

(No Model.)

3 Sheets—Sheet 1.

J. RING.
BOOK BOARDING APPARATUS.

No. 550,844.

Patented Dec. 3, 1895.

Fig. 1.

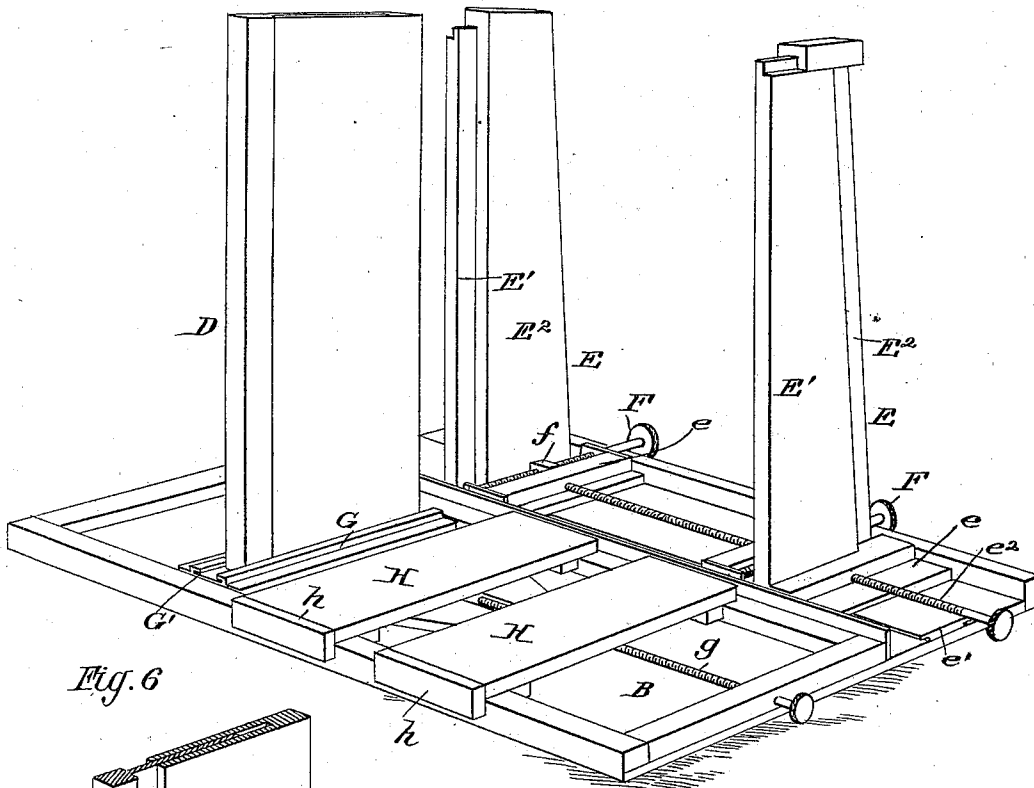


Fig. 6

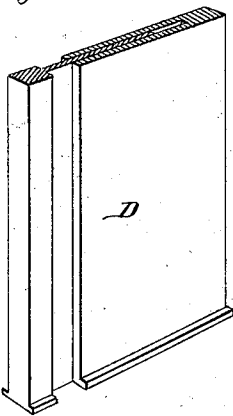
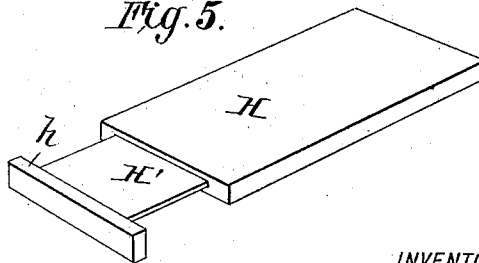


Fig. 5.



WITNESSES:

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Fig. 2.

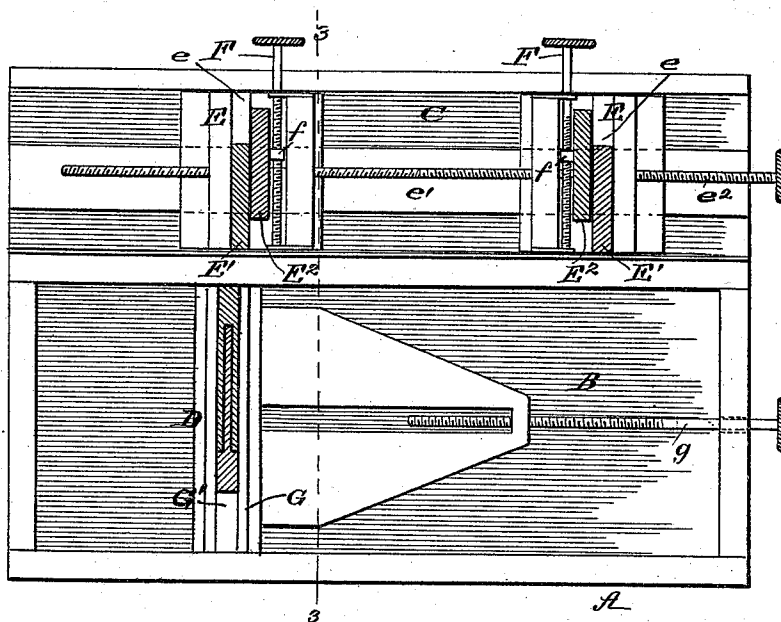


Fig. 3.

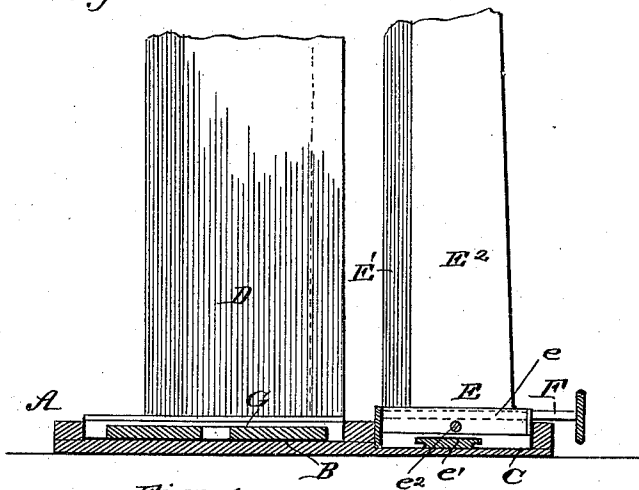
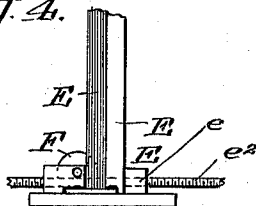


Fig. 4.



WITNESSES:

Jos. A. Ryan
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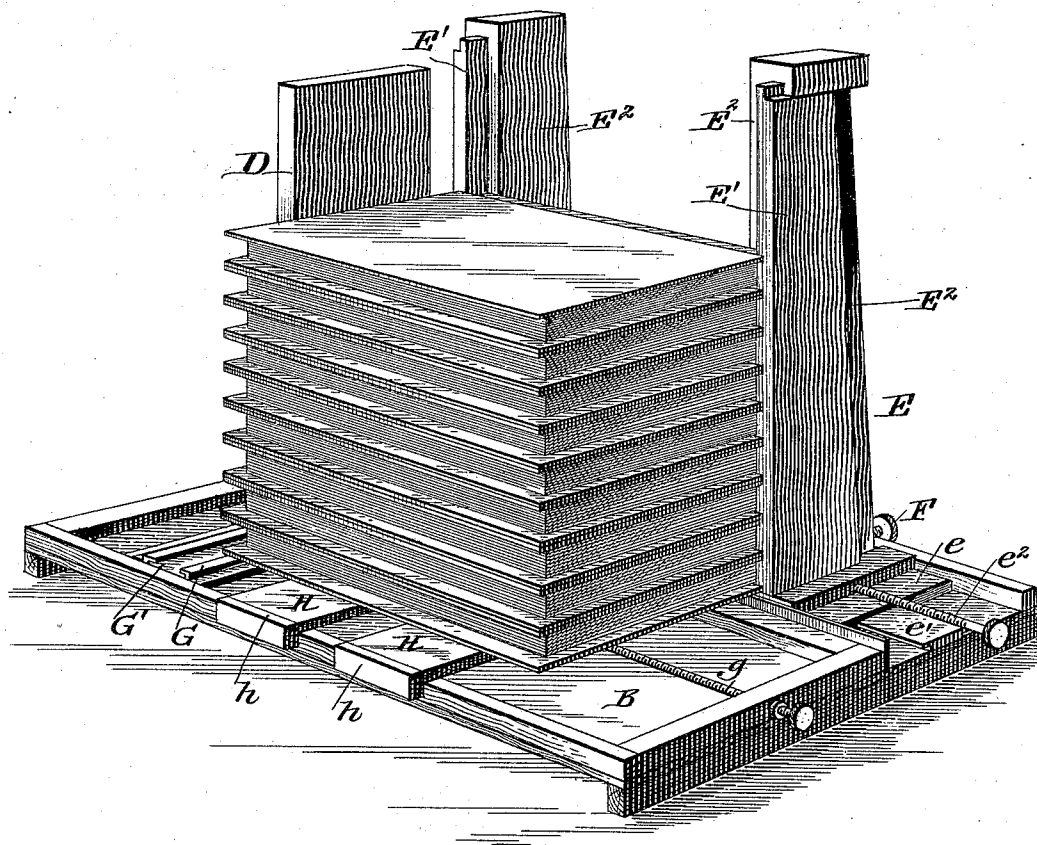
3 Sheets—Sheet 3.

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Fig. 7.



WITNESSES:
Jos. A. Ryan
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INVENTOR:
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UNITED STATES PATENT OFFICE.

JOHN RING, OF WASHINGTON, DISTRICT OF COLUMBIA.

BOOK-BOARDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 550,844, dated December 3, 1895.

Application filed March 30, 1895. Serial No. 543,834. (No model.)

To all whom it may concern:

Be it known that I, JOHN RING, residing at Washington, in the District of Columbia, have invented a new and useful Improvement in Book-Boarding Apparatus, of which the following is a specification.

This invention is an apparatus for use by bookbinders in boarding books; and it has for an object to provide simple mechanism by which to accurately guide and stop the boards and books in proper relation in piling the same; and the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the improved apparatus. Fig. 2 is a plan view thereof, part in section. Fig. 3 is a vertical section on about line 3 3, Fig. 2. Figs. 4, 5, and 6 are detail views; and Fig. 7 is a perspective view of the apparatus with a pile of books thereon, illustrating the apparatus as in use.

In carrying out my invention I provide a suitable base or support, which may consist, preferably, as shown, of a base-frame A, having a front guideway B and a rear guideway C, such guideways B and C being parallel, as shown. This frame or support A carries the end stop D and the side stops E, the former operating as a limiting-stop for the ends of the book-boards, while the stops E serve as limiting-stops for the rear sides of the books and their boards. These side stops E have front stop portions E' and rear stop portions E², the former serving as stops for the book-boards and the latter for the books, and these portions E' E² may be termed, respectively, the "outer" and "inner" stop portions, as the stop E² is set back from the stop E', as shown. These stops D and E are upright on the base and extend for a sufficient height to permit a pile of books to be guided thereby, of such height as can be conveniently manipulated by hand. It is preferred, in order that the apparatus may be adapted and used for different sizes of books, to support the stops adjustably and also to make the side stops with one of their stop portions adjustable with respect to the other, so that such portions

may be set to secure different relations with respect to the projection of the rear edge of the book beyond its board. To this end the side stops have one of their stop portions, preferably the inner one, adjustable with respect to the other, and in order that such adjustable part may be conveniently moved to and held in any desired relation I provide a set-screw F, journaled with respect to the outer stop portion and having a threaded engagement at *f* with the adjustable stop portion by which to set the latter to any suitable position. These side stops E are adjustable within the rear guideway from side to side, being formed with a suitable base *e*, on which the stop portion E' is fixed, and this base *e* is guided by engagement with an undercut rib *e'*, extending longitudinally of the guideway C, and a double-threaded feed-screw *e*² is journaled to the base-frame and has its right thread engaging one of the bases *e* and its left thread the other of such bases, so that by turning the screw in one direction or the other the bases *e* and parts carried thereby may be fed toward or from each other to secure any desired adjustment.

It might be stated here that the end stop D is preferably made in extensible sections and is supported adjustably in the guideway B, so that it can be adjusted laterally, and when this end stop is adjusted laterally it is not absolutely necessary for both the stops E to be adjustably supported; but for ease and convenience it is preferred to support both the stops E adjustably under all circumstances. The end stop D is mounted on a carrier G, which is movable from side to side in the guideway B, and in the construction shown may be adjusted to any desired position by the feed-screw *g*, journaled to the base-frame, as shown. The end stop D is adjustable from front to rear on this carrier by engaging upon an undercut guide G', and for use with books of considerable width these end stops may be extensible from front to rear, as shown.

Upon the front guideway B are mounted what, for convenience, I term "underlying" supports H, which may be slid from side to side upon such guideway and extend over the carrier G, as shown. In order that these sup-

ports H may properly support books of unusual width, I provide them with extensible sections H', which may be drawn outward to support such wide books, and have at their
 5 outer extremities heads h, bringing such extensions up to a level with the supports H, as shown in the drawings. Manifestly the supports may be made without these extensible sections, if desired. These underlying supports
 10 are of especial advantage, as they may be set to so receive the pile of books that the latter may project at their lower edges beyond the supports H, affording a hand-hold beneath the pile of books, facilitating the removal of such pile from the apparatus without
 15 disturbing the set of the boards or books.

In the operation of boarding books, as is well known, the books and boards are set in piles, a board being placed below, properly pasted,
 20 and a book placed on such board with its sewed edge projecting beyond the rear edge of the board and with its ends arranged in from the ends of the boards. Two boards, properly pasted, are then put upon the first book
 25 with their edges in coincidence with those of the first board. A second book is then applied with its rear edge and ends in alignment with those of the first book. Two more boards are applied, and the operation proceeds as before.
 30 In thus piling the books it is necessary that the alignment of the successive boards and books should be accurate, and to secure this accuracy requires the service of an experienced and skilled bookbinder. In the
 35 use of my invention one of the books is placed upon the frame and the side stops are adjusted thereto to secure the proper projection of such book beyond the boards. One of the boards is then applied, being stopped in
 40 its rearward movement by the side stops, and the end stop is adjusted to form a gage for the end of the book-board. The board and book are then removed, a board properly applied, a book then applied, two boards applied,
 45 another book, and so on, until a pile of the proper height is secured, when it is removed, and the operation proceeds as before.

By my apparatus an inexperienced person can pile books and boards with as great a degree of accuracy as is now done by a skilled
 50 workman and with much greater facility, the machine serving to automatically gage the books and boards as the operation of piling proceeds.

55 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An apparatus substantially as described comprising a base or platform, upright stops
 60 for the side and end of the leaves and a stop adjacent to said first stop, for the ends of the boards substantially as set forth.

2. In an apparatus substantially as described, the combination of the stop for the
 65 leaves having offset portions and the stop for

the ends of the boards substantially as set forth.

3. In an apparatus substantially as described, the side stop herein described having an outer stop portion for the boards and inner
 70 stop portion for the book, the inner stop portion being set in beyond the line of the outer stop portion, substantially as described.

4. In an apparatus substantially as described, the side stop having outer and inner
 75 portions one of which is adjustable with respect to the other, substantially as set forth.

5. In an apparatus substantially as described, the side stop having upright portions formed in two longitudinal sections and devices
 80 by which one of such sections may be adjusted with respect to the other, substantially as set forth.

6. In an apparatus substantially as described, the combination of the base or support, the side stops one of which is adjustable
 85 along said support, such stops being formed with adjustable sections, substantially as and for the purposes set forth.

7. In an apparatus substantially as described, the combination of the base and the side stop movably supported thereon and formed with adjustable sections, substantially
 90 as and for the purposes set forth.

8. In an apparatus substantially as described a stop composed of a base having a fixed upright section, an upright section adjustable with respect to such fixed upright
 95 and a screw journaled to the fixed and engaging the adjustable portion of the stop whereby the latter may be set to and held in any desired adjustment, substantially as set forth.
 100

9. An apparatus substantially as described, comprising an underlying support provided with an extensible section and the
 105 upright stops, substantially as set forth.

10. In an apparatus substantially as described, the combination of the stops for the leaves, the end stop, the carrier on which said end stop is supported and means by which to
 110 adjust said carrier, substantially as described.

11. In an apparatus substantially as described, the combination of the base frame, the carrier movable laterally therein and the end stop mounted on and adjustable along
 115 said carrier substantially as set forth.

12. In an apparatus substantially as described, the combination of the base frame, the carrier movable transversely therein and provided with the upright stop and the underlying supports extending over said carrier,
 120 substantially as set forth.

13. An apparatus substantially as described, comprising the base frame having front and rear parallel guide ways, the carrier movably supported in the front guide
 125 way and provided with the stop, for the ends of the boards and the stop for the leaves movable in the rear guide way and having the offset portions, substantially as set forth.
 130

14. The improved apparatus substantially
as described, consisting of the base frame
having front and rear guide ways, the carrier
in the front guide way provided with the end
5 stop, the screw for adjusting such carrier, the
underlying supports adjustable upon said
front guide way and having extensible sec-
tions, the side stops movable in the rear guide
way and having adjustable stop portions and
the screw by which to set the said side stops 10
within the rear guide way, substantially as
set forth.

JOHN RING.

Witnesses:

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