

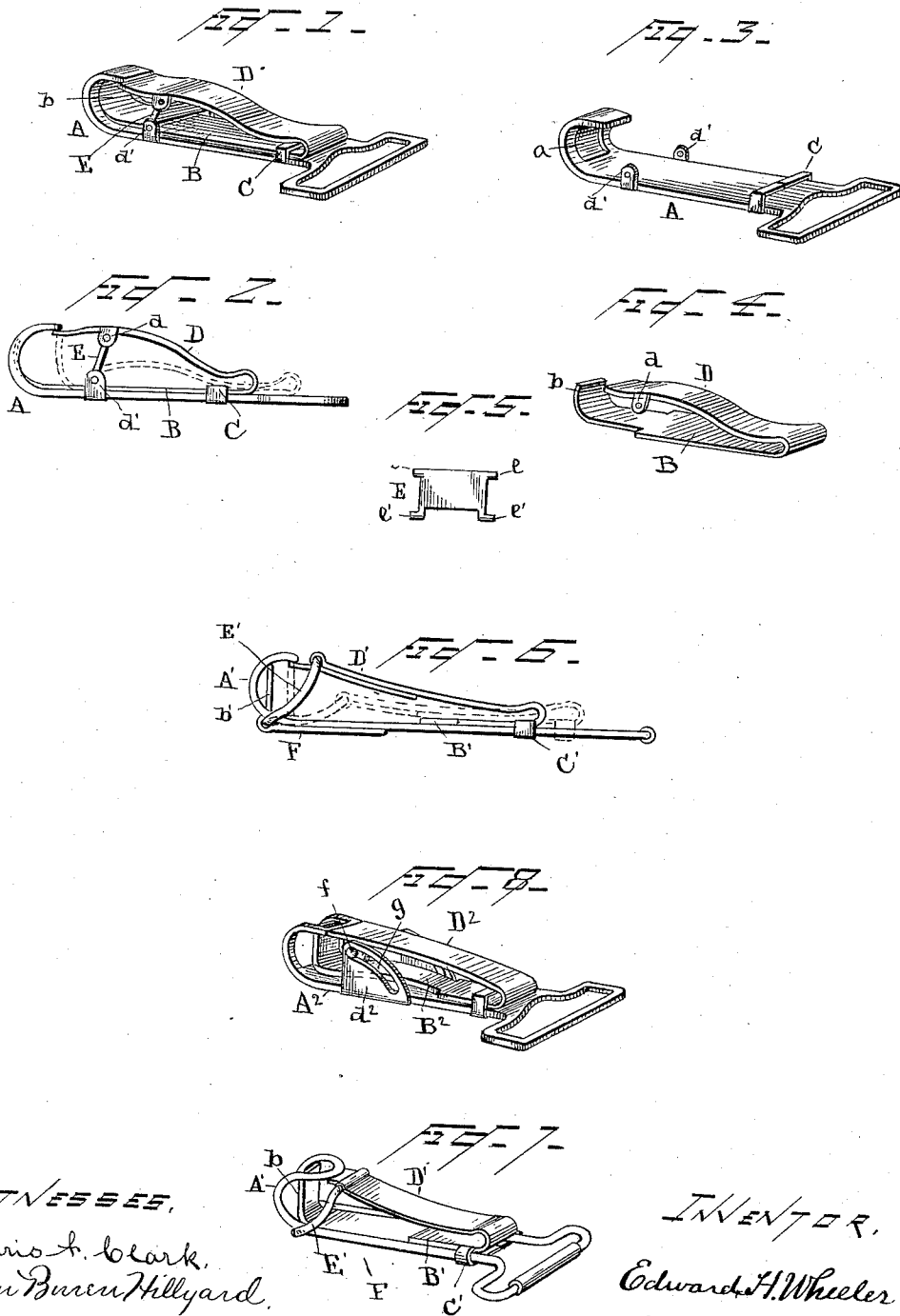
(No Model.)

E. H. WHEELER.

BUCKLE.

No. 385,651.

Patented July 3, 1888.



WITNESSES,

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UNITED STATES PATENT OFFICE.

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BUCKLE.

SPECIFICATION forming part of Letters Patent No. 385,651, dated July 3, 1888.

Application filed April 7, 1888. Serial No. 269,947. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. WHEELER, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Buckles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to snap hooks, and has for its object to combine therewith a device which can be readily and conveniently manipulated by one hand to disengage the hook from the ring or other device to which it may be connected, and which also will prevent the accidental displacement of the ring or other device engaged with the hook.

The improvement consists in having combined with the hook a sliding plate that has its end bent approximately at right angles, and which, when drawn out, lifts the ring, link, &c., from the bottom of the hook, so it can readily slide therefrom; also, in having a second plate connected with or forming a continuation of the first plate and moving therewith to open the hook when the plates are drawn back and close the hook when the said plates are pushed in. This second plate has an in-and-out movement simultaneously with its reciprocating movement, which is effected by a link-connection between it and the hook. The inner ends of the two plates are held separated by a spring-pressure, and the link-connection normally inclines to a vertical line or to a line drawn at right angles to the plane of the hook, so that when the pressure is brought to bear on the outer plate at right angles thereto the plate will be forced in and back against the tension of the said spring. When the pressure is removed, the said plate will spring outward and forward.

The improvement further consists of the details of construction, which hereinafter will be more fully described and claimed, and shown in the drawings, in which—

Figure 1 is a perspective view of a buckle embodying my invention; Fig. 2, a side view

showing the sliding plates drawn back; Fig. 3, a perspective view of the hook; Fig. 4, a perspective view of the sliding plates; Fig. 5, a front view of the link; Fig. 6, a side view of a modification showing the operation of the sliding plates by dotted lines; Fig. 7, an isometric perspective view of the modification shown in Fig. 6, and Fig. 8 a perspective view of a further modification.

The hook A is of ordinary construction, and is provided with the sliding plate B, which has its inner end bent substantially at right angles and adapted to fit within the hook. This sliding plate is held to the hook in any convenient manner, preferably by the lateral extensions C, which are bent over it. The end of the plate B fits in a recess, *a*, in the end of the hook, so as not to receive the wear which comes on the hook on each side thereof, and when slid out it comes about flush with the end of the hook, as shown most clearly in Fig. 2, to permit the ready disengagement of the hook from the part with which it is engaged, as will be readily understood.

A second plate, D, connected with or forming a continuation of the plate B, closes the hook and prevents the accidental displacement of the hook from the link or ring to which it may be applied when the plates are projected forward, as shown in Fig. 1. The plate D is connected with the hook by the link E, which has lateral projections or lugs *e* and *e'*, that fit in ears *d* and *d'*, the lugs *e* fitting in the ears *d* of the plate D and the lugs *e'* fitting in the ears *d'* of the hook. This link inclines to a vertical line, or to a line drawn at right angles to the hook when the plates are in a normal or projected position. A pressure brought to bear on the plate D at right angles to the hook will force the link to close on or approach the hook, and at the same time effect an outward sliding movement of the plates on the hook, the plate D being forced in at the same operation. The plate D is elastic, and when the pressure is removed therefrom it will spring out, and by reason of the link-connection will project the plates and close the hook.

The hook A is made of sheet metal, but may be made equally well of wire, as shown by the hook A' in Figs. 6 and 7. In this instance the

bent end *b'* of the plate *B'* will fit in the space between the wires of the hook, and the lateral extensions *C'* of the plate *B'* will be bent about the side wires of the hook, and the link *E'* will be open or journaled to the plate *D'* and to a plate, *F*, secured to the hook.

Fig. 8 shows a modification in which the sliding plates *D² B²* are connected to the hook *A²* by having the pins or lateral projection *f* extending through cam-grooves *g* in the ears *d²*. The link-connection is dispensed with; but the operation is precisely the same. By pressing on the plate *D²* it will be compressed, and the projections *f*, riding in the cam-grooves, will move the plates rearward.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the hook, of the sliding plates connected together, the end of one plate being bent approximately at right angles and the end of the other plate closing against the end of the hook, substantially as described.

2. The combination, with the hook, of the two sliding plates, the end of one plate closing the hook and the end of the other plate being bent substantially at right angles and adapted to fit in a recess or opening in the end of the

hook, so as not to receive the wear, substantially as specified.

3. The combination, with the hook, of the two sliding plates and the link connecting the outer plate with the hook, substantially as described.

4. The combination, with the hook and the two sliding plates held separated by spring-pressure, of the link connecting one of the plates with the hook, substantially as specified.

5. The combination, with the hook and the sliding plate having its end bent substantially at right angles for the purpose described, of the link-connection between the said plate and the hook, substantially as specified.

6. The combination, with the hook and the sliding plate adapted to close against the end of the hook, of the connection interposed between the plate and the hook, whereby the said plate is reciprocated at the same time it is pressed toward the hook, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD H. WHEELER.

Witnesses:

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