(No Model.)

E. L. BUDLONG.

BELT FASTENER.

No. 431,103. Patented July 1, 1890.

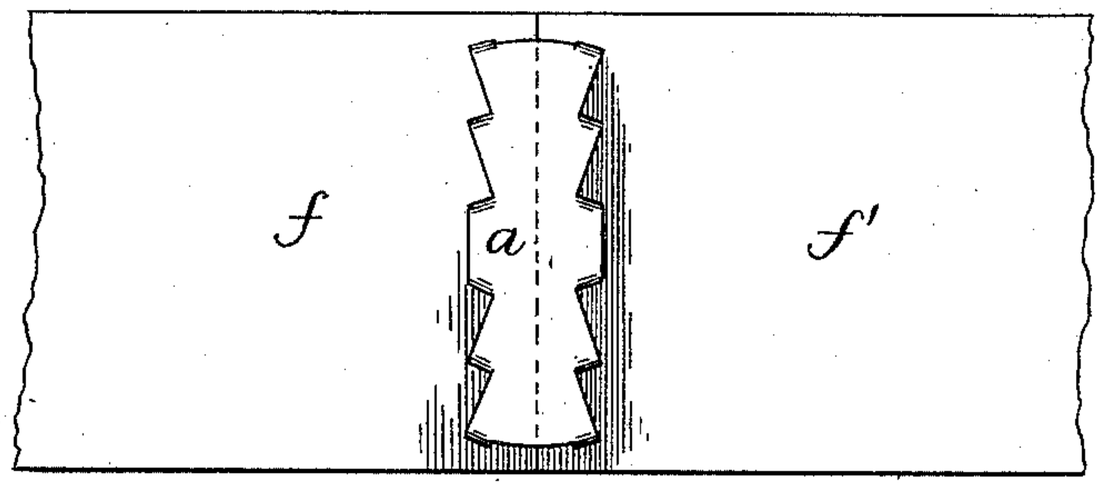

FIG. 1.

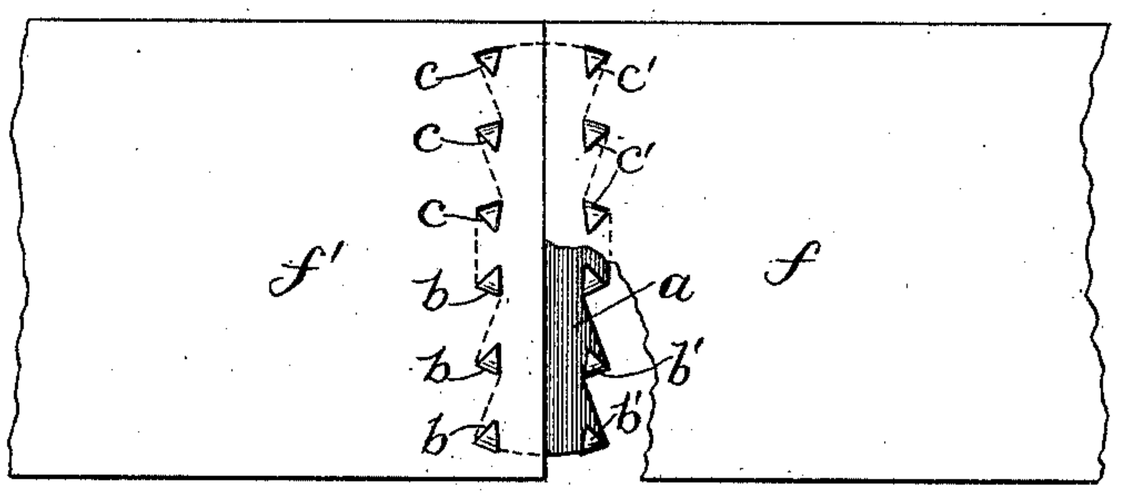

FIG. 2.

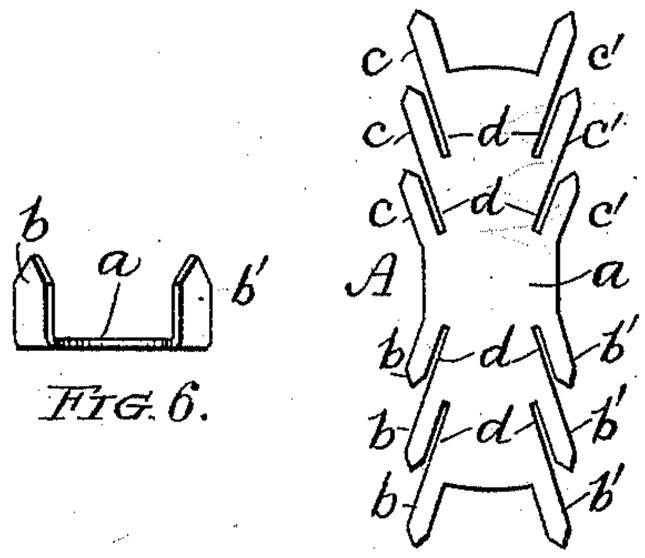

FIG. 3.

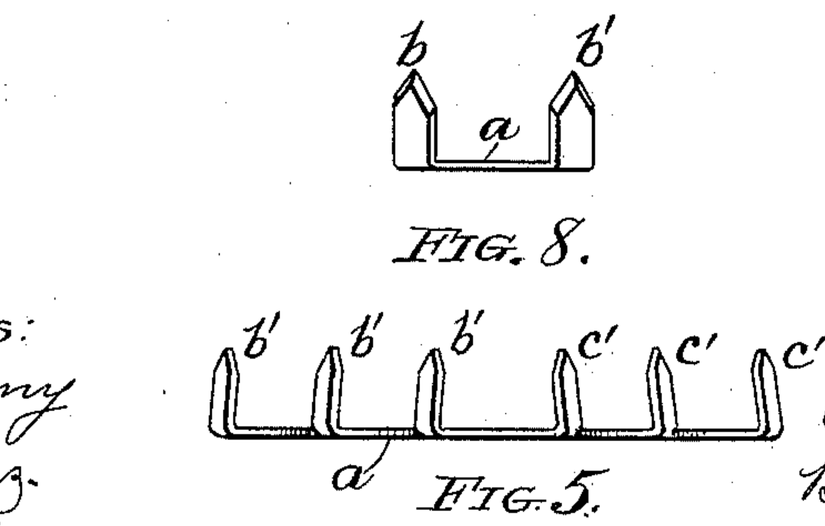

FIG. 6.

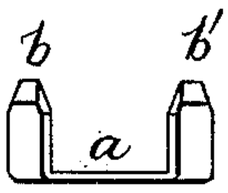

FIG. 7.

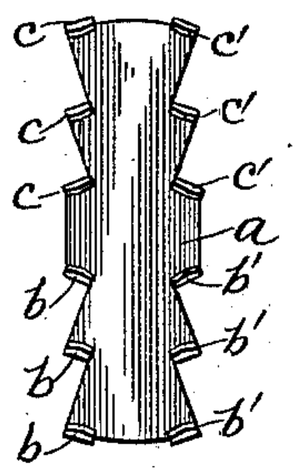

FIG. 4.

FIG. 8.

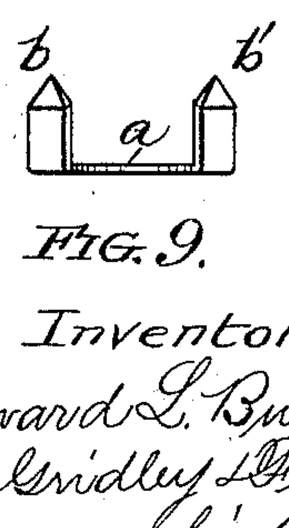

FIG. 9.

FIG. 5.

Witnesses:
J. B. Halpenny
David Stevens.

Inventor:
Edward L. Budlong.
By Bridley & Fletcher
his Attys.

UNITED STATES PATENT OFFICE.

EDWARD L. BUDLONG, OF CHICAGO, ILLINOIS.

BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 431,103, dated July 1, 1890.

Applicatino filed August 3, 1889. Serial No. 319,628. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. BUDLONG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Belt-Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an outside view of a portion of a belt, showing the ends secured to each other by means of my improved fastener. Fig. 2 is a view of the reverse side of said belt in which the leather is partially broken away to show the bent teeth of the fastener. Fig. 3 is a like view of a modification thereof. Fig. 4 is a like view of said blank in which the teeth are bent upwardly ready for use. Fig. 5 is a side view of my improved fastener, showing the manner in which the teeth are inclined from the perpendicular. Fig. 6 is an end view showing one mode of forming the teeth; and Figs. 7, 8, and 9 are like views showing modifications in the end formation of the teeth.

Like letters of reference in the different figures indicate corresponding parts.

The object of my invention is to provide a belt-fastener which may be struck by means of a suitable die from sheet metal, and which may be so formed as to insure the bending of the teeth in a given direction when forced through the belt, while their bodies are in planes oblique to the longitudinal axis of the plate, thereby securing them so as to prevent them from tearing the leather or obtaining an imperfect hold.

A further object is to render said fastener lighter and stronger than when made from cast metal, all of which is hereinafter more particularly described, and definitely pointed out in the claim.

Referring to the drawings, *a* represents the body of my improved fastener, which may consist of sheet steel, iron, brass, or other suitable metal, but preferably steel.

The fastener, as a whole, may be cut and the teeth bent at a single operation; or two or more operations may be found preferable in completing it.

A in Fig. 4 indicates oblong sheet-metal blanks, which may be formed in a die in which the outer edges of the parts *b b′ c c′*, designed to form the teeth of the fastener, are in lines oblique to the longitudinal axis of the plate, the lines forming the edges of the parts *b b′* being arranged so that if extended they would intersect each other as well as the longitudinal axis of the plate, while the lines forming the edges of the parts *c c′* are arranged in like manner but adverse to the lines *b b′*. Cuts *d* (shown as completed in Fig. 4,) are made either upon striking out the blank or at a secondary operation, and thus form the teeth of the fastener, which are indicated in other figures by the same letters *b b′ c c′*, which are intended more especially to designate their outer edges in the blanks shown in said Fig. 4.

By making the outer edges of the teeth in the blank oblique to the longitudinal axis of the plate I am enabled to make the teeth of the same width throughout their length, and in order to insure the bending of said teeth in the directions indicated in Fig. 2 I preferably incline them from the plane of the perpendicular, as shown in Figs. 4 and 5, so that the teeth upon one end of the plate may bend toward those upon the opposite end. This feature is of the utmost importance, as it invariably insures the clinching of the teeth in the desired direction, the tendency being to draw the parts of the belt from each side toward the middle, the position of each tooth being at an angle to the line of strain of the belt.

Aside from the fact that the teeth are inclined out of the perpendicular to the plane of the plate, the fact that each is bent upwardly from the outer edge of the plate leaves it without a basal support upon the outside, so that upon clinching the natural tendency is for it to bend inwardly, which would not be true were the tooth supported upon all sides of its base. This is an important advantage in using my peculiar form of blank.

I am aware that a belt-fastener has been described consisting of a sheet-metal plate having prongs tapered from the base to the point and arranged in planes oblique to the axis of the plate and perpendicular to the

plane of said plate; but I do not claim such.

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

The combination, in a belt-fastener, of the sheet-metal plate A, having prongs *b b' c c'* of an equal width from the base to the beginning of the point, said prongs upon the respective ends being slightly bent toward each other in planes oblique to that of the body of the plate as well as to its axis, whereby the initial tendency of said prongs is to bend in the direction which they are inclined, respectively, in the act of driving the same through a belt, substantially as shown and described.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 22d day of July, 1889.

EDWARD L. BUDLONG.

Witnesses:

D. H. FLETCHER,

J. B. HALPENNY.