No. 855,637. PATENTED JUNE 4, 1907.

E. N. HUMPHREY.

BUCKLE.

APPLICATION FILED MAY 9, 1904.

Fig. 1.

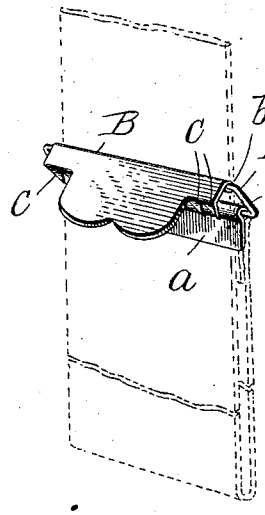


Fig. 2.

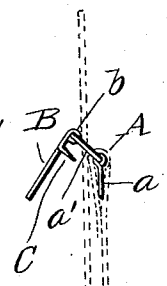


Fig. 3.

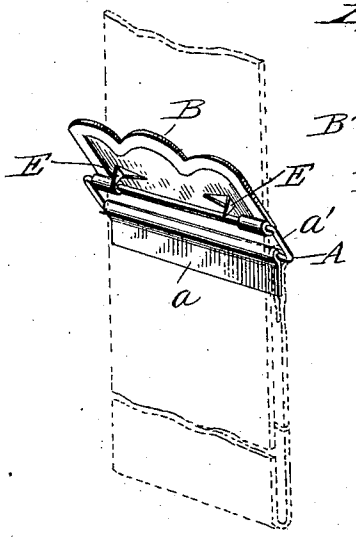


Fig. 4.

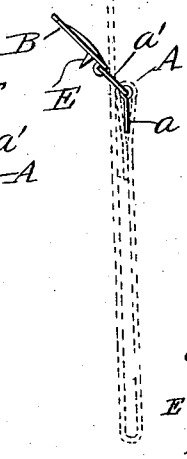


Fig. 5.

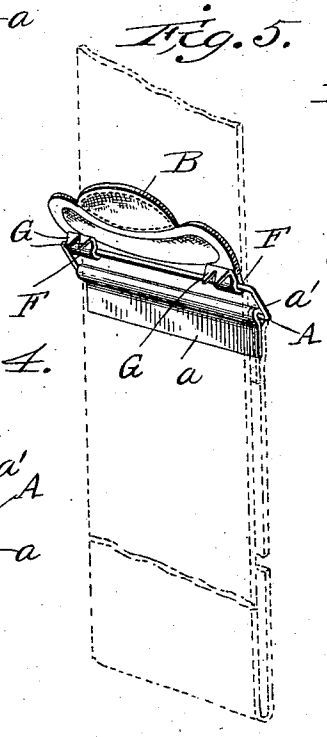


Fig. 6.

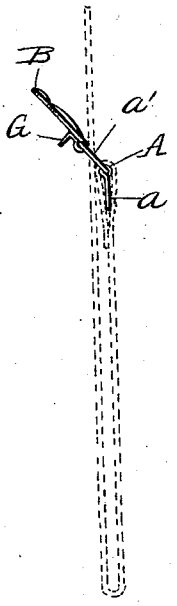
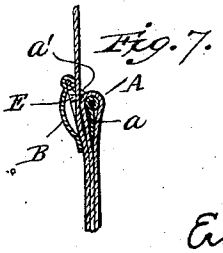


Fig. 7.



Witnesses

Edwin L. Yewell

Thomas Durant

Inventor

Ernest N. Humphrey,

By Church & Church

Attorneys

UNITED STATES PATENT OFFICE.

ERNEST N. HUMPHREY, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE TRAUT AND HINE MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

BUCKLE.

No. 855,637. Specification of Letters Patent. Patented June 4, 1907.

Application filed May 9, 1904. Serial No. 207,143.

To all whom it may concern:

Be it known that I, ERNEST N. HUMPHREY, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Buckles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to improvements in buckles or clasps particularly designed for use in connection with garment supporters such as suspenders, the objects of the invention being to provide a clasp or buckle of this type which will afford a secure fastening, be easily adjusted and in which the holding teeth will free themselves from the webbing when the locking lever is turned to its open position and which will also present a neat appearance and be free from the objection of bunching the web to which it is applied.

The invention consists in certain novel details of construction and combinations and arrangements of parts all as will be now described and the particular features of novelty pointed out in the appended claims.

Referring to the accompanying drawings—Figure 1 is a perspective view of a buckle or clasp embodying the present improvements, the locking lever being shown partially opened and the webbing in dotted lines. Fig. 2 is a side elevation with the locking lever in its open position. Figs. 3 and 4 are views corresponding to Figs. 1 and 2 showing a modified arrangement of the holding points or teeth on the locking lever. Figs. 5 and 6 are similar views showing still another modification. Fig. 7 is a sectional view showing the locking lever in closed position.

The body or frame of the buckle or clasp preferably consists of a loop member A to which one end of the webbing may be attached by any suitable means. As shown in the drawings this loop member is formed by a sheet metal portion *a* and a wire frame *a'* the ends of the latter being securely and rigidly fastened together and to the sheet metal portion *a* by having the latter bent around the same. The wire frame *a'* extends at a slight angle to the sheet metal portion *a*, its top bar constitutes a journal or pintle on which the locking lever is pivotally mounted, and the webbing passes through the loop or opening formed by the wire *a'*.

The locking lever B is preferably formed up of sheet metal, suitable ears *b* as shown in Fig. 1, being bent around the top bar of the frame to form the pivotal connections between the parts.

In the buckle of the present invention, instead of providing a locking or holding arm extending on the opposite side of the pivot from the operating portion of the lever as has been heretofore proposed, the holding parts or projections which are adapted to engage the web are struck from the body of the lever itself and are located on the same side of the pivot with the operating portion of the lever. In the preferred construction illustrated in Fig. 1 of the accompanying drawings the holding teeth are formed by bending downwardly at right angles to the operating portion of the lever pointed projections or teeth C. These teeth C extend at substantially right angles to the operating part of the lever and are adapted when the lever is in its closed or locking position, to penetrate the webbing of the suspender and to project in proximity to the lower bar of the frame and in rear of the pivot of the lever, as shown in Fig. 7. Such holding teeth are preferably of such length and shape as to penetrate the web to a sufficient degree to prevent the webbing from being deflected over the lower bar of the frame and, inasmuch as the teeth are located on the same side of the pivot with the operating portion of the lever they will draw out of the webbing as the lever is swung open to the position indicated in Fig. 2, thus the points of the teeth are prevented from catching and tearing or holding the webbing against being freely adjusted through the buckle.

The holding teeth or projections are arranged at each side or end of the buckle so as to coöperate with the edges or edge portions of the webbing, whereby not only is the construction of the buckle facilitated, but the engagement of the teeth is with that portion of the webbing which is best calculated to afford the maximum strength, hold the webbing in proper alinement and prevent undue wear and tear on the ornamental portions of the webbing.

Obviously, the holding teeth may be formed in various ways and in Figs. 3 and 4 they are shown as being struck downwardly from the body of the locking lever in the form of spuds E, this being a cheap and convenient formation where apertures in the face of the locking lever are not objectionable.

In Figs. 5 and 6 the ears F which constitute the pivotal connection between the lever and frame are extended forwardly and their ends G are formed into holding points or penetrating teeth which in their location and operation conform to the location and operation of the holding teeth illustrated in Fig. 1.

The operating part of the locking lever it will be seen is substantially radial to the pivot and the holding teeth or points are removed some distance from the pivot and project at substantially right angles to the radial plane of the operating portion of the lever. As a result of such construction they will draw substantially straight out of the webbing and a relatively short movement of the lever will be sufficient to entirely free the teeth from the webbing, a result which cannot be accomplished where the teeth or holding edge is radial or substantially radial to the pivot about which they turn.

When in locking position, the operating portion of the lever preferably lies parallel with the sheet metal portion *a* of the frame and the holding teeth project toward said sheet metal portion *a* of the frame and in rear of the pivot. As a result, strain on the webbing tends to swing the lever inwardly or toward the webbing and consequently said lever is held in its closed position and further strain on the webbing only tends to make the lever held more securely.

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

1. In a buckle for garment supporters, the combination with the frame having an opening for the passage of the webbing, of a sheet metal locking lever pivotally mounted on the frame at one side of the opening said locking lever being composed of an operating part and integral web penetrating teeth or projections located on the same side of the pivot with said operating part and projecting at substantially right angles to the plane of the latter at each end of the lever and remote from the pivot said teeth when the lever is in closed position, projecting in rear of the pivot, whereby strain upon the webbing will tend to hold the lever in closed position; substantially as described.

2. In a buckle for garment supporters the combination with the wire frame, of a sheet metal locking lever pivotally mounted upon the top bar of the frame, and having web penetrating teeth formed integral therewith remote from the pivot at each end of the lever and projecting at substantially right angles to the plane of the locking lever, said teeth being so arranged as to project in rear of the pivot of the lever and in proximity to the lower bar of the frame when the lever is in locked position whereby strain on the webbing will tend to hold the lever in closed position; substantially as described.

3. In a buckle for garment supporters the combination with the wire frame of a sheet metal locking lever having ears at each end constituting the pivotal connection with the frame, said ears being extended forwardly and their ends formed into penetrating points projecting at substantially right angles to the plane of the lever, whereby said teeth will be located remote from the pivotal point of connection of the lever and frame.

ERNEST N. HUMPHREY.

Witnesses:
SADIE L. FINNIGAN,
STANLEY PARKER.