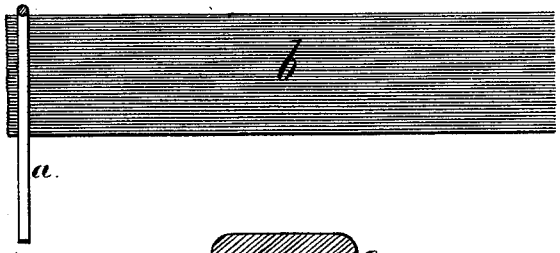
G. P. B. HOYT.

BINDING BOOKS.

No. 188,016. Patented March 6, 1877.

Fig. 1.



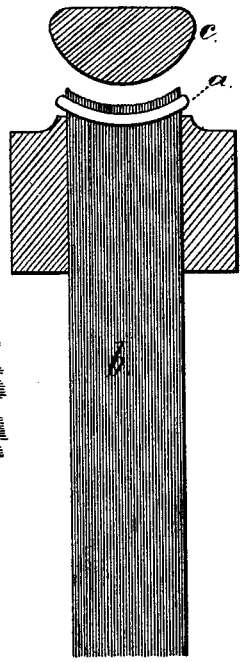


Fig. 2.

Fig. 4.

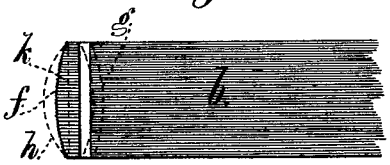
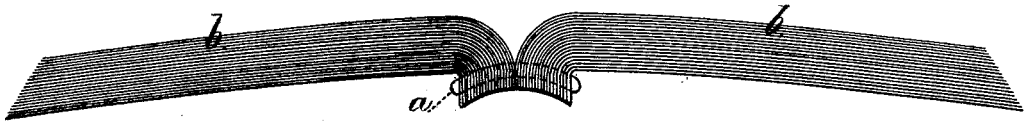


Fig. 3.



Witnesses
Geo. D. Pinckney
Chas. H. Smith

Inventor.
Gabriel P. B. Hoyt.
per Lemuel W. Serrell
Atty.

UNITED STATES PATENT OFFICE.

GABRIEL P. B. HOYT, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN BINDING BOOKS.

Specification forming part of Letters Patent No. **188,016**, dated March 6, 1877; application filed January 25, 1877.

To all whom it may concern:

Be it known that I, GABRIEL P. B. HOYT, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Binding Books, of which the following is a specification:

Books have been bound with wire staples passed through the sheets near the back edges and turned over or clinched at the ends, and curved wire pins have been inserted through loose sheets near the back edges, and retained by a spring-back, to clip the sheets at their outer back edges.

My invention relates to a method of applying the wire binding to books, whereby the book is held much more firmly at the back than heretofore, and the leaves can be opened to the back with as much freedom, or nearly so, as the ordinary sewed books.

In the drawing, Figure 1 is a section representing the first stage in the binding operation. Fig. 2 is a section representing the mode of bending the back of the book, and Fig. 3 shows the book as opened.

The sheets or leaves of paper are laid together in the manner usual in book-binding, and at the places required for the binding-wires there are punctures or perforations, preferably drilled, and then the staple-shaped binding-wires are inserted while straight. These wires *a* are shown as inserted through the sheets *b* in Fig. 1. The ends of the wires are next bent over parallel to the back edges of the sheets, so as to hold the sheets together firmly. The book is then placed in a binder's press or other clamp, with the back upwardly and the center portions of the staple-wires *a* and the ends resting upon the top surfaces of the clamp, or nearly so, and pressure is applied sufficiently to hold the book in the clamp. An instrument or bar, such as shown at *c*, is now laid upon the back of the book and pressure applied by blows from a hammer or other instrument until the back of the book assumes the desired shape, and the wires are thereby bent to an arc of a circle, the center of which is behind the back of the book. This operation tightens the wires holding the sheets more firmly than before, and at the same time the back folds of the sheets are rendered pliant, and in a condition similar to that resulting from the hammering of the back of the book in ordinary binding.

The result of this method of binding is that volumes of greater or less size can be reliably bound without resorting to sewing, and the sheets will lie over on each side when the book is open, and allow access to the inner portions of the sheets, as well as hand-sewed books, because the wires are in the arc of a circle, to allow the leaves to fall over freely, as illustrated in Fig. 3. I remark that the wires may be round or flat or formed of strips of sheet metal.

If it is desired to have the book-back either convex or flat, the holes for the wires are bored when the sheets are laid together with the back convex, as at *f*, Fig. 4, after which the wires are bent into the arc of a circle, as at *g*, and the back and edges of the book will be square, the dotted line *k* representing the back of the book; but if the margin of the sheets will allow of t .e same, the back may be convexed to the dotted line *h*, and the wires inserted and afterward bent as aforesaid, the back being forced by a concave instrument to the shape shown by the full line at *f*, so as to leave the back in a convex form.

The wire may be bent into the arc of a circle before the ends are clinched or afterward.

I claim as my invention—

The method herein specified of binding books, consisting in inserting the binding-wires straight, and, near the back edge of the book, clinching such wires, and bending the wires into the arc of a circle, for the purposes and as set forth.

Signed by me this 22d day of January, A. D. 1877.

G. P. B. HOYT.

Witnesses:
GEO. D. WALKER,
GEO. T. PINCKNEY.