No. 758,871. PATENTED MAY 3, 1904.

W. STRINGER.

BINDING PRESS.

APPLICATION FILED APR. 15, 1903.

NO MODEL.

Fig. 1.

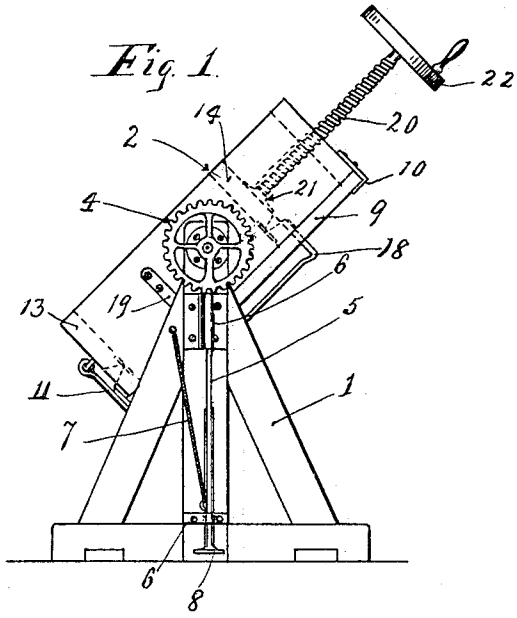


Fig. 2.

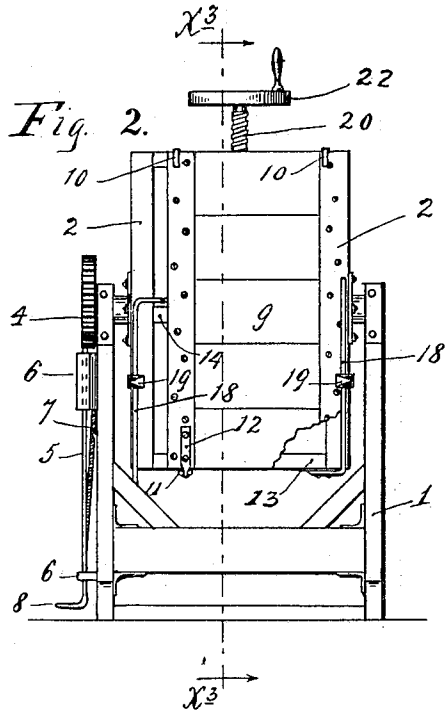


Fig. 3.

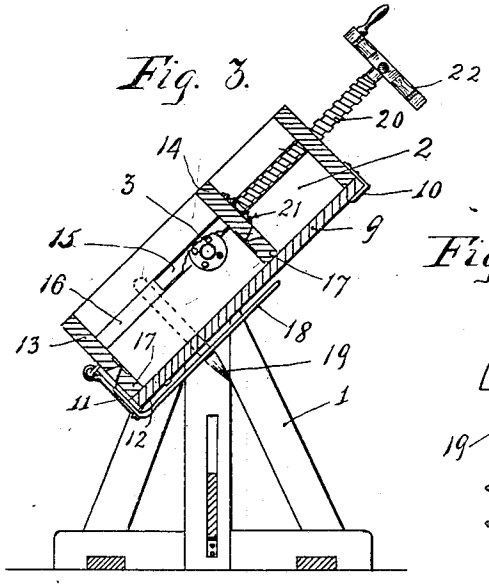
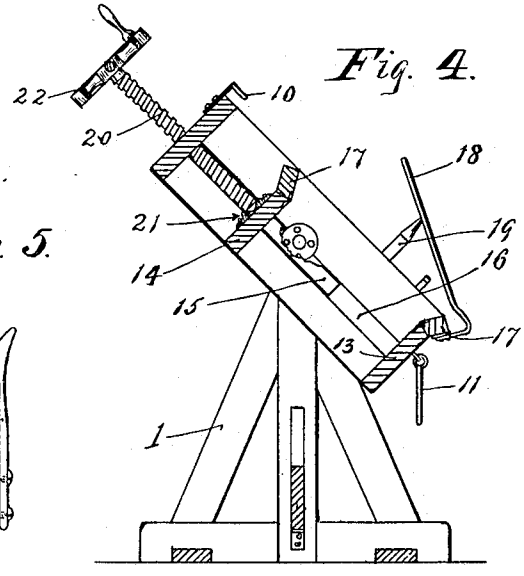


Fig. 5.

Fig. 4.



Witnesses,
R. C. Mabry.
W. D. Kilgore.

Inventor,
Wesley Stringer,
By his Attorney
Williamson & Merchant

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 758,871. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

WESLEY STRINGER, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO CARLOS F. HATCH, OF MINNEAPOLIS, MINNESOTA.

BINDING-PRESS.

SPECIFICATION forming part of Letters Patent No. 758,871, dated May 3, 1904.

Application filed April 15, 1903. Serial No. 152,815. (No model.)

To all whom it may concern:

Be it known that I, WESLEY STRINGER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Machine for the Binding of a Flat-Opening Book, which I have named a "Bookbinding-Press," of which the following is a specification.

My invention has for its object to provide an improved bookbinding-press by the use of which the leaves of books may be clamped together in proper position for binding with those edges of the leaves which are to receive the glue or adhesive material free to be slightly separated, so that such adhesive material may be run in between them a short distance, thereby enabling the binding together of the leaves of the book by the adhesive material in such manner that a "flat-opening" book is provided.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

In the accomplishment of the object of my invention I employ an oscillating frame or holder which is provided with coöperating clamping-heads having hinged supplemental sections which when in operative positions firmly clamp together those edges of the leaves that are to be secured by the glue or adhesive material, but which supplemental sections when turned into inoperative positions permit the said edges of the leaves to be slightly separated, so that the adhesive material may be worked in a short distance between the said leaf edges. The oscillating supporting frame or holder is provided with a detachable alining board or bottom against which the edges of the leaves which are to receive the adhesive material are placed while the said frame is turned with the said alining board or bottom downward. With this construction after the leaves are properly alined by the said alining-board they are securely clamped together by the clamping-heads, and the frame is then turned upside down, the alining-board is then removed, and the adhesive material is applied in a manner already indicated, but which will be hereinafter more fully described.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts thoughout the several views.

Figure 1 is a side elevation of the complete device. Fig. 2 is a front elevation of the said device with some parts broken away and showing the supporting-frame turned into a vertical position. Fig. 3 is a section on the line x^3 x^3 of Fig. 2. Fig. 4 is a similar view to Fig. 3, but shows the supporting-frame turned upside down and with the alining-board thereof removed; and Fig. 5 is a detail in side elevation of one of the latch-hooks of the device removed from working position.

The numeral 1 indicates a supporting-pedestal made up of side brackets rigidly tied together by transverse bars. The oscillating supporting-frame 2, which, as shown, is rectangular, has trunnions 3, which are loosely journaled in the upper side portions of the pedestal 1, one of said trunnions having at its projecting end a peripherally-notched wheel or gear 4. A vertically-movable lock-plunger 5, which is mounted in guides 6 on one side of the pedestal 1, is yieldingly held upward by a spring 7 applied thereto and to the said pedestal. The upper end of this lock-plunger 5 engages with the notches of the gear 4 to hold the supporting-frame 2 in whatever position it may be set. At its lower end the lock-plunger 5 is provided with a laterally-projecting foot-piece 8, which when stepped upon releases it from the gear 4 and permits the supporting-frame 2 to be freely turned into any position desired.

The detachable alining board or bottom 9, which is adapted to close the bottom of the said frame 2, is, as shown, detachably held in working position by angular brackets 10 on the upper portion of said frame and by a hook 11 on the lower portion of said frame, which hook is adapted to engage with a projecting end of a strap 12 on the adjacent edge of the said alining-board. The so-called "detachable alining-board" is movable to and from an operative position, and the expression "de-

tachable" is herein used in a broad sense to indicate that fact.

One of the so-called "clamping-heads" of the device is afforded by the lower transverse portion 13 of the frame 2, and the other clamping-head, 14, is provided at its ends with rigidly-secured guide-shoes 15, that work in guide channels or grooves 16, formed in the inner surfaces of the sides of the frame 2 and extending longitudinally from end to end thereof. The clamping-heads 13 and 14 at those edges that terminate short of but close to the alining-board 9 when the latter is in working position are provided with hinged supplemental sections or cleats 17, that are adapted to be turned into positions in which they diverge from each other, as shown in Fig. 4. Each hinged supplemental section 17 is provided with a rigidly-secured operating-bar 18. The free ends of these operating-bars 18 project in opposite directions and each follows quite closely one side of the oscillating supporting-frame 2 and coöperates with a cam-nosed spring latch-hook 19, secured at one end to the adjacent side of the said frame 2. When the operating-bars 18 are forced toward the side of the frame 2 far enough to bring the supplemental sections 17 into a straight line with their respective clamping-heads, the spring latch-hooks 19 engage said bars and lock said supplemental sections in operative positions. The movable clamping-head 14 is moved by a screw-rod 20, which works through the upper transverse portion of the frame 2 and is swiveled at its lower end to a bearing 21 on said head. At its outer end said screw-rod is provided with a hand-wheel 22, by means of which it may be readily turned.

Operation: The operation of the device may be briefly stated as follows: While the alining-board 9 is held in operative position on the frame 2 and the said frame is turned substantially in the position indicated in Fig. 3, the leaves of the book are placed within the frame between the clamping-heads and against the said alining-board. Then the movable clamping-head 14 is tightly pressed against the leaves, so that the said leaves are firmly held between the two clamping-heads. Then the frame 2 is turned upside down or substantially into the position indicated in Fig. 4, and the alining-board is removed from the frame. When the spring-hooks 19 are sprung outward, the supplemental sections of the clamping-head are released and may then be moved into inoperative positions, as shown in Fig. 4. Then the glue or adhesive material is applied to the upper edges of the leaves and is worked in between the leaves by running the finger or a tool up and down over the released edges of the leaves. Then after the adhesive material has been worked in between the edges of the leaves the supplemental clamping-sections 17 are forced back into operative positions, so as to squeeze out from between the edges of the leaves all surplus adhesive material, and thereby press the stuck edges of the leaves within the same space occupied by the loose portions of the leaves. The said supplemental sections should of course be left locked in their operative positions long enough to permit the glue or adhesive material to set. While the leaves are still clamped by the supplemental sections 17, the cloth backing or binder should of course be applied to the adhered edges of the leaves.

The utility and convenience of the device above described will be apparent to all persons familiar with bookbinding, and it will also be understood that the said device makes it possible to do better bookbinding by the use of adhesive material without stitching or sewing than has hitherto been possible or at least practicable. In short, as already indicated, by the use of the above-described device books may be bound by the use of adhesive material and without stitching or sewing which are capable of being opened flat without breaking the back of the book—that is, without splitting apart the bound edges of the leaves.

From what has been said it will of course be understood that the device described is capable of many modifications within the scope of my invention as herein set forth and claimed.

It will of course be understood that the bookbinding-press herein disclosed is capable of use for binding all kinds and all classes of books, pamphlets and magazines, catalogues, &c., as well as larger books.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A bookbinding-press comprising a supporting-frame, having coöperating clamping-heads, movable one with respect to the other, to clamp the leaves of books of different thickness, at least one of said clamping-heads being formed with a supplemental section, movable to and from an operative position respectively to clamp and release those edges of the leaves to which the adhesive material is to be applied, the said frame being open to permit of such application of the adhesive material, and means for locking or holding the said supplemental clamping-section in working position, and whereby when said supplemental section is in inoperative position, the adhesive material may be worked in between the edges of the leaves.

2. A bookbinding-press, comprising a reversible supporting-frame, having a detachable alining-board, and a pair of clamping-heads, at least one of which clamping-heads is formed with a hinged supplemental section adjacent to said detachable alining-board, which supplemental section is movable to and from operative position respectively to clamp and release those edges of the leaves to which the adhesive material is to be applied.

3. A bookbinding-press comprising an oscillating supporting-frame, having a detachable alining-board, and a pair of clamping-heads, one of which clamping-heads is movable with respect to the other, and both of which clamping-heads are provided with hinged supplemental sections for clamping and releasing those edges of the leaves to which the adhesive material is to be applied, substantially as described.

4. A bookbinding-press, comprising a supporting-pedestal, an oscillating frame supported thereby, and provided with a pair of clamping-heads having hinged supplemental clamping-sections, means for locking said supplemental sections in operative positions and for releasing them, a screw-rod for moving one of said clamping-heads, and a detachable alining-board, applicable to said oscillating frame in a position adjacent to the supplemental sections of said clamping-heads, substantially as described.

5. In a bookbinding-press, the combination with a supporting-pedestal, and an oscillating supporting-frame supported thereby, of means for locking said frame in different positions with respect to said pedestal, a pair of clamping-heads carried by said supporting-frame, one thereof being fixed and the other movable with respect thereto, said clamping-heads having hinged supplemental clamping-sections, spring-latch devices for holding said supplemental sections in operative positions and for releasing them, and a screw-rod for adjusting the movable clamping-head, said screw-rod reacting on said oscillating supporting-frame, and a detachable alining-board applicable to said oscillating frame adjacent to the supplemental sections of said clamping-heads, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 31st day of March, A. D. 1903.

WESLEY STRINGER.

Witnesses:
ELVA HATCH,
LOUIS A. HUBACHEK.