G. D. STEERE.

APPLIANCE FOR BOOKBINDERS' USE.

APPLICATION FILED SEPT. 30, 1909.

962,867. Patented June 28, 1910.

Fig. 1.

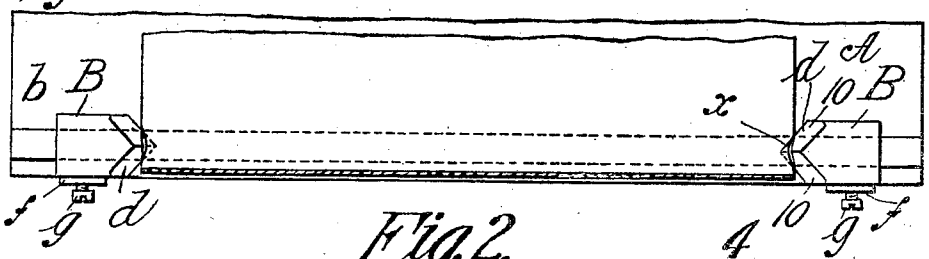


Fig. 2.

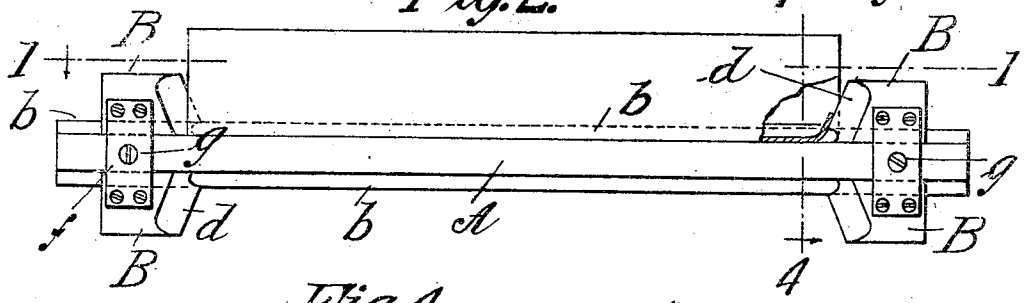


Fig. 4.

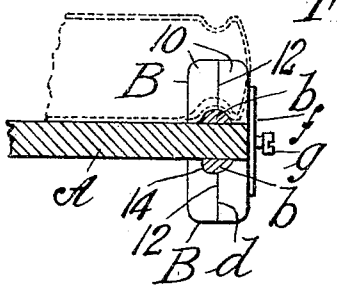


Fig. 3.

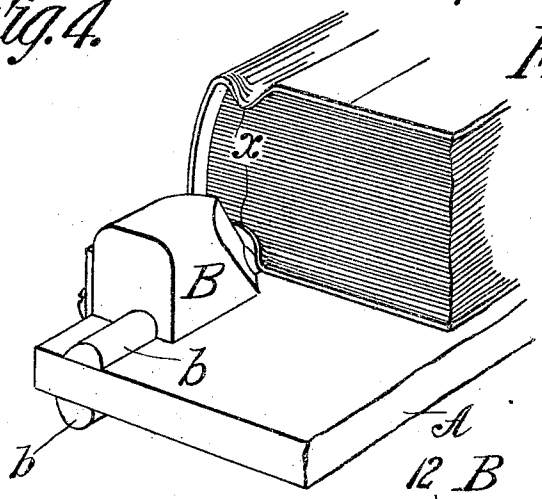
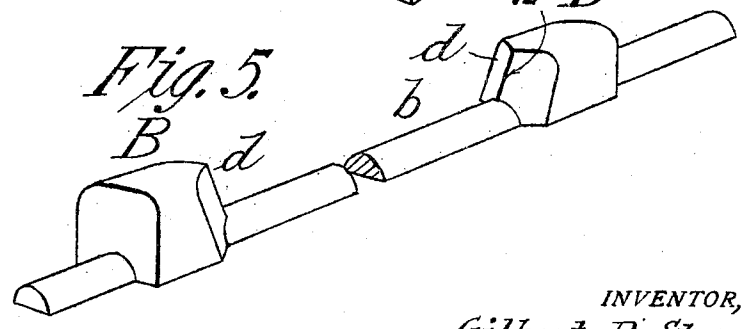


Fig. 5.



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APPLIANCE FOR BOOKBINDERS' USE.

962,867. Specification of Letters Patent. **Patented June 28, 1910.**

Application filed September 30, 1909. Serial No. 520,235.

To all whom it may concern:

Be it known that I, GILBERT D. STEERE, a citizen of the United States of America, and resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Appliances for Bookbinders' Use, of which the following is a full, clear, and exact description.

In the manufacture of blank books, such as accountants' ledgers, journals and the like, the covers are usually composed of mill board or heavy paper stock and covered with cloth and connected to the back by flexible material, such as thin leather, which is extended across and around the back and forwardly for a short distance on the adjacent portions of the cover, the book having comparatively deep grooves at its sides near the back at the hinge lines; and the leather or flexible hinge-constituting material at the upper and lower edges of the book at the ends of the grooves,—termed the heads of the book,—is inwardly deflected or bent; and as heretofore accomplished this inward bending or deflection of flexible material at the heads has been by the employment of a comparatively stout cord which has been arranged to longitudinally encircle a book in the opposite hinge grooves thereof, the intermediate part of such cord crossing from cover to cover at one end, while other portions crossing at the other end are so tightly tied as to crowd the hinge-forming material at the heads inwardly. This has usually been performed while the material is more or less moist, and has required not only the expenditure of considerable time in tying the books up, but also thereafter the expenditure of further time in untying.

The present invention relates to means for imparting to the books the inward bending of the flexible hinge-constituting material at the heads in an expeditious, satisfactory and workmanlike manner. And the invention consists in the parts or appliances as hereinafter described in conjunction with the accompanying drawings and set forth in the claims.

In the drawings:—Figure 1 is substantially a plan view of the device with a book in its place thereon, to be operated on thereby. Fig. 2 is an elevation of the device, the back of the book being shown. Fig. 3 is a perspective view showing one end portion of the device with the corresponding end portion of a book in place thereon. Fig. 4 is a vertical cross section on line 4—4, Fig. 2, the relative position of the book being indicated by dotted lines. Fig. 5 is a perspective view of important components of the device which may be employed without being necessarily attached to the supporting board shown in the previous figures.

The device comprises, as most generally employed, a board A having ribs *b b* longitudinally provided thereon, at its opposite sides at equal distances from its edge; and the board has on each side a pair of members B B which are located at different points along the length of said ribs. The ribs may be formed as integral parts of the board or secured permanently thereto, or they may be detachably supported thereon; and the said members B B are made wider than the ribs and extend beyond the same, in directions perpendicular to the faces of the board. Said members have noses *d* at their inwardly facing ends constituted by the opposite beveled surfaces 10, 10, which meet at the apex lines 12 which constitute the salient portions or points of the noses, such points or apex lines 12 receding from the bases toward the backs of the members. In the utilization of these appliances in which the nose provided members B B which are at the same side of the board are in separation approximately corresponding to the length of a book to be operated upon, a book is laid sidewise on the board with its hinge groove portion receiving therein the rib while the noses of the members B B near the opposite ends on the upper side of the board inwardly crowd the flexible material at the heads as indicated at *x* in the drawings. Another board similarly equipped is then laid on the top of the book with its members B B downward, and another book is laid on the top of the second board,— boards and books being alternated one with another until a suitable stack is produced which is placed in a press and left for such time as sufficient for the inwardly bent heads of the books to become set, whereupon the stack is removed from the press and the books and boards are separated from each other.

In some cases the boards, with strips *b* to make the ribs, together with the nose-provided members are all rigidly and permanently united, such nose-provided members

having positions with fixed extents of separation; and these appliances are available with the utmost convenience where a very large number of books of the same length are to be treated as above described; but where it may be desired that the appliances may be utilized for operations on small quantities, each of different lengths, of books, the nose-provided blocks or members B B are advantageously made so that at least one thereof is adjustable relatively to the other or so that they are individually adjustable; and in Figs. 1, 2 and 3, the blocks or members B B in pairs at the opposite sides of the board are represented as formed with base grooves 14, which fit the rib strips *b*, and such pair of members at the opposite sides of the board are united by a bar *f* which is rigidly connected thereto and through which the binding screw *g* is passed for an engagement against the edge of the board A. By loosening the screw the pair of blocks may be slid along the board to be suitably near or far from the opposite set of such blocks.

The nose-provided members B may be carried on the strips *b* as represented in Fig. 5,—without necessarily having the strips attached on boards, it being practicable to lay them in their proper positions in relation to alternate boards and backs to be operated on.

In a book bindery where large numbers of books are being manufactured, the shaping of the heads of the books by the employment of the devices which constitute the present invention may be performed not only much more quickly, but much more inexpensively than was formerly the case where hand operations using cords or strings were carried out.

I claim:—

1. A tool for shaping book covers comprising a pair of members, opposed to each other in a longitudinal line, having noses at their ends toward each other that recede relatively to the lengths of such members from their bases toward their backs, and means for immovably holding said members separated approximately corresponding to the length of a book to be operated upon.

2. A tool for shaping book covers, comprising a strip or bar and a pair of members, located on and at different points in the length of, the strip, having noses at their ends toward each other that recede relatively to their lengths, from their bases toward their backs.

3. A tool for shaping book covers comprising a board having a rib extending along a side thereof, and a pair of members located on and at different points in the length of said strip, wider than the latter and upstanding above the same, having noses at their inwardly facing ends which recede or are beveled from their bases toward their backs.

4. A tool for shaping book covers, comprising a board having a rib extending along a side thereof, and a pair of members located on and at different points in the length of said strip, wider than the latter and upstanding above the same, having noses at their inwardly facing ends which recede or are beveled from their bases toward their backs, one of said nose-provided members being adjustable along the strip toward and away from the other member.

5. A tool for shaping book covers, comprising a board having ribs extending along opposite sides thereof at equal distances from the edge of the board and double pairs of members located on and at different points in the length of said ribs which are wider than the latter and extend transversely from the surface of the board beyond said ribs, having noses at their inwardly facing ends which recede from their bases toward their backs,—two of such members which are at opposite sides of the board having a bar which rigidly unites them, said members being adjustable longitudinally on the board and its opposite ribs, and means for confining them at required points along the length of the board.

6. A tool for shaping book covers, comprising a board having longitudinally extending ribs at its opposite sides at equal distances from its edge, a pair of members located on and at different points of said ribs, wider than the latter and extending above the same, having noses at their inwardly facing ends which recede from their bases toward their backs, and one of said members having a groove in its base whereby it is slidably engaged with said rib, and means for confining said slidably engaged member in its position of adjustment along the length of the rib.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

GILBERT D. STEERE.

Witnesses:
WM. S. BELLOWS,
G. R. DRISCOLL.