

No. 657,752.

Patented Sept. 11, 1900.

F. E. ALLEN.

CLASP.

(Application filed Feb. 10, 1900.)

(No Model.)

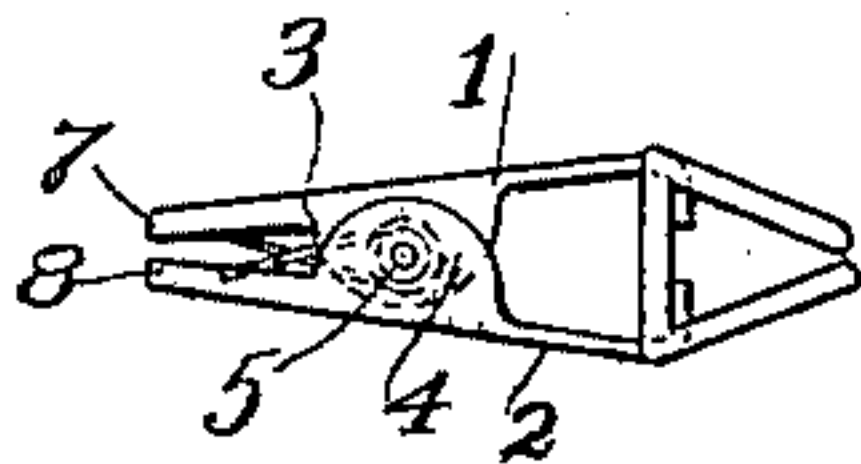


Fig. 1

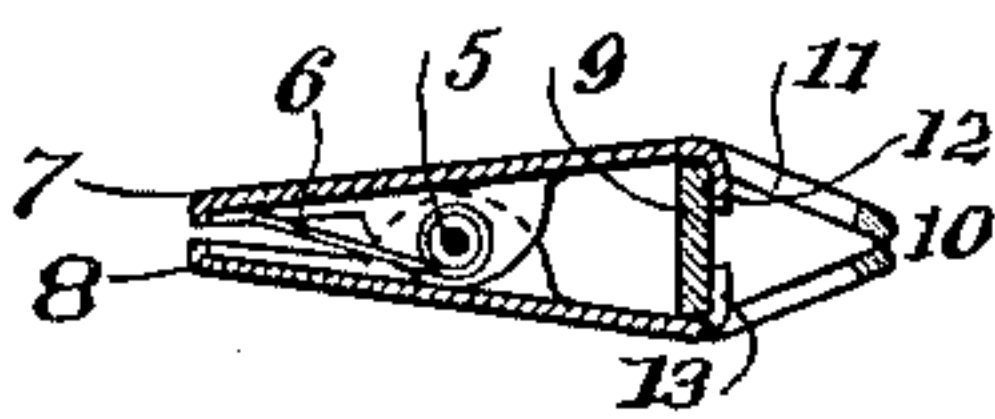


Fig. 3.

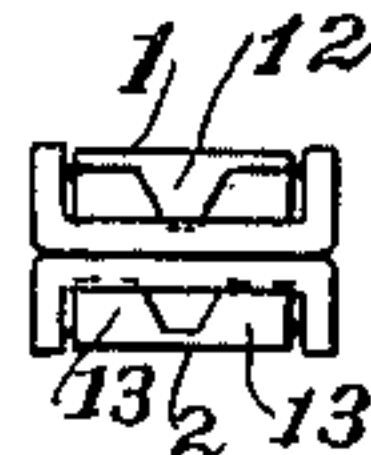


Fig. 5.

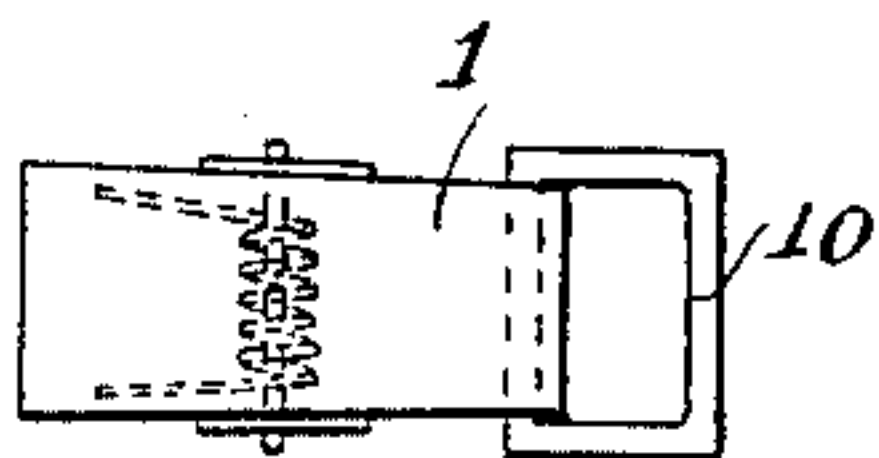


Fig. 2.

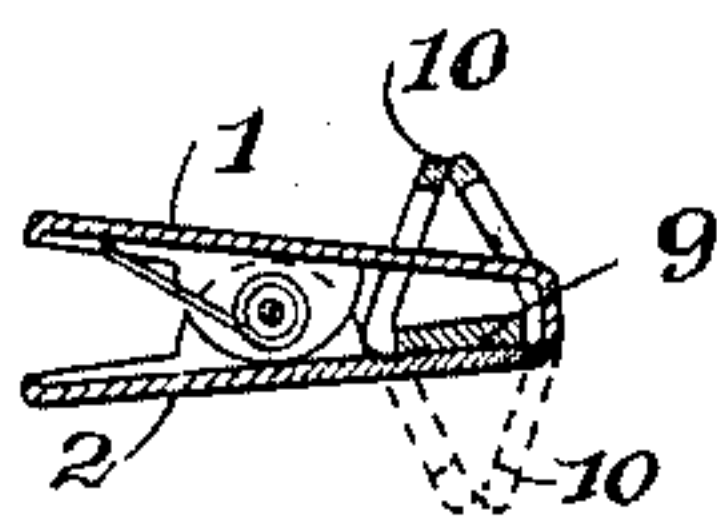


Fig. 4.

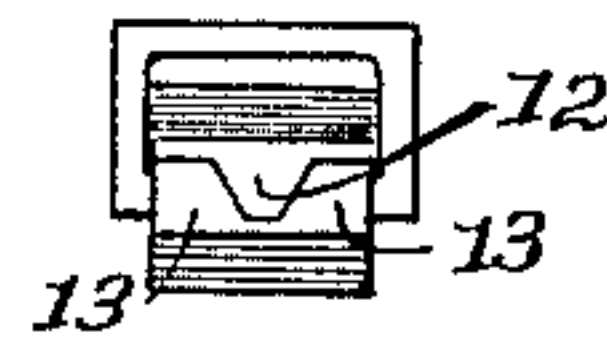


Fig. 6.

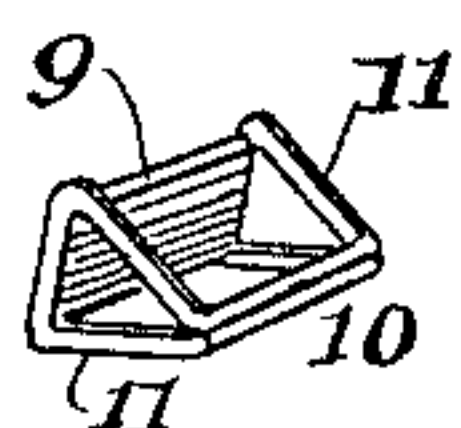


Fig. 7.

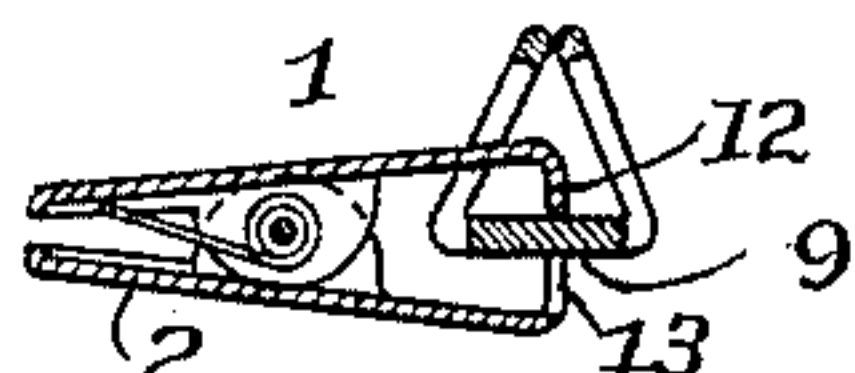


Fig. 8.

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# UNITED STATES PATENT OFFICE.

FREDERICK E. ALLEN, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO FRANK E. H. GARY, OF SAME PLACE.

## CLASP.

SPECIFICATION forming part of Letters Patent No. 657,752, dated September 11, 1900.

Application filed February 10, 1900. Serial No. 4,756. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK E. ALLEN, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Clasps, of which the following is a specification.

This invention relates to clasps of the kind employing two hinged jaws and a cam interposed between said jaws for the purpose of holding them in a closed position.

The invention consists in certain novel features of construction and arrangement in clasps, which I shall now proceed to set forth and claim.

Of the accompanying drawings, Figure 1 represents a side elevation of a clasp constructed in accordance with my invention. Fig. 2 represents a plan view thereof. Fig. 3 represents a longitudinal section with the jaws closed. Fig. 4 represents a longitudinal section with the jaws open. Fig. 5 represents a rear elevation with the jaws closed. Fig. 6 represents a rear elevation with the jaws open. Fig. 7 represents a perspective view of the cam. Fig. 8 represents a longitudinal section showing the manner of removing the cam.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings, 1 and 2 designate the two jaws of a clasp, which are permissibly made alike and provided with inward-turned ears 3 4, through which extends a pintle 5, whereby the jaws are hinged or pivoted together. A spring 6, surrounding the pintle 5 and pressing against the jaws, tends to hold their front or gripping ends 7 8 apart.

9 is a flattened cam-plate interposed between the rear ends of the jaws 1 2 back of the hinge and adapted to occupy either a position transverse to the jaws, as represented in Fig. 3, wherein it holds the gripping ends of the jaws together, so as to firmly grip the article or goods to which the clasp is applied, or a position parallel to the jaws, as represented in Fig. 4, wherein the gripping ends of the jaws are permitted to separate to release the article gripped or to apply the clasp to the article. The cam partakes of a rotary motion in moving from one position to the other, and is so arranged that it can move in either of

two directions from a transverse position to a parallel position, so that the clasp may be opened or closed from either side. 10 represents a loop or bail connected with the cam-plate 9 and serving as a means for attaching the clasp to a base such as a strap end. The full and dotted lines representing the bail in Fig. 4 illustrate the two positions in which the cam-plate may rest in parallelism with the jaws 1 2. A method of forming the loop or bail 10 is by bending up two integral and continuous side loops 11 11 on the corners of the plate 9, the side bars of said loops forming triangles, while the cross-bars meet and run parallel to each other. It is to be observed that rearward tension exerted on the bail or loop 10 by the base to which it is attached will move cam-plate 9 from either of its parallel positions to its transverse position. The tendency of opposite strains exerted between the base and the article gripped by the clasp is always to hold the jaws in gripping engagement with the said article, this engagement being easily released at any time by merely turning the cam-plate to its parallel position. The cam-plate 9 is wholly disconnected from both jaws and is normally retained in place by means of lips or projections 12 13, turned inwardly from the two jaws, substantially at right angles to the planes of the jaws, and serving as abutments to limit the rearward movement of the cam-plate with respect to the jaws. Owing to the fact that the cam-plate is wholly unconnected with either of the jaws, as above stated, the cam is rotatable in either of two opposite directions, thus enabling the clasp to be opened or closed with equal facility whether one side or the other is resting against the clothing of the user.

As seen in Figs. 5 and 6, the upper jaw 1 is provided with a single projection 12 and the under jaw 2 with two projections 13 13, separated by a space into which the projection 12 enters when the rear ends of the jaws come together. It may easily be provided, as shown in the drawings, that the distance separating the projections 12 13 when the jaws are fully closed together shall be sufficient to permit the cam-plate 9 to be wholly withdrawn from engagement with the jaws



when said plate is turned in its parallel position, as represented in Fig. 8. The rear ends of the jaws are normally held together by the action of the spring 6, so that the cam-plate when in its parallel position will normally be retained in engagement with the jaws.

By referring to the sectional views it may be seen that the cam-plate 9 is rectangular in sectional outline—that is, the edges of said plate which abut against the inner faces of the two jaws are narrow flat surfaces. When the cam-plate stands in its jaw-closing position, transverse to the jaws, these edge faces lie flat against the inner sides of the jaws. The cam-plate is therefore in a measure locked in this position, since in moving it toward its parallel position it presents a slightly-longer axis or diameter to said jaws than when standing straight across the jaws. The inward pressure exerted between the jaws when they are closed on the article to which the clasp is attached tends to augment this locking effect, so that the clasp does not readily become unlocked.

While I have referred to the plate 9 as the “cam-plate,” it is to be understood that this does not necessarily mean that said plate is in the shape of an ordinary cam, but that its action is similar to that of a cam. As a matter of fact, the plate 9 has a wedging action when it is turned from the position shown in Fig. 4 to that shown in Fig. 3 and when in the latter position has a locking action; but since one edge or the other of said plates has also a cam-like action, I have preferred to define it as a “cam-plate.”

Having thus explained the nature of my invention and described a way of constructing and using the same, although without having attempted to set forth all the forms in which it may be embodied or all the modes of its use, I declare that what I claim is—

1. A clasp comprising two jaws hinged together, and a cam-plate interposed between the rear ends of said jaws and unconnected with either jaw, said cam-plate being movable by a rotatory movement into a position transverse to the jaws, whereby the front or gripping ends of the jaws are moved into gripping relation, or into a position parallel to said jaws, whereby said gripping ends are permitted to separate.

2. A clasp comprising two jaws hinged together, a flattened cam-plate interposed between the rear ends of said jaws and unconnected with either jaw, said cam-plate being movable by a rotatory movement into a position transverse to the jaws, whereby the front or gripping ends of the jaws are moved into gripping relation, or into a position parallel to said jaws, whereby said gripping ends are permitted to separate, and a bail or loop connected with said cam-plate and adapted to attach the clasp to a base, the cam-plate being movable into its transverse position by rearward tension exerted on the bail.

3. A clasp comprising two jaws hinged together, a flattened cam-plate interposed between the rear ends of said jaws and disconnected from both jaws, said cam-plate being movable by a rotatory movement into a position transverse to the jaws, whereby the front or gripping ends of the jaws are moved into gripping relation, or into a position parallel to said jaws, whereby said gripping ends are permitted to separate, a bail or loop connected with said cam-plate and adapted to attach the clasp to a base, the cam-plate being movable into its transverse position by rearward tension exerted on the bail, and projections extending inwardly toward each other from the jaws, substantially at right angles to the planes of the jaws and forming abutments limiting the rearward movement of the cam-plate.

4. A clasp comprising two jaws hinged together, a flattened cam-plate interposed between the rear ends of said jaws and disconnected from both jaws, said cam-plate being movable by a rotatory movement into a position transverse to the jaws, whereby the front or gripping ends of the jaws are moved into gripping relation, or into a position parallel to said jaws, whereby said gripping ends are permitted to separate, and means retaining the cam-plate between the jaws when in its transverse position, and permitting its removal from between the jaws when in its parallel position.

5. A clasp comprising two jaws hinged together, a flattened cam-plate interposed between the rear ends of said jaws and disconnected from both jaws, said cam-plate being movable by a rotatory movement into a position transverse to the jaws, whereby the front or gripping ends of the jaws are moved into gripping relation, or into a position parallel to said jaws, whereby said gripping ends are permitted to separate, a bail or loop connected with said cam-plate and adapted to attach the clasp to a base, the cam-plate being movable into its transverse position by rearward tension exerted on the bail, and projections extending inwardly toward each other from the jaws substantially at right angles to the planes of the jaws and forming abutments limiting the rearward movement of the cam-plate, said projections having a space between them when the gripping ends of the jaws are closed together, sufficient to permit the cam-plate to be removed from the clasp when held in its parallel position.

6. A clasp comprising two jaws hinged together, a cam-plate interposed between the rear ends of the jaws, back of the hinge, said cam-plate being free from both of the jaws, and movable from a position transverse to the jaws, wherein it holds the front or gripping ends of said jaws in gripping relation, by rotatory movements in either of two directions to positions parallel with said jaws, whereby their gripping ends are permitted to



5 separate, and a loop or bail attached to said cam-plate and adapted to connect the clasp to a base, the cam being movable to its transverse position from either of its parallel positions, by rearward tension on the bail.

10 7. A clasp comprising two jaws hinged together, and a cam-plate for operating said jaws, said plate having integral continuous loops bent up from its corners, the side bars of said loops forming two triangles with the plate, the cross-bars meeting and running parallel, the two loops forming a bail for attaching the clasp to a base.

15 8. A clasp comprising two jaws hinged together, a spring normally holding their gripping ends apart, and a cam movable in either

one of opposite directions to move said ends toward each other.

9. A clasp comprising two jaws hinged together, a spring normally holding their front or gripping ends apart, and a cam interposed between the rear ends of the jaws, back of the hinge and movable in either one of opposite directions, for moving the gripping ends toward each other.

25 In testimony whereof I have affixed my signature in presence of two witnesses.

FREDERICK E. ALLEN.

Witnesses:

C. F. BROWN,

A. D. HARRISON.