

(No Model.)

J. W. LEWIS & J. M. IRWIN.
BOOKBINDING.

No. 506,125.

Patented Oct. 3, 1893.

Fig. 1.

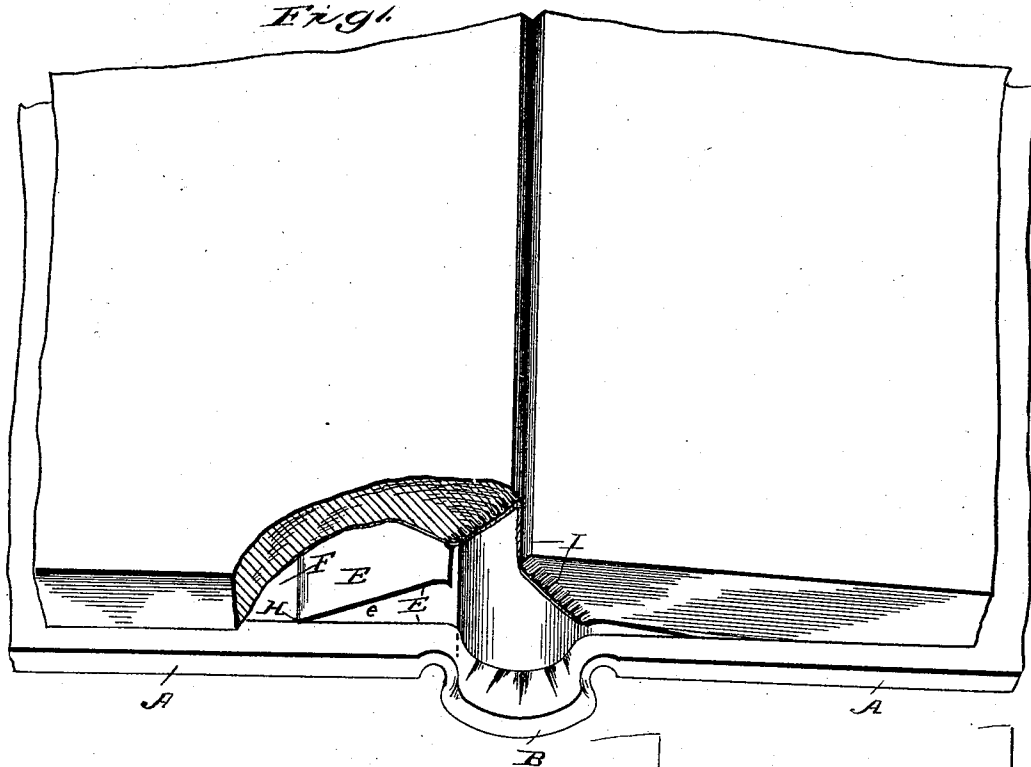


Fig. 2.

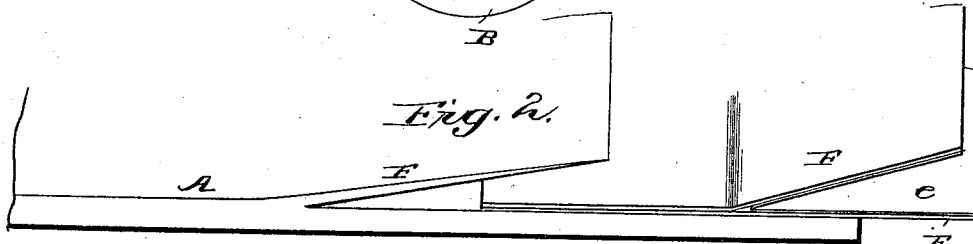
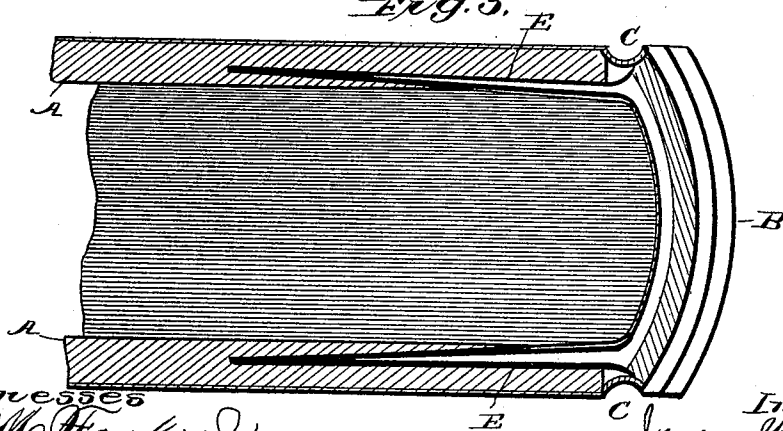


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. LEWIS AND JAMES M. IRWIN, OF QUINCY, ILLINOIS.

BOOKBINDING.

SPECIFICATION forming part of Letters Patent No. 506,125, dated October 3, 1893.

Application filed May 3, 1893. Serial No. 472,924. (No model.)

To all whom it may concern:

Be it known that we, JAMES W. LEWIS and JAMES M. IRWIN, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Bookbinding; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention has for its object to provide an improved binding, particularly, though not exclusively applicable to blank books, ledgers and other books of a heavy character, whereby they may be opened out flat without straining or injuring the binding in the least.

With these objects in view, the invention may be said to consist in providing a book with the usual stiff covers and spring back and connecting the signatures or sections which have been previously united, to the said stiff covers by wide yielding connecting pieces which are joined to the covers some distance above the joint between the covers and spring back.

Further, the invention consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described and pointed out particularly in the appended claims.

Referring to the accompanying drawings: Figure 1 is a perspective view of a book with portions broken away to illustrate the invention. Fig. 2 is a detail perspective illustrating the manner of uniting the parts. Fig. 3 is a sectional view through the back of a book formed in accordance with this invention.

Similar letters of reference in the several figures indicate the same parts.

In order that the advantages and differences between a book bound in accordance with our present invention and those bound in the ordinary manner, may be more clearly comprehended, we will first describe the completed book and then the method of forming and uniting the parts.

Referring now particularly to Fig. 1, it will be seen that the usual heavy stiff sides or covers A are provided for the book, extending up close to the back B and united thereto by the usual narrow flexible hinge portion C.

Thus the exterior of the book presents the ordinary appearance when opened or closed.

The body of the book, *i. e.*, the signatures or sections of leaves which are united together in the ordinary manner, instead of being connected to the covers at the rear edges of the latter, as heretofore, are now connected to the covers at points some distance from the rear edges by means of intermediate yielding boards E, which give upward readily when the book is opened out as shown in Fig. 1, without straining the holding threads, covers or bindings in the least.

The yielding boards E, while they allow the body of the book to give upward and open out flat, have sufficient strength to prevent the sagging of the body of the book when stood on edge or held by the covers thereby preserving the shape of the book perfectly.

In binding books in accordance with this invention we first provide and cut the stiff heavy covers of proper size. Then on the inner side of each one some distance from the rear edge, we form a pocket by raising a flap F. Having thus prepared the covers and having united the signatures or sections of leaves in the ordinary manner, with tapes, or equivalents, projecting from each side, we proceed to prepare the yielding boards for uniting the two, for which purpose, we select two pieces of press board of proper thickness to support the weight of the body of the book edgewise but still sufficiently flexible to yield readily as before described. These pieces of press board, lettered E in the drawings are glued or otherwise suitably fastened together throughout their length, and for a portion of their width, preferably corresponding to the depth of the pocket in the cover. Then the free or unglued sides are separated and their adjacent faces covered with a piece of muslin or equivalent fabric *e* pasted in place so as to form a strong union between the two pieces of press-board, at the rear edge of the opening between them, and also to prevent any tearing of the same at any point. The thick edge of the yielding connecting piece as we shall term this part, is now inserted in the pocket, and the under side glued fast to the body of the cover. Then the cover is applied to the book by having the straps uniting and holding the signatures or sections, passed

along and secured to the intermediate yielding boards and preferably having the ends secured beneath the flaps forming the pockets in the covers. The flaps are then pasted down and the whole pressed in the usual manner, care being taken to have the intermediate yielding connecting pieces have their edges extending across the joint of the book, or up to the edge of the first signature or section of the book body. The outside covering is now applied, together with the spring back, which latter is connected with the edge of the stiff unyielding covers in the ordinary manner, *i. e.*, by means of the outer covering which forms the hinge joint between the two. In order to present a finished appearance at top and bottom, and secure greater flexibility of the yielding connecting boards, the edges of the same are slit down at the pocket as shown at H and the edge of the outer cover may pass through the slit between the two sections without being cut at all as will be readily understood from Fig. 1.

The binding it will be seen is simple, cheap and makes a perfect flat opening book, hence is particularly applicable to blank books, ledgers, &c., adapted to be written in.

In some instances, especially where heavy paper is employed, we find it advantageous to crease each leaf of the book back and forth

along the line I, thus insuring the flat opening at every point in the book, with absolutely no tendency of the leaves to close.

Having thus described our invention, what we claim as new is—

1. A book having the stiff covers, spring back with a hinge joint between the rear edges of the covers and back, the united signatures or leaf sections, and the intermediate yielding connecting boards incorporated with the stiff covers some distance above their hinge edges and having their free edges connected with and supporting the signatures or leaf sections, substantially as described.

2. A book having the stiff covers formed with pockets on their inner sides some distance above their rear edges, the spring back united to the rear edges of the covers by hinge joints, the united signatures or leaf sections and the yielding intermediate connecting boards having their forward edges held within the pockets in the covers and their rear free edges connected with and supporting the signatures or leaf sections; substantially as described.

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