

(No Model.)

2 Sheets—Sheet 1

H. M. UNDERWOOD.

LETTER COPYING BOOK.

No. 385,433.

Patented July 3, 1888.

Fig. 1.

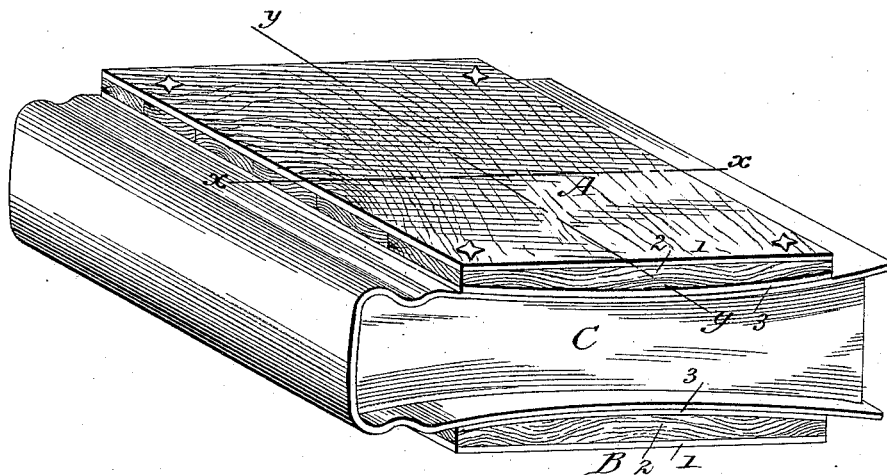
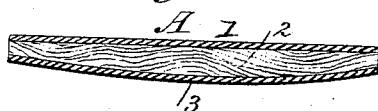


Fig. 2.



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Fig. 3.

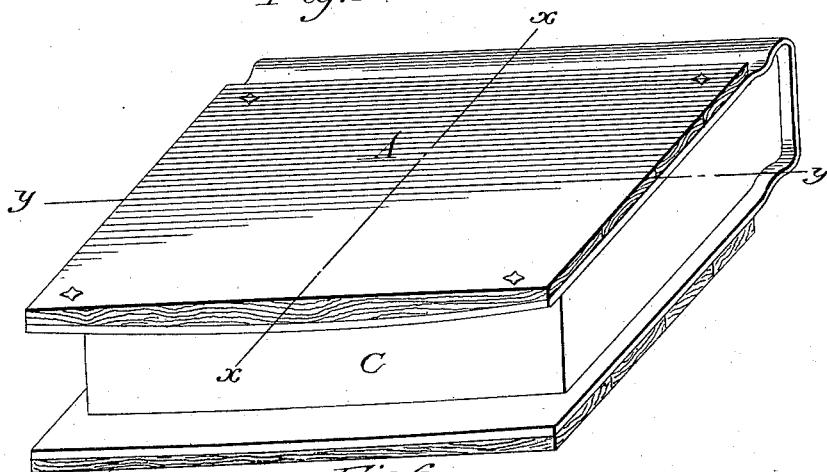


Fig. 6.

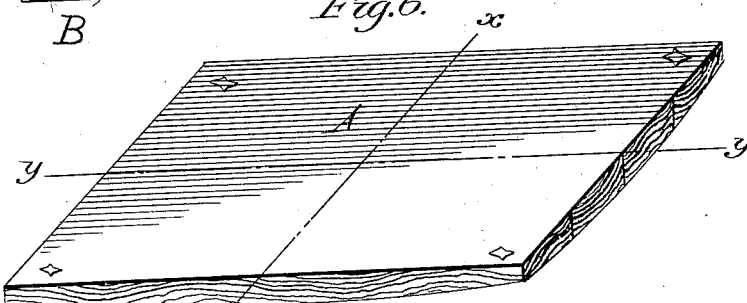


Fig. 4.

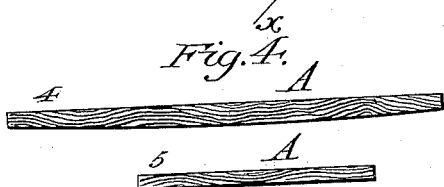


Fig. 5.

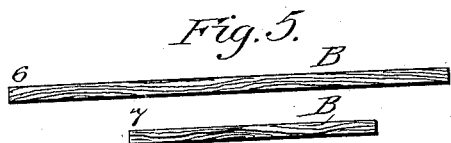


Fig. 7.

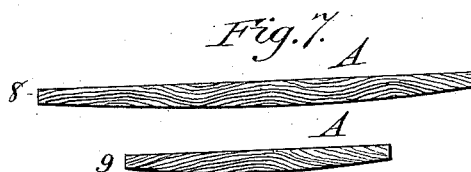
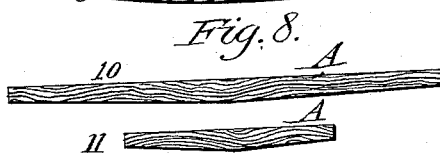


Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY M. UNDERWOOD, OF WAUKEGAN, ILLINOIS.

LETTER-COPYING BOOK.

SPECIFICATION forming part of Letters Patent No. 385,433, dated July 3, 1888.

Application filed May 19, 1887. Serial No. 238,734. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. UNDERWOOD, a citizen of the United States, residing at Waukegan, in the county of Lake and State of Illinois, have invented a new and useful Letter-Copying Book, of which the following is a specification, by means of which and the accompanying drawings others skilled in the art to which this invention pertains may be able to make and use the same.

My invention relates to improvements in letter-copying books, whereby an ordinary letter-book, such as is common in commercial usage, shall have combined with it neat, light, and effective means for obtaining copies for preservation of written and printed matter, and the use of the heavy, stationary, and costly screw or other press may be dispensed with.

My invention consists in providing an ordinary letter-copying book with rigid supplementary covers for one or both sides, which covers on the side adjacent to the leaves of the book when closed shall be slightly raised at or near their center, as being slightly bent or curved outward, or as having a slightly-conical form or a convex form, for reasons as will hereinafter be more fully set forth and explained.

The accompanying drawings illustrate my invention, in which—

Figure 1 shows in perspective an ordinary letter-copying book having attached to each of its covers rigid supplementary covers, and Fig. 2 shows an enlarged section of the supplementary cover A on the line *xx* of Fig. 1. Figs. 3, 4, 5, 6, 7, and 8 illustrate certain modifications, and in all the figures like letters and figures of reference designate like parts.

A and B represent rigid supplementary covers attached by screws to the covers of the letter-copying book C. The faces of covers A and B adjacent to the inclosed book are slightly raised at the center, curving outward each toward the other, and the book-covers being attached thereto, being flexible, conform to this shape.

In order that the covers A and B shall retain the desired form of face, they are each constructed with two layers of wood veneer, 1 and 3, inclosing between them other thicker wood, 2, in strips, the general direction of the grain

of the latter being in the direction of the curve it is intended to preserve and at about right angles to the line of the grain of the layers of veneer, 1 and 3. All three layers 1, 2, and 3 are firmly glued together in each cover A and B.

For convenience it is preferred to make covers of the form desired and to attach them to the ordinary covers of the book, there to remain while the same is in daily use. When the book is filled, these supplementary covers can be removed, leaving the book in a well-preserved condition. If desired, however, they can be incorporated into the cover proper of the book when the book is made, and would then remain with it.

In operation oiled board, blotting-paper, and the sheet to be copied are placed in the book, a leaf of which has been dampened, and the book is closed, as is of common usage with the ordinary process. The book is then laid flat upon the floor, when the cover A will perform the function of the platen and the cover B the function of the bed-plate of a press. A person who may stand upon cover A will have his entire weight concentrated upon a very small area of the surface of the sheet being copied at the line or point where the face of cover A most nearly approaches the face of cover B, and by slightly shifting his weight from one foot to the other he can by a rocking motion concentrate his entire weight upon each and every part in succession and at frequent intervals. In practice this is found to accomplish the desired effect in less time than it is customary to allow a like sheet to remain under a screw-press, for the apparent reason that much of the intervening air and surplus moisture is driven from the center outward, and the ink rendered solvent is absorbed by close and frequent contact with the leaf of the book.

I do not confine myself to the special arrangement of these covers as shown in Fig. 1, as it is evident that the same result will be obtained if the form of section shown in Fig. 2, as that of *xx*, Fig. 1, be used instead in the direction of *yy*, or as more particularly shown in Fig. 3 and in Fig. 4, in which 4 is a section on line *yy*, Fig. 3, and 5 is a section on line *xx*, Fig. 3; or the form of section shown in Fig. 2 can be used in the direction of both *xx*

and *y y* to form a convex face, as more fully shown in the supplementary cover A, Fig. 6, and the sectional views 8 and 9, Fig. 7, which show sections of Fig. 6 on the lines *y y* and *x x*, respectively; or, again, such face might be slightly conical, as is shown by Fig. 6 and the sectional views 10 and 11, Fig. 8, on the lines *y y* and *x x*, respectively, of Fig. 6, Fig. 6 being equally applicable to show either a convex or a slightly-conical face for the supplementary cover A. Again, cover A might have an outwardly-curved face, a convex face, or a slightly-conical face, while cover B could have either form indiscriminately or a plane face, which latter is shown by B, Fig. 3, and the central cross-sections thereof by 6 and 7, Fig. 5; or cover B could be dispensed with, when the floor would furnish a plane face, in which case it would only be necessary that the raised face of cover A should be more prominent than when it divides the extent of its prominence with its opposing cover, B.

I am aware that rollers have heretofore been used for this purpose, and I do not claim such as my invention.

I am also aware that rigid curved-bed and platen plates have heretofore been used in letter-copying presses; but such were so arranged as to compress the book between concave and convex faces each parallel with the other.

I am also aware that rigid covers have heretofore been applied to copying-books; but such covers have presented parallel plane faces to the closed book contained between them; and, also, I am aware that flexible curved plates have been used to compress a letter-copying book, which curved plates in the operation of

pressing the book become approximately straight plane faces with parallel planes. Bed and platen plates with planes the one parallel to the other will not serve my purpose, and I do not claim any such as above described; but

What I do claim, and desire to secure by Letters Patent, is fully stated in the following claims, viz:

1. A rocking platen for letter-copying presses, consisting of the rigid supplementary cover A, having a face adjacent to the closed book C slightly raised from a plane at or near its center, in combination with the letter-copying book C and a bed-plate having a plane face adjacent to the book C, substantially as shown and described, and for the purpose specified.

2. The rigid supplementary covers A and B, removably attached to the letter-copying book C, and having the faces of each adjacent to the closed book and facing toward its fellow cover slightly raised from a plane at or near its center, substantially as and for the purpose shown and described.

3. A letter-copying book provided with rigid supplementary covers, which covers adjacent to the closed book shall present faces slightly raised from a plane at or near their centers as being bent or curved outward, or as being convex or being slightly conical, for the purpose substantially as described and shown.

HENRY M. UNDERWOOD.

Witnesses:

O. S. LINCOLN.

JAMES MOSHER, Jr.