 is then releasably held in its adjusted position.

The roll 34 at each end, only one end shown (Figure 5) is provided with a reduced portion

68 which is mounted in a cavity 69 formed in the plates 43.

The super-structure 2 includes a pair of spaced parallel side cheeks 70 of like form and of less length than the length of the base structure. Each side cheek 70 includes a rear part 71 and a forward part 72, the latter is of less height than the part 71. The bottom of the part 72 is arranged above the bottom of the part 71. The forward end of the part 71 forms a shoulder 73. Arranged against the shoulder 73 and extending forwardly from the part 72 are supporting bars 74 for a platform or table 75. The parts 71, 72, bars 74 and platform 75 are suitably secured together. The platform 75 extends forwardly beyond the front of the base structure 1 and may be formed with a depending handle or grip. The platform 75 extends inwardly to an extent to be arranged over the roll 34 and under the roll 35 and has a beveled inner end edge 76 (Figure 3). The inner corners of the platform 75 are cut-out as at 75^b to provide clearances and to reduce the width of the inner end terminal portion 75^c of the platform. The side cheeks 70 are formed with cut-outs 77 (Figure 1) for the upper end of the blocks 37. The side cheeks 70 are hinged to the base structure 1 and for this purpose pintles 78 are suitably secured to the rear ends of the side cheeks 70 and are mounted in upstanding supporting plates 79 secured to the inner faces of the portions 20 of the side cheeks 4, 5 and extend above the latter. The plates 79 oppose the inner faces of the side cheeks 70.

Carried by the side cheeks 70 is a supporting bar 80 for a series of forwardly extending spaced gravity lowering weighted pick-up fingers 81, which seat at their forward ends on the top of the applying roll 33. The bar 80 is formed with reduced end terminals which are removably mounted in the notched extensions 82 at the upper end of the rear of the cheeks 70. The plates 79 are also formed with notches 83 for removably receiving the bar 80. The extensions 82 are arranged above the notches 83. The pick-up structure can be bodily adjusted relative to the roll 33 to dispose the pick-up fingers at different levels with respect to the roll 33. The extensions 82 and notches 83 provide for this adjustment, as when bar 80 is mounted in the extensions 82 the pick-up fingers will be disposed at a higher level than when the bar 80 is mounted in the notches 83. The adjustment of the pick-up structure will provide for changing the distance between the roll 36 and the pick-up fingers.

The shaft of the guide roll 35 is indicated at 84 and it is eccentrically mounted in head 85 formed on the inner ends of bearings 86 positioned in openings 87 (Figure 4) formed in the side cheeks 70. Secured to the heads 85 by threaded shanks 88 are blocks 89 fixed to forwardly extending spring controlled adjusting rods 90 which are slidably mounted in apertured arms 91 formed on the inner faces of the parts 72 of the cheeks 70. The rods 90 are threaded, as at 92 and threadably engaging with the rods 90 are adjusting nuts 93 therefor. The nuts 93 are arranged forwardly of the arms 91. The arrangement of the rods 90 is such that if the rods 90 are adjusted inwardly the roll 35 will be swung away from the roll 33, but if the rods 90 are adjusted outwardly the roll 35 will be swung towards the roll 33.

The guide roll 36 is of less length than the guide roll 35 and a pair of oppositely disposed peripherally threaded adjustable shafts or supports 94 having pointed or tapered inner ends 94^a to rotatably suspend the roll 36 above the roll 33 and also above the roll 35, but rearwardly of the latter. The shafts 94 threadedly engage with tubular members 94^b and with spacers 94^c arranged at the inner ends of the members 94^b. The members 94^b are slidably arranged in oval-shaped aligned slots 97 formed in the superstructure 2 near the upper edges of the sides of the latter. The shafts 94 extend inwardly from the spacers 94^c and have their ends 94^a engage in tapered sockets 94^d formed in the ends of the roll 36. The spacers 34^c are arranged against the inner faces of the sides of the superstructure 2.

The blocks 89 are formed with headed pivots 95 and extending rearwardly from the said pivots to the shafts 94 are links 96 formed with openings 96^a (Figure 2) in proximity to their rear ends for the passage of said shafts 94.

The manner of connecting the rolls 35 and 36 together as aforesaid provides that when the nuts 93 are turned clockwise the roll 35 is moved up from the table and away from the roll 33 due to the fact that the bearings for the roll 35 are placed eccentrically as shown by Figure 1. Also when the nut is turned as explained, not only does the roll 35 move away from the roll 33 but the roll 36 is also moved away from the roll 33 due to the fact that the pivots 95 connect the eccentric bearing 86 with the links 96 and the roll 36, which thereby moves in conjunction with the roll 35.

The purpose of this linkage is to adjust both rolls 35, 36 simultaneously. For example; if it is desired to glue a thin sheet of paper the roll 35 will be close to the table and close to the glue roll, and roll 36 will be close to the glue roll. However, when it is desired to glue heavier material, for example: a light cardboard, more distance is required both between the table and roll 35 and the glue roll and roll 33. Therefore, if the cardboard to be glued is, for example, $\frac{1}{32}$ of an inch thicker than the paper previously glued, the nuts 93 are adjusted so that roll 35 is the proper distance from the table, and by adjusting it for this distance it is also adjusted away from the glue roll due to the eccentricity. Also by adjusting the roller 35 to the proper height from the table the roll 36 is pulled by the links 96 to the right as shown in Figure 1, the center being supported in the slots 97 and therefore moves in a straight line, and by moving in a straight line the distance between the roll 36 and the roll 33 is also increased to accommodate the heavier material.

The end walls of the slots 97 correlate with the members 94^b to limit the extent of the bodily shifting in unison of the rolls 35, 36 in opposite directions.

As is well known, the glue or coating applying roll and the wiping roll forming elements of machines of the class to which the machine forming the subject of this application belongs, are driven from a suitable power transmission operated by a prime mover, such as an electric motor, and although it is not shown that the shafts of rolls 33, 34 are connected with a driving means for such shafts, it is to be understood that such shafts are to be suitably connected to any suitable driving means therefor, such by way of example as shown by the patent aforesaid.

Each spring controlled rod 90 coacts with its correlated nut 93, arm 91 and block 89 to form a spring controlled combined adjusting and latching structure for a head 85.

The work to be coated is mounted on the table 75 and is fed from the inner end of the latter to between the roll 33 and roll 35, from there the coated work is conducted to between rolls 36, 33, and after it passes roll 36, it is picked up and conducted upwardly and off of the machine by the fingers 81. The fingers 81 have their forward ends inclining rearwardly from bottom to top against which travels the coated work. The rollers 34, 35 not only function as guides but also as coated work retainers as they hold the coated work against the roll 33.

Although the machine is specifically referred to as a machine for applying glue to one face of an object, yet it is to be understood that it is also adapted for applying coatings of materials other than glue. The sliding bearings for the wiping roll and the horizontal shiftable adjusting means for said bearings, when taken together may be termed a pair of adjustable horizontally shiftable parallel carriers for adjusting the wiping roll.

What I claim is:

1. In a machine for the purpose set forth, a supporting structure having means to provide an open top compartment for a liquid coating, a coating applying roll supported from the sides of said structure depending into said compartment, a bodily adjustable wiping roll arranged in said compartment adjacent to said applying roll, a pair of adjustable horizontally shiftable parallel carriers for adjusting said wiping roll mounted in the sides of said structure, the said carriers including yieldingly urged parts connected with said wiping roll, and a combined adjusting and latching means supported from one end of said structure for, connected to and engaging with the front ends of and common to said shiftable carriers for adjusting them in unison and for holding them in adjusted position, said adjusting and latching means including a shaft provided at its ends with trunnions eccentrically disposed with respect to the axis of said shaft and extending through the front ends of said carriers for connecting said means to the carriers.

2. In a machine for the purpose set forth, a supporting structure having means to provide an open top compartment for a liquid coating, a coating applying roll supported from the sides of said structure and arranged in said compartment, a bodily adjustable wiping roll arranged in said compartment adjacent to said applying roll, a pair of adjustable horizontally shiftable parallel carriers for adjusting said wiping roll mounted in the sides of said structure, the said carriers including yieldingly urged parts connected with said wiping roll, a combined adjusting and latching means supported from one end of said structure for, connected to and engaging with the front ends of and common to said shiftable carriers for adjusting them in unison and for holding them in adjusted position, said carriers being formed with oval-shaped openings at their front ends, and the said adjusting and latching means including a shaft provided at its ends with trunnions eccentrically disposed with respect to the axis of the shaft and extending through said openings for connecting said means to the carriers.

3. In a machine for the purpose set forth and of that type including a coating applying roll and an adjustable wiping roll for correlation with the applying roll, the combination of a lower coated material guide roll arranged above the wiping roll and opposing the upper portion of the front of the coating roll, bearings for said guide roll, a pair of rotatably mounted adjusting means having the bearings of said guide roll eccentrically mounted thereon for adjusting said guide roll with respect to said applying roll, an upper coated material guide roll arranged over the top of the applying roll, spaced aligned bodily slidable shafts for rotatably suspending the upper guide roll, and a linkage pivotally connected to said adjusting means and to said shafts for bodily adjusting said upper roll with respect to said applying roll in unison with the adjusting of said lower roll.

4. In a machine for the purpose set forth and of that type including a coating applying and a wiping roll for the applying roll, the combination of a rotatably suspended slidably mounted adjustable coated material upper guide roll arranged over the top of the applying roll, an adjustable coated material lower guide roll arranged above the wiping roll, connected with the upper roll and opposing the upper portion of the front of the applying roll, said upper roll being adjusted in unison with said lower roll, a shaft for said lower guide roll, and a pair of spring controlled combined adjusting and latching means for said lower guide roll and for holding the rolls in adjusted position, the said means having rotatable parts having the bearings for the shaft of the lower guide roll eccentrically mounted thereon for the adjustment of the lower guide roll to provide for the adjusting of said rolls in unison with respect to said applying roll.

5. In a machine for the purpose set forth and of that type including a coating applying and a wiping roll for the applying roll, the combination of a rotatably suspended coated material upper guide roll arranged over the top of the applying roll, a coated material lower guide roll arranged above the wiping roll and opposing the upper portion of the front of the applying roll, a shaft for said lower guide roll, a pair of spring controlled combined adjusting and latching means for and for holding the lower guide roll in its adjusted position, the said means including rotatable parts having the bearings for the shaft of the lower guide roll eccentrically mounted thereon for the adjustment of the lower guide roll with respect to said applying roll, a pair of inner endwise aligned slidably mounted spaced shafts for suspending the upper guide roll, and a pair of links slidably connected to the shafts of said pair and pivotally connected to said parts to provide for the adjusting of said rolls in unison.

6. In a machine for the purpose set forth, a base comprising an endless hollow body formed of a closed bottom, a closed top having intermediate its ends an open upper end depending part of substantially U-form spaced from said bottom, a closed front integral with said top and bottom and spaced from said part, a closed back integral with said top and bottom and spaced from said part, said body being open at each side, a pair of upstanding side cheeks secured to the sides of the said body correlating with said depending part to thereby provide the base with an open top coacting material receiving chamber and correlating with said top and the depending part of the latter and with said bottom, front and back to thereby provide the base with a closed water heating chamber below and at the front and rear of said compartment.

7. In a machine for the purpose set forth, a base including means providing an open top coating material compartment, a coating supplying

roll supported from the sides of the base and depending into said compartment, an adjustable wiping roll arranged in said compartment for said applying roll, bearings for said wiping roll slidably mounted in the sides of said base, a pair of adjustable horizontally shiftable adjusting means for the bearings of said wiping roll mounted in the sides of said base, said means including yieldingly urged parts at their rear ends connected to said bearings and slotted couplers at their front ends, and a combined adjusting and latching means for adjusting and holding said horizontally shiftable means in adjusted position, said adjusting and latching means being supported from the base and including parts extended through the slots of the couplers for connecting it to the said horizontally shiftable means.

8. In a machine for the purpose set forth, a base including means providing an open top coating material compartment, a coating supplying roll supported from the base and depending into said compartment, an adjustable wiping roll arranged in said compartment for said applying roll, bearings for said wiping roll slidably mounted in the sides of said base, a pair of horizontally shiftable adjusting means for the bearings of said wiping roll mounted in the sides of said base, said means including yieldingly urged parts at their rear end connected to said bearings and slotted couplers at their front ends, and a combined adjusting and latching means for adjusting and holding said horizontally shiftable means in adjusted position, said combined adjusting and latching means including a rotatable adjusting shaft having eccentrically disposed trunnions extended through the slots of the couplers for connecting it to the said horizontally shiftable means, and apertured combined supporting and bearing brackets extended from the base, arranged interiorly of said couplers and in which the body of said shaft is mounted.

9. In a machine for the purpose set forth, a base including means providing an open top coating material compartment, a coating supplying roll supported from the sides of the base and depending into said compartment, an adjustable wiping roll arranged in said compartment for said applying roll, bearings for said wiping roll slidably mounted in the sides of said base, a pair of horizontally shiftable adjusting means for the bearings of said wiping roll mounted in the sides of and extended from the front of said base, said means including yieldingly urged parts at their rear ends connected to said bearings and slotted couplers at their front ends, and a combined adjusting and latching means for adjusting and holding said horizontally shiftable means in adjusted position, said combined adjusting and latching means including a rotatable adjusting shaft having eccentrically disposed trunnions extended through the said slots of the couplers for connecting it to the said horizontally shiftable means to thereby provide for the adjusting of the latter on the operation of the combined adjusting and latching means, said combined adjusting and latching means being supported from one end of said base and including a shiftable operating element therefor connected to one of said parts and a plurality of designated sockets for selective coaction with said shiftable element for latching the latter to thereby releasably retain said horizontally shiftable means in adjusted position.

10. In a machine for the purpose set forth, a base including an endless hollow body open at each side having a flat horizontally disposed imperforate bottom, an upstanding impervious front integral at its lower end with the front end of said bottom, an upstanding impervious back integral at its lower end with the rear end of said bottom, a pair of oppositely disposed inwardly extending spaced aligned flanges integral with the inner faces of said front and back at the upper ends of the latter and parallel to said bottom and an upstanding U-part integral at the upper ends of its sides with the inner ends of said flanges, and upstanding side cheeks secured to spaced points of and for closing the sides of said body, said cheeks depending below said bottom to form a support for said body, and said cheeks correlating with said body to form the base with an open top compartment and a closed compartment arranged at the bottom and at the front and rear of the other compartment.

JULIUS M. MINKOW.