W. C. WATSON
Book-Clamp.

No. 198,437. Patented Dec. 18, 1877.

Fig. 1.

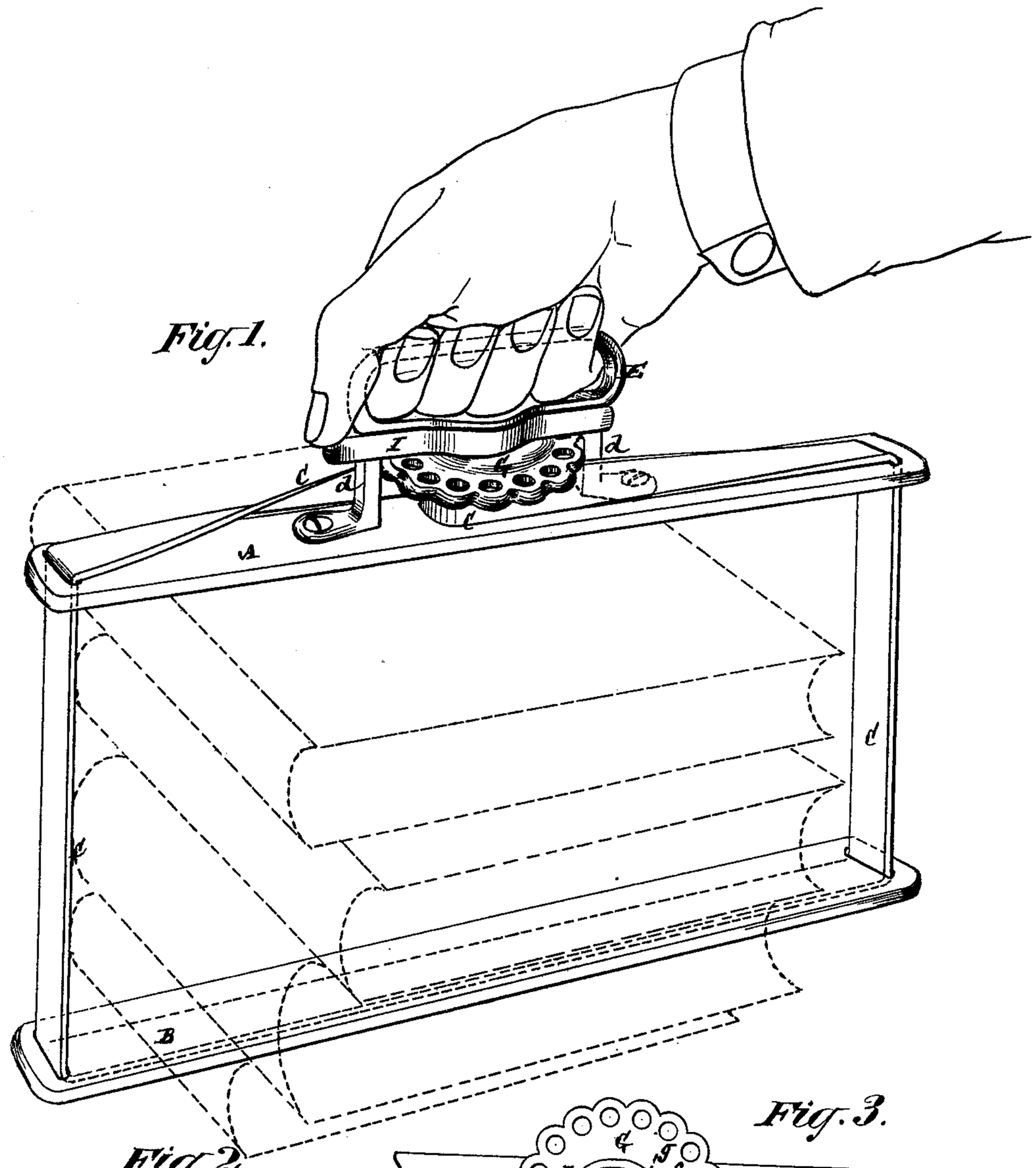


Fig. 2.

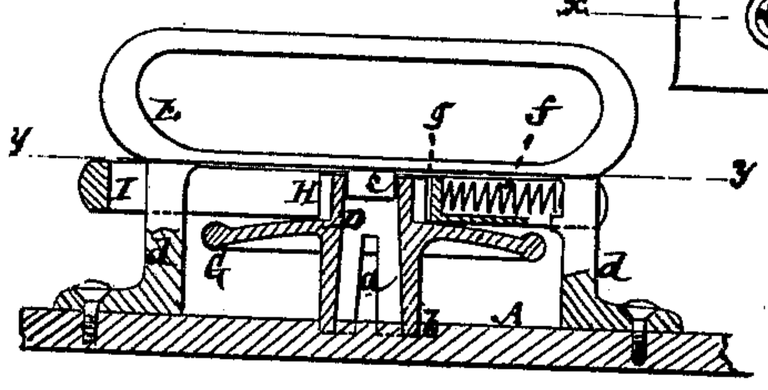


Fig. 3.

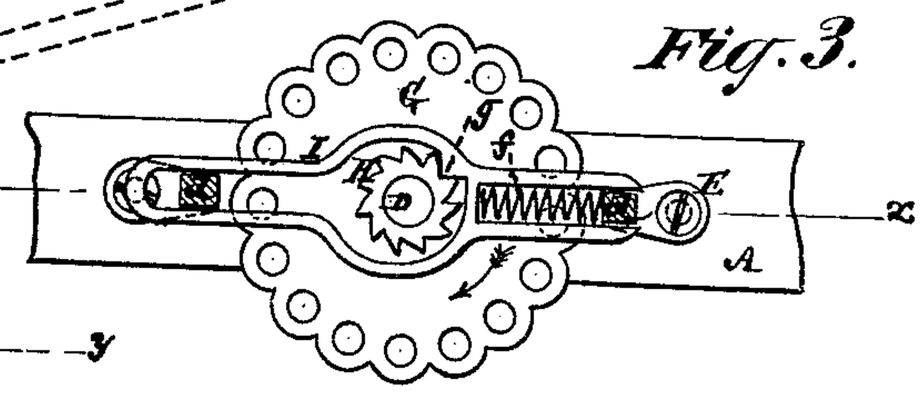
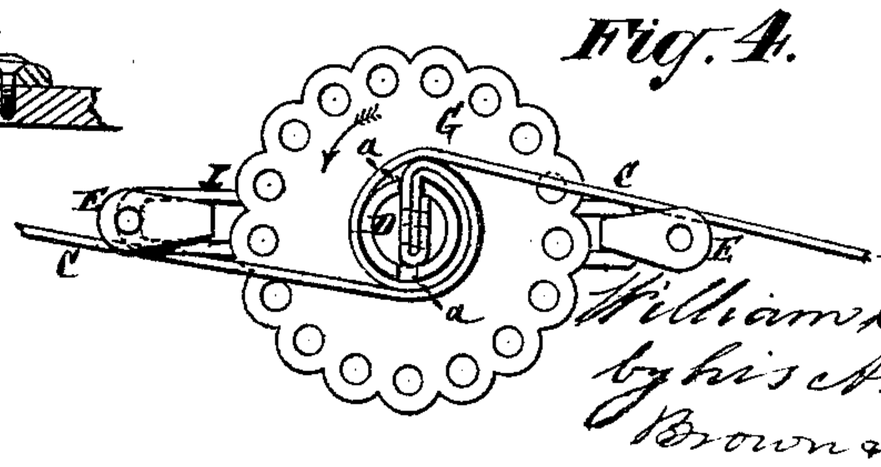


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. WATSON, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN BOOK-CLAMPS.

Specification forming part of Letters Patent No. **198,437**, dated December 18, 1877; application filed November 19, 1877.

To all whom it may concern:

Be it known that I, WILLIAM C. WATSON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Book-Clamps, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to clamps for school and other books, designed, principally, to be used in carrying books from one place to another; and consists in a novel combination of devices for carrying, tightening, and releasing the clamp, whereby increased efficiency and conveniences are obtained.

Figure 1 represents a view, in perspective, of my improved book-clamp as in use; Fig. 2, a longitudinal vertical section of the same, in part, on the line *x x* in Fig. 3, mainly in illustration of certain clamping devices. Fig. 3 is a horizontal section thereof on the line *y y;* and Fig. 4, an inverted plan of said clamping devices, in part.

A is an upper, and B a lower, clamping plate or bar, united by a cord or strap, C, which is entered at its opposite ends through a lateral slot, *a*, in a hollow windlass, D, and secured within the latter by bending over the one end of the strap and stitching the two ends together. Said windlass D is a simple hollow socket, and may have duplicate or opposite lateral slots *a* in it, for entering the ends of the strap therein from either opposite side of the axis of the windlass. The lateral slots *a* are open at their bottoms, to facilitate the entry of the ends of the strap. The hollow socket or windlass D is fitted to turn at its lower end in an annular recess, *b*, in the center of the upper surface of the top clamping plate, bar, or stick A, and is steadied at its upper end by a lower stud, *c*, on a handle, E, which is fast to the upper clamping-bar A, entering within said socket.

The cord or strap C, secured at its ends to or within the hollow socket or windlass D, passes freely through slots or openings in the ends of the clamping-bars A B, and under the lower one, B, of said bars; or the strap might be divided, and attached at its outer ends to the lower clamping-bar B.

Arranged on or around the windlass D, and fast thereto within opposite legs or feet *d d* of the handle E, is a hand-wheel, G, for operating the windlass to draw the clamping-bars A B toward each other, for the purpose of holding between them the books to be carried. Fast, also, on the upper end of said hollow socket or windlass D is a ratchet-wheel, H, with which a spring-pawl engages, to hold the clamp at its set—that is, the clamping-bars A B to their hold on the books between them—by the turning of the windlass through its hand-wheel G, which operates to wind or take up the strap C.

The pawl, which thus engages with the ratchet to admit of the winding action of the windlass, and of its secure hold of the clamping-bars A B, having the books in between them, is constructed of a yoke, I, fitted to slide lengthwise of the handle E, between it and the hand-wheel G, subject to guidance by the legs *d d* of the handle, and constructed to receive within it, or between it and one of the legs *d*, a spring, *f*, which serves to press the yoke I longitudinally forward, and so cause a tooth, *g*, in said yoke to engage with the teeth of the ratchet H.

The purchase given by the hand-wheel G and the windlass D serves to admit of a very secure hold being obtained for the books between the clamping-bars A and B; and the handle E being a fixed one, there is no manipulation of it necessary to effect the hold or release of the books.

When it is required to release the books from between the clamping-bars A B, it is only necessary to liberate the tooth *g* of the sliding pawl or yoke I from engagement with the ratchet-wheel H. This may be done in a most convenient manner by pressing with the thumb of the hand which holds the clamp on the forward end of the sliding yoke I against action of the spring *f*, when said yoke or pawl being disengaged from the ratchet, the clamp may be opened, or the weight of books in it, caused by pressure on the lower

clamping-bar B, be made to open the clamp, and so to liberate the books from between the clamping-bars.

I claim—

The combination, with the clamping-bars A and B and handle E, attached to the upper bar A, of the independent windlass D, one or more cords or straps, C, connecting said windlass with the lower clamping-bar B, the hand-wheel G, the ratchet-wheel H, and the sliding yoke or pawl I, controlled by a spring, to engage with the ratchet, and arranged to admit of its disengagement therefrom by pressure of the thumb or finger of the hand by which the clamp is carried, substantially as specified.

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Witnesses:

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