

G. H. REYNOLDS.
MANUFACTURE OF BOOKS.

No. 177,354.

Patented May 16, 1876.

Fig. 1

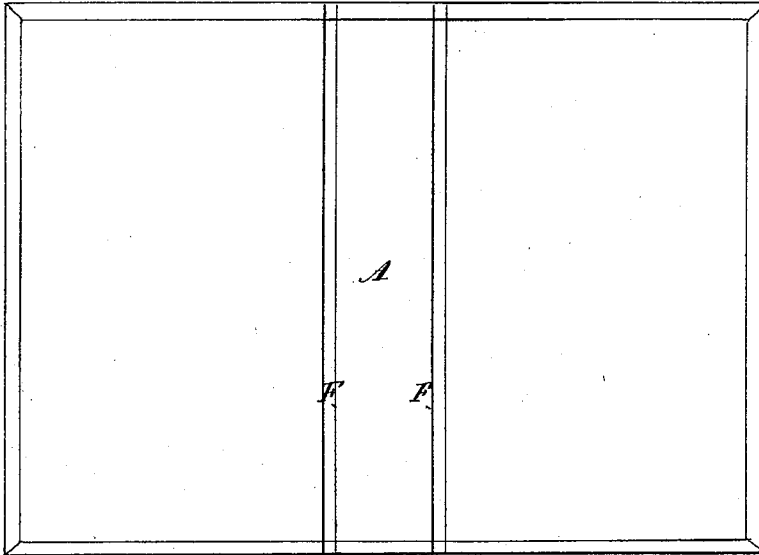


Fig. 3

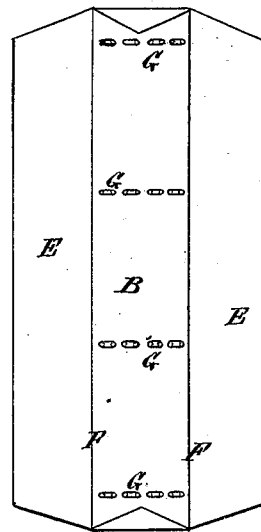


Fig. 2

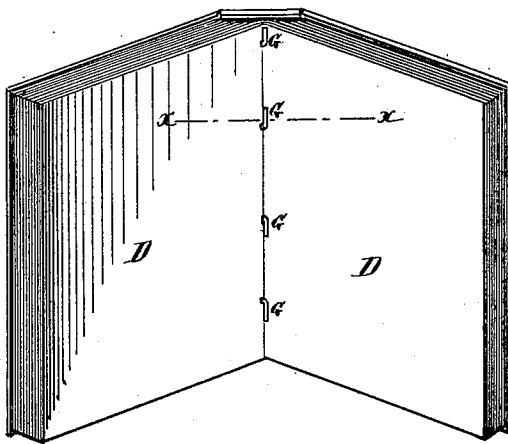


Fig. 4

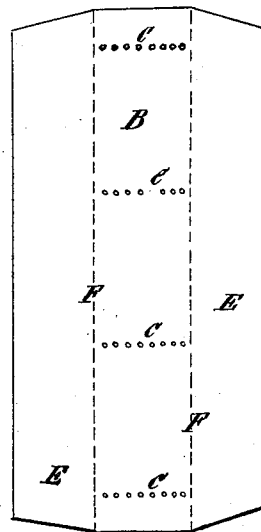
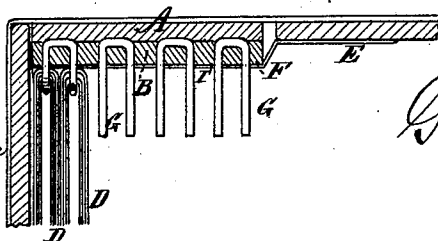


Fig. 5



WITNESSES.

P. O. Wall.

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GEORGE H. REYNOLDS, OF NEW YORK, N. Y., ASSIGNOR TO ROBERT BURNET, OF EAST ORANGE, NEW JERSEY.

IMPROVEMENT IN THE MANUFACTURE OF BOOKS.

Specification forming part of Letters Patent No. **177,354**, dated May 16, 1876; application filed July 22, 1875.

To all whom it may concern:

Be it known that I, GEORGE H. REYNOLDS, of the city, county, and State of New York, have invented a new and useful Improvement in the Manufacture of Books; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Prior to my invention, all books had their filling or sections of paper secured by sewing with thread or cord, and when it is desired to remove a sheet or section from the book, it can only be done by cutting the thread or tearing the section from the book, thus incurring the danger of loosening the remaining sections, and the destruction of the book; besides, the manufacture of such books is always attended with great expense.

Now, it is the object of my invention to manufacture books that shall be stronger, more durable, and much less expensive than a sewed book, and that shall possess the additional advantage of enabling any person to remove a single sheet or section, or any number of sections of paper from the book, and to substitute at pleasure new sections for those removed, without the slightest injury to the remaining sections, or to the case; to which end my invention consists in the use of a back having wires passing through it, and projecting from its surface, which wires pass through the fold of the sheets or sections of paper, and are bent down against the paper so as to lock the sections securely to the back.

My improved book is peculiarly useful for invoice, scrap, sample, and all books where pasting of miscellaneous matter in the book is the chief object required.

In the accompanying plate of drawings, Figure 1 represents the case of the book. Fig. 2 represents the finished book with one of its sections laid open at the fold, showing the method of locking the sections to the back. Fig. 3 is a back view of wire-lock back, showing the method of securing the wire-staples to the back. Fig. 4 is a front view of the back, showing the perforations through which the wires are passed. Fig. 5 is a cross-section of Fig. 2 through the line *x x*, showing two of

the sections of paper locked to the back, and showing projecting staple-wires ready for locking the remaining sections of paper to the back.

Similar letters of reference indicate corresponding parts.

A is the back of the case, made of binders' board, of a corresponding width with that in the covers. B is a board, of the same width as the board in the back of the case, as shown by the lines F F, Figs. 1, 3, and 4. This board I glue over on one side, and cover it with a piece of binders' cloth, which has been previously cut so as to extend about one and a quarter inch over the sides of the board, as shown at E E, Figs. 3 and 4. I then make lines of perforations in the board, as shown at C, Fig. 4, and I then take wire-staples and press the ends through the perforations, and after all of the holes are filled with the staples, I hammer them down until all of them are brought flush with the back of the board, as shown at G, Fig. 3, leaving the ends of the staples projecting from the surface of the board that has been covered with the binders' cloth. The wire-lock back being thus finished, it is ready to be attached to the case, which is done by gluing the board at the back, and placing it in the case in contact with the back A, so that the side lines F shall be in exact line. I then place small blocks between and extending above the rows of projecting wires, and I apply pressure to the blocks, so as to force the wire-lock back in exact contact with the back of the case. I then proceed to paste down the projecting sides of the binders' cloth to the joints of the covers, and then attach the lining. The case is then ready to receive the sections of paper. I then use a saw and cut the sections on the back through the fold, so that the saw-cuts shall correspond with the lines of wire in the back. The sections should be cut deep enough to allow the staple wires to pass through freely. I then take the first section and open it in the center, and through the saw-cuts I pass the first line of wires running the length of the book. I then bend the wires down in reverse directions until they are brought in contact with the paper, and I so proceed until all of the sections are locked to

the back. D D, Fig. 2, show the sides of one of the sections, and G shows the staple wires passed through the saw-cuts in the fold of the section, and the ends of the staple wires bent down locking the section to the back.

I am enabled to manufacture my book at a cost not exceeding fifty per cent. of that required to manufacture a sewed book.

I claim, and desire to secure by Letters Patent—

1. The wire-lock back B, having side extensions E E, rows of perforations C C C C through the body of the back, with staple wires G G G G passing through the perforations, and projecting from the surface of the back, and secured in their positions by the bent ends of the staples being in contact with the reverse side of the back, substantially as shown and for the purpose described.

2. The new article of manufacture, a book constructed with an outer case, having a back, A, and an inner wire-lock back, B, with side extensions E E, rows of perforations C C C C, wires G G G G passing through perforations and extending from the surface of the back and passing through the folds of the sheets or sections D D, with the ends of the wires bent down against the inner folds of the sheets or sections, locking them securely to the back, substantially as described.

I have hereunto set my hand this 20th day of July, 1875.

GEORGE H. REYNOLDS.

Witnesses:

P. O'NEILL,
EDWARD J. DENIN.