

(No Model.)

H. H. & F. H. HOFFMANN.
BLANK BOOK.

No. 464,325.

Patented Dec. 1, 1891.

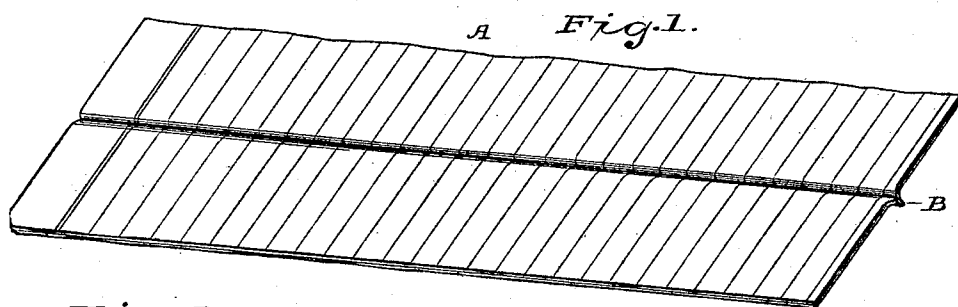


Fig. 2.

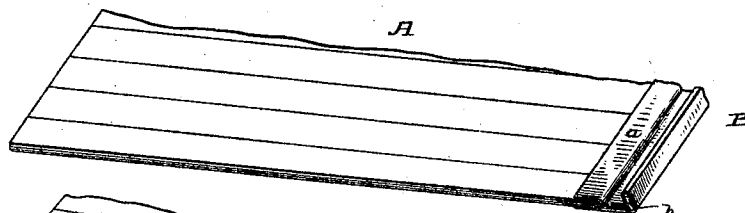


Fig. 3.

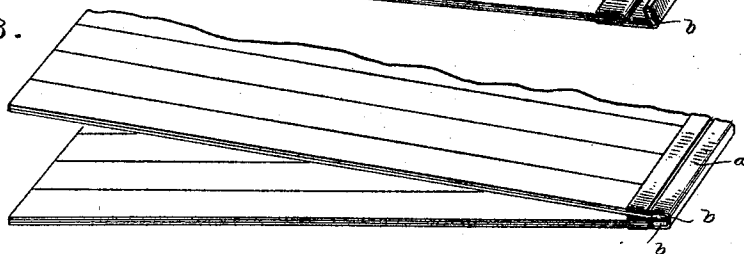


Fig. 4.

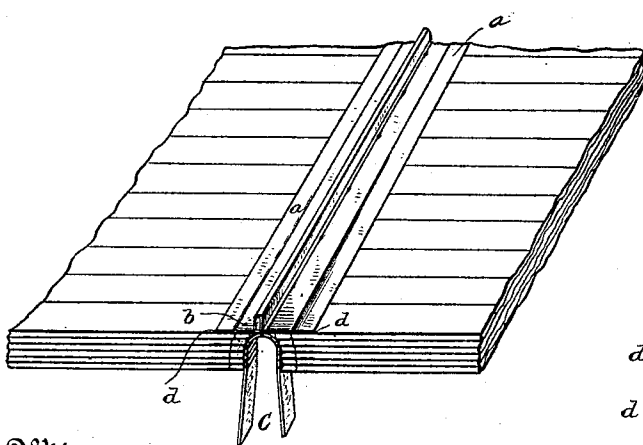


Fig. 5.

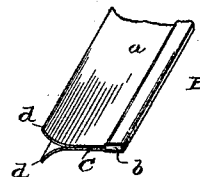
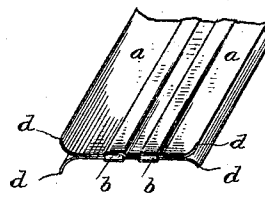


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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BLANK BOOK.

SPECIFICATION forming part of Letters Patent No. 464,325, dated December 1, 1891.

Application filed September 21, 1891. Serial No. 406,611. (No model.)

To all whom it may concern:

Be it known that we, HERMANN H. HOFFMANN and FRANK H. HOFFMANN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Blank Books, of which the following is a description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to certain new and useful improvements in books, the same being especially adapted for blank books.

Said invention relates particularly to the manner of attaching the leaves or pages to the backing, so that when the book is opened the leaves or pages will lie flat.

Heretofore a number of flat-opening books have been devised, some comprising a flexible guard or hinge between the signatures and the back of the book and others having a stiff or non-flexible guard. In all of these, however, the sections or signature, composed of a number of sheets of paper laid one on top of the other and folded in the center, are sewed through said central fold to the guard or filling piece, thereby increasing to some extent the cost of the book and putting considerable strain upon the thread and rendering the book liable to break apart between the sections.

The object of our invention is to provide a flat-opening book in which the liability of the breaking apart between the sections is reduced to a minimum and in which the thread with which the book is sewed is released from all strain, whereby is secured a lasting binding at a low cost.

To accomplish these objects our invention comprises, primarily, a blank book composed of a number of sections or signatures, each stitched separately through the central fold, combined with a suitable hinge or guard secured to the backing and having a suitable filling-piece, said hinge being secured on both exterior sides of the section at the fold.

The invention comprises, secondly, a blank book composed of a number of sections or signatures each stitched separately through the central fold, combined with a suitable hinge or guard having a filling-piece and secured at one end to both exterior sides of a section

at the fold, said filler being adapted to fold over, the hinge being secured at the fold of the filler to a number of sewing-bands adapted to be attached to the backing of the book.

The invention finally comprises certain details of construction and arrangements of parts, all as hereinafter described, and referred to in the appended claims.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a section or signature. Fig. 2 is a view of a section having a single hinge. Fig. 3 is a view of a double section provided with the double hinge. Fig. 4 is a view of a number of sections joined to the sewing-bands and ready to be put in a book. Figs. 5 and 6 are details of the hinges.

In these drawings, A represents a section or signature. This is composed of a number of sheets of paper laid one on top of the other and arranged to fold in the center. Through the fold is passed a number of stitches for the purpose of holding together the leaves or sheets, so as to make each section or signature an entirety by itself.

B represents as a whole the hinge or guard to which the signature or section is attached and which forms the medium through which it is attached to the backing of the book. When the book is composed of a number of single sections, the form of hinge shown in Fig. 5 is used. This consists of a strip *a* of linen, muslin, or other fabric of suitable width and length, to which is attached, to extend an equal distance on both sides of the center of the strip, a strip of pasteboard or other suitable material *b* the thickness of the section and forming a filler. The strip of fabric is then folded in the center over the filler and secured thereto and the two wings or parts of the fabric secured together at *c*, but leaving the two ends *d d*, between which the section or signature A is secured by being glued on its exterior sides to the inner sides of the ends *d d* of the strip.

It will be readily understood that instead of having a single strip of fabric folded over the filler, two strips attached on either side of the filler may be used; but for a single section the construction just described is somewhat preferable. The book may be entirely composed of single sections or partly of sin-

gle and partly of double sections—as, for instance, where an odd number of sections are used. After the hinge has been attached to the section the filler *b* is folded over toward the section and sewed at the fold or bend to bands or parchments C, as in ordinary blank books. The parts are then secured to the book-binding in the usual way. When double sections are used, it is preferred to construct the hinge or guard as shown in Fig. 6. In this figure the hinge B is composed of two filling-pieces *b* placed side by side but not abutting, so that one can fold over on the other. Upon the top faces of these fillers or strips of paste-board or similar material is pasted or otherwise secured a strip *a* of linen, muslin, or other suitable fabric, and upon the other side of the filling-pieces a second piece of fabric of the same width as the first is secured, the ends *d* being left free for the insertion between and securing to them of the signatures or sections A, as above described. The strips of fabric are then folded in the center—that is, between the filling-pieces—thus making a double section, as shown in Fig. 3, which double section is secured to the bands or parchments C by sewing through the fold, and the operation of binding is then completed in the usual way.

It will be understood that the fillers need not necessarily be pasted to the strips of fabric, but that paper stubs might be sewed between the sections, thus answering the same purpose.

It will be seen that by our construction a book may be made up of a number of single or double sections, or both, and by making the signatures separately and then by stitching through the center and then gluing or pasting the same on the exterior sides of the fold to a hinge having a filling-piece, and then sewing through the fold of the hinge adjacent to the filler to the bands or parchments, we make a book at comparatively slight cost, in which the sewing-thread is released from

strain, and which is not likely to break apart between the sections or signatures.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A blank book comprising a number of sections or signatures, each stitched separately through the central fold, combined with a suitable hinge or guard secured to the backing and having a suitable filling-piece, said hinge being attached on both exterior sides of the section at the fold, substantially as described.

2. A blank book comprising a number of sections or signatures, each section stitched separately through the central fold, combined with a suitable hinge or guard having a filling-piece and secured to both exterior sides of a section at the fold, said filler being adapted to fold over, and a plurality of sewing-bands adapted to be attached to the back of the book and secured to said hinge by a line of stitching through the fold of the filler, substantially as described.

3. A hinge or guard for use in book-binding, comprising a strip or strips of fabric having end pieces or parts, as *d*, a filling-piece secured to said strip or strips of fabric, said end pieces *d* being adapted to receive between them the sections or signatures, substantially as described.

4. The herein-described blank book composed of sections or signatures, as A, and hinges or guards, each comprising two layers of fabric, a filling-piece secured between said layers, said sections or signatures being also secured between the layers of fabric, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

HERMANN H. HOFFMANN.

FRANK H. HOFFMANN.

Witnesses:

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R. J. CHAMPLIN.