(No Model.)

G. G. BURTON.

BOOK BINDER.

No. 462,426. Patented Nov. 3, 1891.

Fig 1.

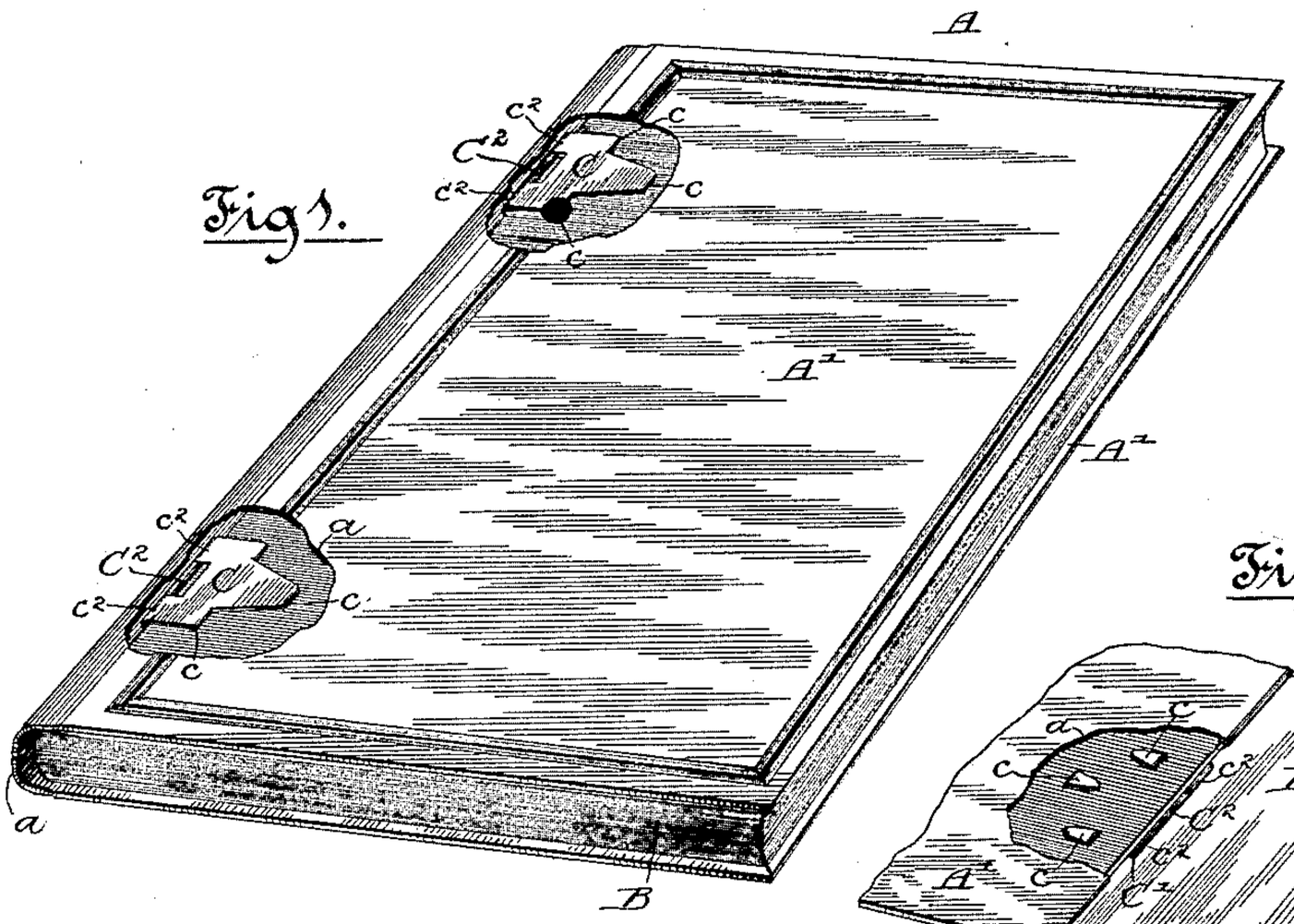

Fig 2.

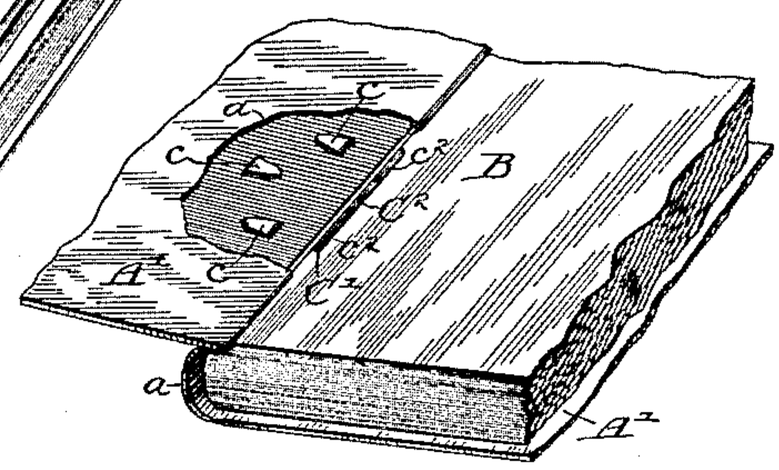

Fig 3.

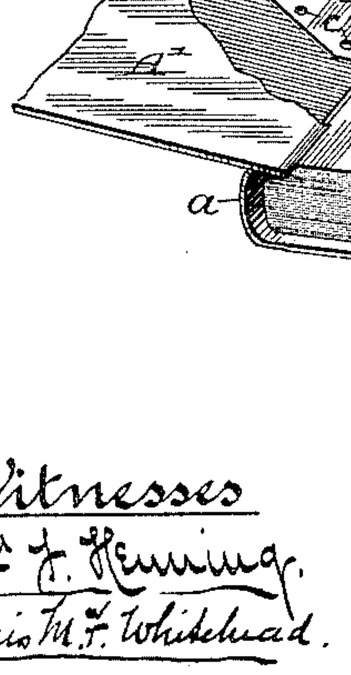

Fig 4.

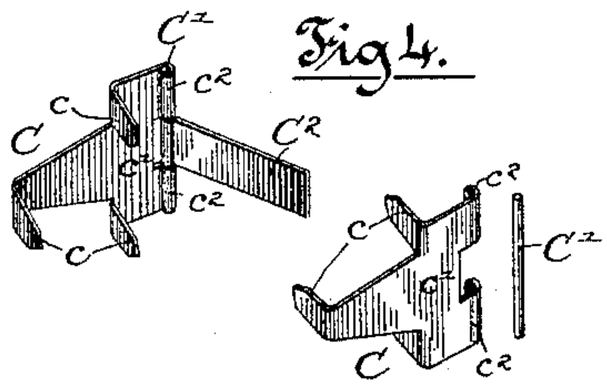

Fig 5.

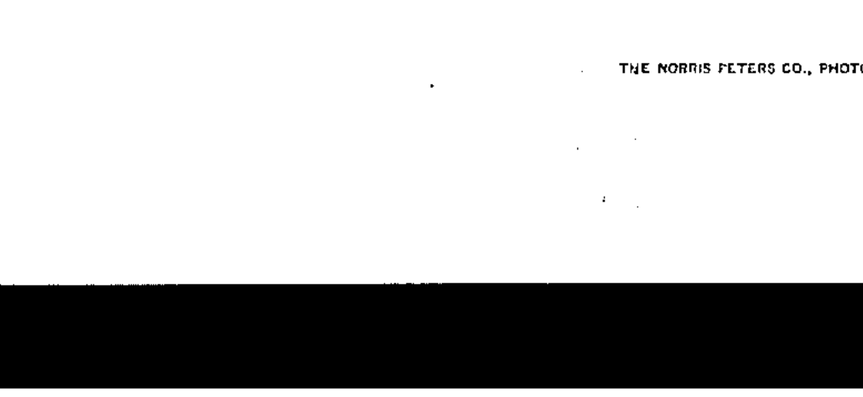

Fig 6.

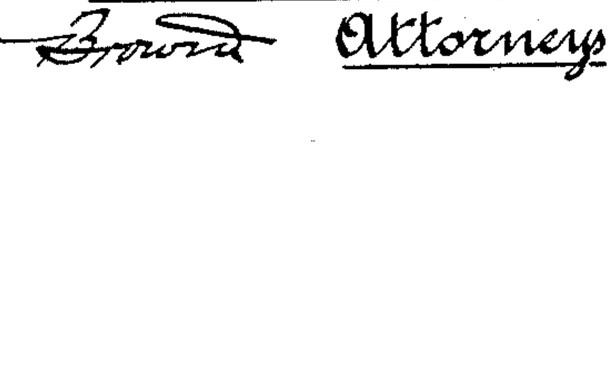

Fig 7.

Witnesses
Wm. F. Fleming.
Louis M. F. Whitehead.

Inventor
Garrett G. Burton
by Dayton, Poole & Brown Attorneys

UNITED STATES PATENT OFFICE.

GARRETT G. BURTON, OF TRENTON, NEBRASKA.

BOOK-BINDER.

SPECIFICATION forming part of Letters Patent No. 462,426, dated November 3, 1891.

Application filed May 6, 1890. Serial No. 350,742. (No model.)

To all whom it may concern:

Be it known that I, GARRETT G. BURTON, of Trenton, in the county of Hitchcock and State of Nebraska, have invented certain new and useful Improvements in Book-Binders; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to devices employed in book-binding for the purpose of fastening the leaves of a book together and for the purpose of securing the lids of a book to the leaves or body thereof to prevent the separation of the two by wear or rough or careless handling.

The invention consists in the employment of a suitable binding-strip which is inserted through the several leaves of the book to unite or bind the leaves together, and which is secured at each end by a hinged joint to a metal plate secured on each lid of the book, which unites the lids or backs firmly with the leaves or body.

The invention will be more readily understood by reference to the accompanying drawings and the appended claims.

Figure 1 is a perspective view of a closed book provided with my invention, with a portion of the outside covering broken away to show the invention. Fig. 2 is a perspective view of a portion of said book, the lid being thrown back. Fig. 3 is a transverse sectional view of the closed book, taken through the metal-hinged binder. Fig. 4 represents the metal-fastening device or binder on the book illustrated in Figs. 1, 2, and 3. Fig. 5 is a perspective view of the inside of a portion of a book, showing a modified method of securing the plate to the lid. Figs. 6 and 7 are perspective views of modified forms of the invention.

Referring to Figs. 1 to 4, inclusive, A represents the book as a whole, A′ A′ the two lids, and *a* any suitable covering. B B are the leaves of the book. C C are triangular-shaped metal plates provided with three bent portions or prongs *c*, as more clearly shown in Fig. 4. The base *c′* is notched centrally and is turned over for the purpose of forming an eye or bearing c^2 for the pintle-pins C′. C^2 is the binding strip or piece of flat metal secured at one end around one of the pintle-pins C′ and adapted to be secured at its other end around the second pintle-pin C′ after said strip C^2 has been passed through the leaves B of the book.

In practice I first secure one of the plates C to one of the lids A′ by passing the prongs *c* through suitable openings in said lid and then clinch said prongs upon the other side thereof, as shown more clearly in Figs. 2 and 3. I have shown three of said prongs *c;* but it is obvious that a greater or lesser number may be employed, the number depending, of course, upon the size of the plate, the weight of the lid of the book, or the fancy of the manufacturer. I then secure the opposite or remaining plate C to the second lid A′ in such position that the two will register with each other when the lids are placed in proper position to cover and bind the book. I then insert the relatively flat and thin metal strip C^2 through the leaves B and secure the ends of said strip to the two pintle-pins C′. It will be understood that when said strip C^2 is thus secured to the two pintle-pins C′ the leaves B are firmly united and the lids A′ are hinged or pivotally secured thereto. If I place the plates C upon the outside of the lids, as shown in Fig. 1, the covering *a*, which may be of any suitable material, such as leather or cloth or paper, is preferably placed upon the lids of the book outside of the plates C, so as to conceal them from view, although in some classes of book-binding, where the plates C are of ornamental pattern, I may expose them to view by placing them on the lids A′ outside of the covering *a*.

In Fig. 5 I have shown the plate C secured to the inside of the lid A′ by means of a rivet c^3. When rivets are employed, of course I dispense with the downwardly-projecting prongs *c* illustrated in Fig. 4. I may find it advisable to use all rivets on the plate C or to use a rivet at one place, together with the downwardly-projecting prong *c*, or I may use one rivet, as at c^3, Fig. 5, and then indent or punch the plate at various places, (see c^4, Fig. 5,) so as to cause a portion of its surface to engage a recess or depression in the adjacent surface of the lid caused by such punch or

indentation. I do not intend to be limited to the precise constructions here described, as other forms may be employed to produce similar results. I have shown in the drawings two of such modified forms as illustrations.

In Fig. 6 I have shown a form of the invention very much stronger, although heavier, than that illustrated in the other figures, consisting of two plates E, united by a bridge *e*, forming a double plate, the two parts of which are passed on opposite sides of the lid A′ of the book and secured thereto. The lid A′ and the double plate E are secured together by means of suitable rivets or rivets and prongs, or indentations, as before explained. In this form of the invention the pintle-pin C′ finds its end bearings in the bridge *e*. The binding-strip C^2 is secured to the pintle-pins, as before explained.

In Fig. 7 I have shown a modification of the binding-strip C^2, consisting of a wire or wires D. The wire D is passed through suitable holes in the leaves B, and the ends are then inserted in the turned portion *d* of the opposite plates C, entering the same at opposite ends and turned so as to form a pivot-pin, as will be readily understood. The turned ends and the part *d* form the hinges.

A book secured by my fastening and hinge device in either of the forms above described may be very cheaply constructed and is permanently bound. Books the leaves of which have been secured together by the ordinary methods, such as by staples or by stitching, and from which the lids have been torn and the leaves themselves separated, may be repaired by the use of my fastening device, which will be found exceptionally strong, light, and durable.

I have shown the binding-strip C^2 as of flat metal and in Fig. 7 as of wire; but I do not intend to be limited to the use of metal, as it will be manifest that various other materials may be used, such as canvas, leather, or the like. I prefer, however, the flat metal strip.

I claim as my invention—

1. A book-binding device comprising two plates, each adapted to be secured to the lid of a book, and a connecting or intermediate part adapted to be inserted through the leaves of the book, said intermediate part being pivotally united at its ends to each of said plates, substantially as described.

2. A book-binding device comprising two metal plates, each adapted to be secured to the lid of a book, and a connecting or intermediate metal part adapted to be inserted through the leaves of the book, said intermediate part being pivotally united at its ends to each of said plates, substantially as described.

3. The book-fastening device comprising two metal plates, as C, each provided with prongs *c*, whereby said plates are each secured to the lid of a book, a connecting or intermediate metal part, as C^2, adapted for insertion through the leaves of a book, and to be hinged at its ends to the plates C, substantially as described.

4. A fastening device for uniting the book-cover with the leaves of a book, consisting of a metal strip or wire passing through the said leaves and holding same together, and a plate secured to the said cover and hinged to the said metal strip or wire, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

GARRETT G. BURTON.

Witnesses:

TAYLOR E. BROWN,

GEORGE W. HIGGINS, Jr.