

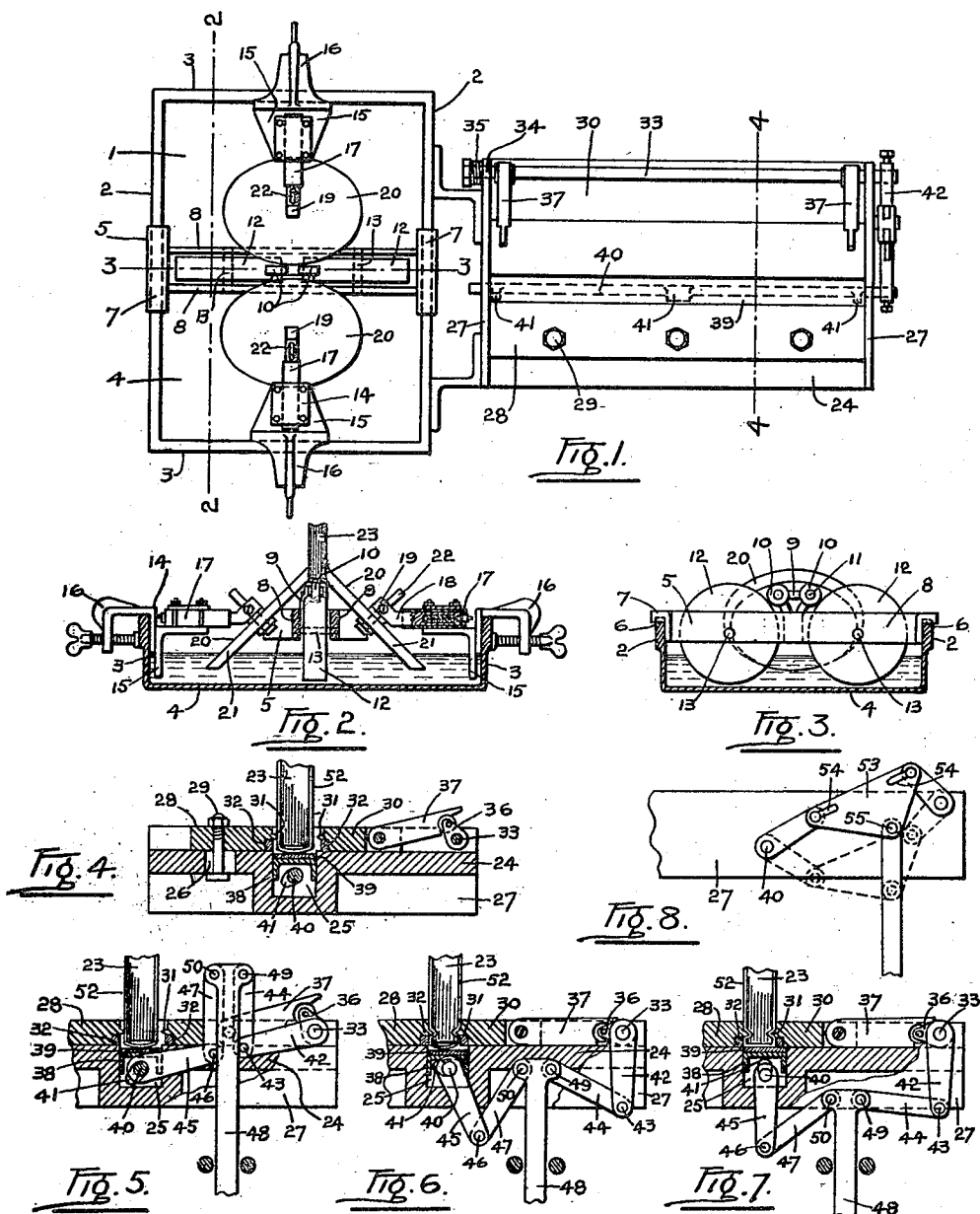
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GLUING AND BINDING PRESS FOR BOOKS

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GLUING AND BINDING PRESS FOR BOOKS.

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To all whom it may concern:

Be it known that I, GEORGE HENRY PEEBLES, of the city of Vancouver, in the Province of British Columbia, Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Gluing and Binding Presses for Books, of which the following is the specification.

My invention relates to improvements in gluing and binding press for books and the object of the invention is to provide a simple means for coating the back and sides of the binding of stapled or sewn books with an even film of glue for attaching a cover to the book, for simultaneously pressing the cover back into contact with the glued surface and for forming the binding hinge crease and to provide means whereby the device is adjustable to fit any width of book and finally, in which the different parts of the gluing device may be taken apart for cleaning and it consists essentially of a glue tank, glue transferring rollers located within the tank, and means for simultaneously forcing the cover back into contact with the book back and for gripping and creasing the sides of the book cover as hereinafter more particularly explained by the following specification.

Fig. 1 is a plan view of my gluing and binding press.

Fig. 2 is a sectional view through the gluing tank taken on the line 2—2, Fig. 1 and showing the disposition of the gluing rollers.

Fig. 3 is a sectional view through the tank taken on line 3—3, Fig. 1.

Fig. 4 is a sectional view through the binding press taken on line 4—4, Fig. 1.

Fig. 5 is a view of the sliding jaw operating mechanism in the normal position with the jaws in section.

Fig. 6 is a view of the sliding jaw operating mechanism showing the binding jaw in section at the end of its stroke.

Fig. 7 is a view of the sliding jaw operating mechanism showing the binding jaw and the presser bar in section at the end of its stroke.

Fig. 8 is a detail view of a modified form of sliding jaw operating mechanism.

In the drawings like characters of reference indicate corresponding parts in each figure.

1 indicates a glue tank having side walls 2, end walls 3 and bottom 4. The tank 1 may be heated in any desired manner. 5

indicates a roller carrying frame supported upon the side wall 2—2 and held against edgewise movement along said walls by a shallow recess 6 which is cut in the upper edges of the wall and into which the end pieces 7 are inserted.

7 are end pieces which are angular in form to contact with the walls 2—2. 8—8 are side bar members preferably rectangular in cross section extending between the end pieces 7 to connect them together. 9 is a bracket carried by and between the members 8—8 intermediately of their length. 10 are rollers mounted upon the bracket 9 by means of the pivots 11. 12 indicates a pair of rollers freely and rotatably mounted upon pins 13 carried by the side members 8. The rollers 12 are so mounted that the lower peripheral portions thereof are immersed in the glue contained within the tank 1.

The frame 5 and all parts which are liable to contact with the glue within the tank are preferably so constructed that they may be readily withdrawn and dismantled for cleaning. 14 indicates in general my disc holders, each of which consists of a bracket 15 to which is secured a screw clamp 16 for attaching the disc holders to the end walls 3 of the tank 1. 17 is a tubular socket clamped to the bracket 15 in which are located spring-pressed sliding arms 18, the outer ends of which are turned upwardly at an angle preferably of forty-five degrees as indicated at 19.

20 are circular discs each having a bevelled edge 21 formed at such an angle as to present a vertical line of contact with the side faces of the book 23. 22 are pins carried by the arms 18 upon each of which a disc 20 is rotatably mounted. 23 (see Fig. 2), is a book, the binding edges of which it is desired to coat with adhesive substance. 24 indicates a bed plate shown in detail in Fig. 4 which is preferably attached to the tank 1 and which is provided with a rectangular groove 25 extending longitudinally thereof.

26 is one of a plurality of slotted apertures extending through the bed for the reception of the bolts 29. 27 are side plates projecting upward from the upper surface of the bed plate 24 and secured thereto. 28 is a jaw adjustably secured to the bed plate 24 by the bolts 29 which engage the slotted apertures 26. 30 is a jaw mounted upon

the bed plate and movable transversely thereof. The opposing edges of the jaws 28 and 30 are each provided with a projecting rib 31 adapted to form a hinge crease in the binding cover of the book when pressed thereinto.

32 is a strip of rubber or other resilient material secured to the opposing edges of the jaws so that they may exert a close contacting pressure upon the binding placed therebetween. 33 is a shaft extending longitudinally above the bed plate 24 which is journaled within suitable bearings in the end plates 27 as indicated at 34 and which is provided with a coil spring 35 to rotate the shaft to withdraw the jaw 30 from contact with the binding cover on the release of the operating mechanism.

36 are cranks secured to the shaft 33 through which movement is imparted to the jaw 30 by a pair of connecting rods 37. 38 is a presser bar preferably channelled in cross section having vertical movement within the groove 26. 39 is a strip of resilient material covering the upper surface of the presser bar 38 and secured thereto. 40 is a shaft shown in Fig. 1 in dotted lines and in Figs. 4 to 8 in solid lines.

41 is a plurality of cams secured to the shaft 40 for raising the presser bar 38 into contact with the binding back of the book. 42 is a crank mounted upon the shaft 33, the upper end of which is connected by a pin 43 to a toggle 44. 45 is a crank mounted upon the shaft 40, the outer end of which is connected by a pin 46 to a toggle 47. 48 is a connecting rod which is mounted in a suitable manner in slotted guides to retain it in a substantially vertical position throughout its downward and upward travel. The connecting rod 38 is slotted at its upper end and connected to the toggle 44 by the pin 49 and to the toggle 47 by the pin 50. 23, as hereinbefore referred to represents a book to be bound and 52 the binding cover which it is desired to glue to and press upon the book 23.

In Fig. 8 I have shown a modified form of crank operating mechanism in which the toggles previously referred to are dispensed with and a plate 53 of triangular form is substituted. The plate 53 is provided with a pair of slots 54 to engage the pins at the outer end of the operating cranks, a connecting rod depending from the apex of the plate connected thereto by a pin 55.

In Fig. 8 I have shown by dotted lines the position of the cranks and plates at the end of the operating stroke.

Having thus described the several parts involved in my invention I will briefly describe the operation of the same.

The book 23 to be covered is held with its back or binding edge downward. The binding edge is then placed upon the

periphery of one of the glue coated rollers 12 and drawn between the bevelled edges 21 of the glue coated discs 20 and from thence into contact with the other roller 12 by which means the back of the binding edge and the sides of the binding edge are coated with glue to the width desired, such width being controlled by vertically adjusting the brackets 15 upon the side walls of the tank 1. The rollers 10 serve to prevent the binding edge from being pressed downward between the bevelled discs beyond a predetermined level.

The book having been glued is placed in position upon a binding cover which is then folded upon the book and its binding placed upon the presser bar 38 between the jaws 28 and 30. Downward pressure is then exerted upon the connecting rod 48 which first exerts a rocking movement on the shaft 33 by means of the toggle 44 and the crank 42.

In Fig. 6 the limit of this movement is indicated whereby the side surfaces of the cover are firmly pressed into contact with the glued side surfaces of the book and hinge creases simultaneously formed lengthwise thereof by means of the ribs 31 indenting each side face of the cover as it is gripped by the jaws 28 and 30.

A further downward movement of the connecting rod rotates the cam shaft 30 raising the presser bar into forcible contact with the back of the cover causing it to adhere to the binding hinge of the back as will be readily seen by referring to Fig. 7.

From the foregoing it will be apparent that I have devised a very simple and effective means for attaching binding covers to books which may be adjusted to suit various sizes and thicknesses of books and in which such parts as are liable to contact with glue may be readily taken apart for the purpose of cleaning, and reassembled.

What I claim as my invention is:

1. A device of the class described comprising a glue tank, means carried by the tank for transferring the glue onto the back or binding edge of a book, a disc located at each side of the aforesaid transferring means, each disc having a bevelled edge passing through the glue and bearing against the side faces of the book.

2. A device of the class described comprising a glue tank, means carried by the tank for transferring the glue onto the back or binding edge of a book, a disc located at each side of the aforesaid transferring means, each disc having a bevelled edge passing through the glue and bearing against the side faces of the book, and means for permitting a resiliently opposed outward movement of the discs.

3. A glue transferring device comprising a carrying frame, a transferring roller car-

ried by the frame, the lower peripheral portion of which is adapted to be immersed in glue and over the upper peripheral portion of which the back edge of a book is adapted to pass in contact, and bevelled edge discs located at each side of the roller disposed with their edges bearing against the sides of the book.

4. A glue transferring device comprising a carrying frame, a transferring roller carried by the frame, the lower peripheral portion of which is adapted to be immersed in glue and over the upper peripheral portion of which the back edge of a book is adapted to pass on contact, bevelled edge discs located at each side of the roller disposed with their edges bearing against the sides of the book, and an outwardly yieldable mounting for the discs.

5. A glue transferring device comprising a carrying frame, a transferring roller carried by the frame, the lower peripheral portion of which is adapted to be immersed in glue and over the upper peripheral portion of which the back edge of a book is adapted to pass in contact, bevelled edge discs located at each side of the roller disposed with their edges bearing against the sides of the book, an outwardly yieldable mounting for the discs, and means for adjusting such mounting vertically.

Dated at Vancouver, B. C. this 5th day of June 1922.

GEORGE HENRY PEEBLES.

Witnesses:

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ERNEST E. CARVER.