

J. B. BOYCE.

Book-Clamp.

No. 161,743.

Patented April 6, 1875.

Fig 1

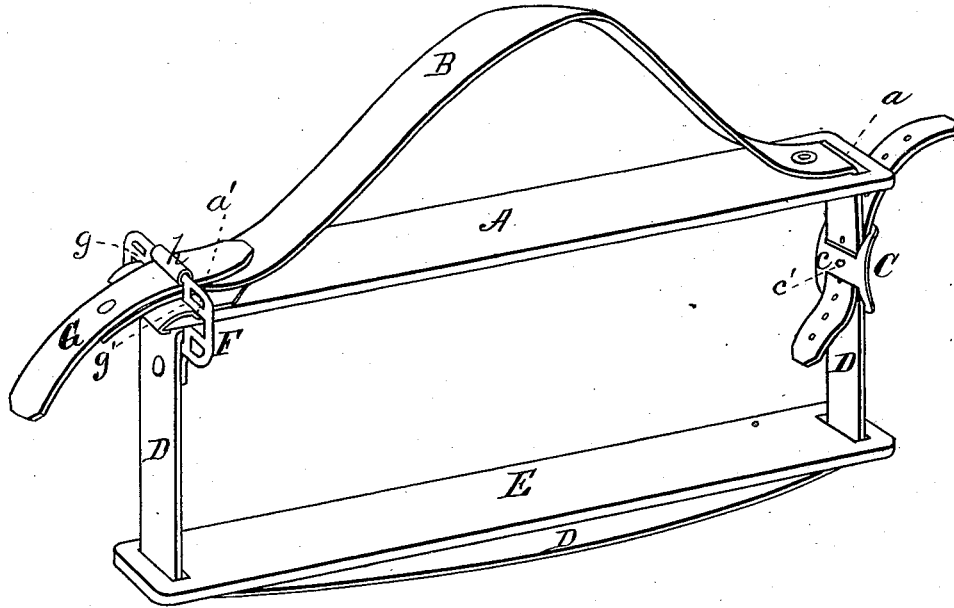
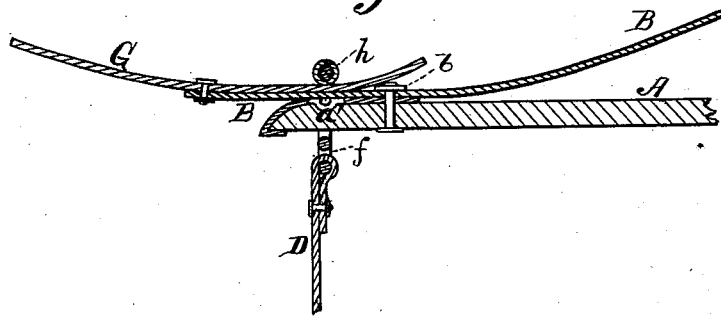


Fig 2



WITNESSES
C. H. Bates
Robert Everett

INVENTOR
Joseph B. Boyce
Chipman Fosmire & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH B. BOYCE, OF LOCKPORT, NEW YORK.

IMPROVEMENT IN BOOK-CLAMPS.

Specification forming part of Letters Patent No. 161,743, dated April 6, 1875; application filed November 23, 1874.

To all whom it may concern:

Be it known that I, JOSEPH B. BOYCE, of Lockport, in the county of Niagara and State of New York, have invented a new and valuable Improvement in Book-Clamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a perspective view of my book-clamp, and Fig. 2 is a sectional detail view of the same.

This invention has relation to clamps which are especially designed for conveniently carrying books to and from school, and the object of the invention is, while having sufficient adaptation to be adjusted to a greater or less number of books, to supply a means whereby the clamp may be instantly loosed, thereby releasing the books, and whereby I am enabled to dispense with the cumbersome and complicated buckles of common use, the handling of which, in cold weather, is so trying to children.

To this end the nature of the invention consists in combining, with the upper board of a book-clamp having one deeply-indented metal-tipped end, a loop or buckle upon the free end of an adjustable strap supporting the lower board, whereby, when the books have been placed on the said board, the loop or buckle may be passed over the indented end of the said upper board, and, being engaged in the groove thereof, will be held to this engagement by the weight of the books in the clamp, as will be hereinafter more fully explained.

In the annexed drawings, A designates the upper board of my improved book-clamp, having through one end a transverse slot, *a*, and in the other a deep transverse groove, *a'*, as shown in Fig. 1. In practice, I prefer to have the grooved end of the said board tipped with sheet metal, and that it should be likewise indented to correspond with and conform to the groove *a'* therein, for the purpose of preventing undue wear thereof, but when I use very hard woods I may dispense with the tipping. B designates a handle-strap, riveted at *b* to the upper board A of the clamp, one end of

which passes through the slot *a* therein to receive a buckle, C, by means of which a strap, D, supporting the lower board E of my improved clamp, is connected thereto. The buckle C is, in longitudinal section, of curved form, presenting rectangular sides, and it is also provided with a centrally-arranged brace, *c*, and a pin, *c'*, projecting therefrom on the concave side of the buckle, as shown in Fig. 1. The end of the handle-strap B is provided with a number of spaced perforations, into which the pin *c'* is engaged when the said strap is passed into the buckle. The strap D is also similarly provided, and, when passed through the buckle C, also receives the said pin in one of its perforations, thus rigidly, but removably, connecting the straps B D, the one with the other, and allowing them to be readily adjusted for the reception of any desired number of books. The strap D passes downward through the transversely-slotted ends of the lower board E, thence upward to an engagement with the grooved end *a'* of the upper board A by means of a loop, F, rigidly secured to the free end thereof. The loop or buckle F may be of rectangular form, and it is preferably oblong. Its lower part is also slotted at *f*, for the purpose of receiving the end of the strap D, and its upper opposite corners are provided with interior rectangular shoulders *g g'*, whereby a bridge, *h*, is formed, for a purpose hereinafter explained.

The clamp is used in the following manner, to wit: The books are placed one upon the other on the lower board E. The upper board is then brought over upon the heap of books, and the loop F, on the end of strap D, passed over the end of the upper board and engaged in the groove *a'* thereof. In this position the shoulders *g g'* only are engaged in the said groove, the space between them, formed by the vertical sides of the shoulders and the upper bar of the buckle, being occupied by the end of the handle-strap B, which is passed through it. For convenience of handling, a second strap, G, is riveted to it in such a manner as to leave its two ends free, the latter strap being a continuation of the former, and its use is as follows: The outer end thereof is passed through the loop when the books are ready for clamping, and, being drawn

upon, causes the said loop to be engaged over the notched end of the board A, when both the inner end of the strap G and the end of the handle-strap B will be under the bridge *h*. When it is desired to remove the loop from its groove, a slight pull upon the inner end of the strap G will have the desired effect.

I have in this manner dispensed with a buckle for connecting the ends of the strap D to the upper board, an advantage to be readily appreciated when it is remembered how difficult it is to unbuckle a strap with cold fingers.

Instead of using the strap G, as above described, I may, at pleasure, make the handle-strap B of sufficient length to permit it to be bent over and inward, and its end to be inserted under the bridge *h*, when, by giving it a slight pull upward, the loop F will be dis-

engaged from its groove *a'* in the upper board A.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a book-clamp, the combination, with the board A having a transverse groove, *a'*, of the loop F, having shoulders *g g'*, substantially as specified.

2. The combination, with the loop F and the groove *a'* of the upper board A, of a detach-ing-strap, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH BENSON BOYCE.

Witnesses:

H. F. GASKILL,
E. M. KETCHAM.