(No Model.)

W. H. BRISTOL.

BELT FASTENER.

No. 596,690. Patented Jan. 4, 1898.

Fig. 1.

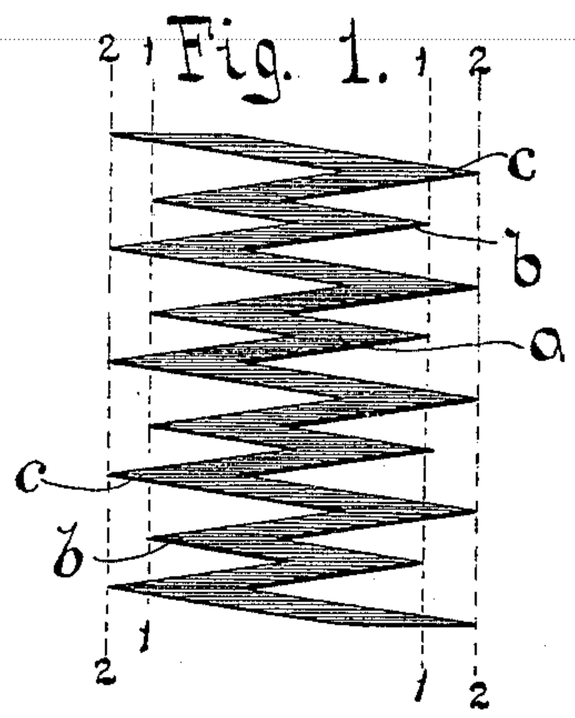


Fig. 2.

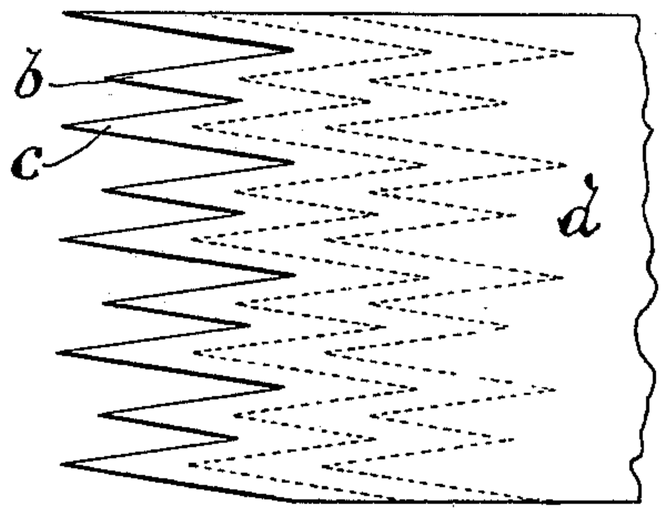


Fig. 3.

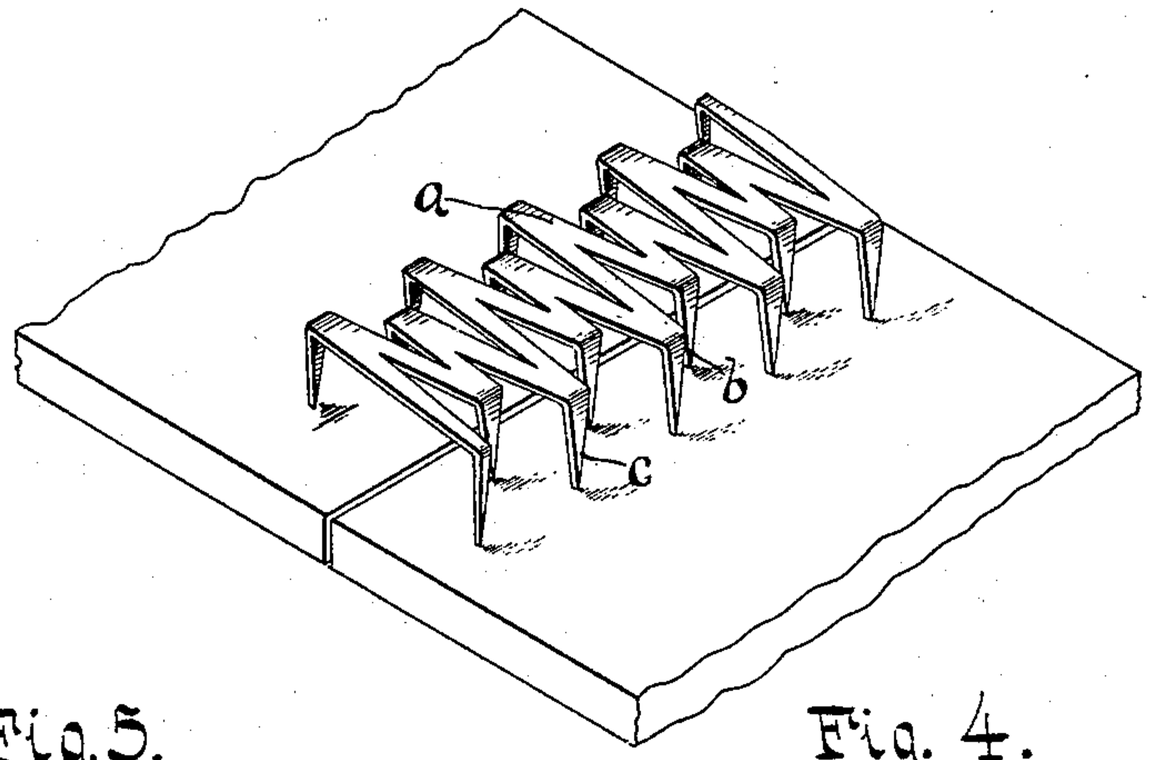


Fig. 5.

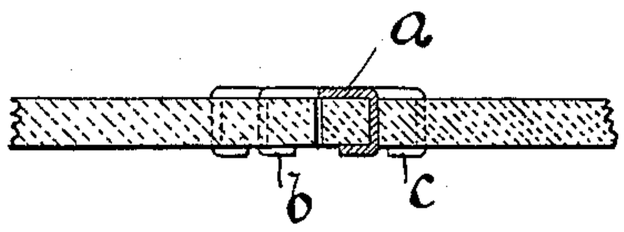
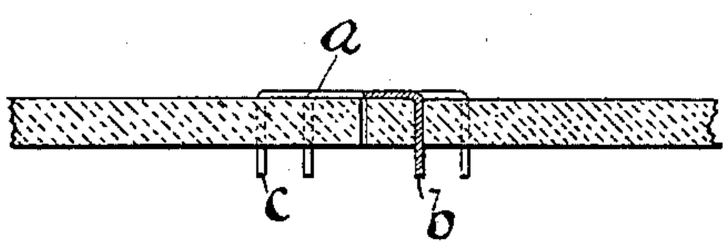


Fig. 4.



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BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 596,690, dated January 4, 1898.

Application filed July 6, 1897. Serial No. 643,491. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BRISTOL, a citizen of the United States of America, and a resident of Hoboken, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Belt-Fasteners, of which the following is a specification.

My invention has reference to improvements in belt-fasteners, and particularly to that class having continuous bodies with two lines of spurs on opposite sides of the longitudinal center line of the body; and it has for its object to produce such fasteners continuously and without waste of material from a strip or ribbon of sheet metal fed in one direction. Heretofore belt-fasteners have been made with an elongated strip or body having a plurality of pointed projections extending outwardly from its longitudinal edges and alternately long and short and all bent at right angles to form points to pass through the belt and be clenched on the opposite side thereof, the projections on one side of the body being staggered with relation to those on the opposite side. In such fasteners the body is in the form of a solid rectangle, and consequently the fasteners cannot be manufactured without considerable waste of material between successive blanks.

Belt-fasteners have heretofore also been formed of sheet metal into a continuous zigzag or sinuous body having spurs alternating on opposite sides of the longitudinal center line, said spurs being bent so as to extend at right angles to the body. This construction is shown in my prior patent, No. 408,061, dated July 30, 1889.

With the object as above set forth in view and also with the object of rendering such double-line fasteners sufficiently flexible to accommodate themselves to the twist of the belt my invention consists, essentially, in a belt-fastener formed of sheet metal into a continuous zigzag or sinuous body provided with two lines of spurs on each side of a longitudinal center line, all said spurs being bent in the same direction and substantially at right angles to the body.

The nature of my invention will best be understood when described in connection with the accompanying drawings, in which—

Figure 1 represents a face view of a blank as cut preparatory to striking up the spurs. Fig. 2 represents a section of the ribbon from which the blanks are cut, the broken lines representing the successive blanks. Fig. 3 is a perspective view of a complete fastener. Fig. 4 is a sectional elevation showing the fastener with the spurs driven through a belt. Fig. 5 is a similar view showing the spurs clenched.

Similar letters of reference designate corresponding parts throughout the several views of the drawings.

In the manufacture of my improved fastener I stamp or otherwise form from sheet metal, preferably sheet-steel, a blank formed of a body *a* and spurs *b* and *c*, Fig. 1. The body is made in substantially sinuous or zigzag form, and the spurs *b* and *c* are alternately short and long and terminate in two horizontal lines 1 and 2 on opposite sides of the longitudinal center line of the body. To form the sinuous or zigzag body, which forms an essential part of my invention, the angular recesses between the spurs have their inner ends staggered—that is to say, the inner ends of the recesses on the same side of the fastener do not lie in one and the same parallel line with the longitudinal center line of the body, but are located in a broken line, thus differing from all fasteners provided with double rows of spurs on each side of the longitudinal center line. In the present instance I have shown the inner ends of the recesses overlapping each other; but this is not absolutely necessary for the production of a sinuous and flexible body, but by so overlapping the same greater economy in material is obtained and the body is rendered more flexible. After the blank has been formed, as shown in Fig. 1, the two sets of spurs are bent so as to extend at right angles or in parallel planes with respect to the body, as shown in Fig. 3. In applying the fastener it is driven through the meeting ends of the belt, as shown in Fig. 4, and the spurs then clenched in the usual manner, as illustrated in Fig. 5.

By reference to Fig. 2 of the drawings it will be readily understood that the blanks for the fastener can be successively punched from a ribbon *d*, which is fed forward in a straight line without lateral reciprocating

movement. The broken lines in Fig. 2 show the successive cuts made by the punch. When all the recesses on the same side of a fastener having double rows of spurs on each side of the longitudinal center line terminate in a line parallel with the longitudinal center line of the body, there must be a waste of material between the successive blanks.

What I claim as new is—

A flexible belt-fastener formed of metal with two lines of spurs on each side of its longitudinal center line and the angular recesses between the spurs being alternately long and short and having their inner ends staggered; and said spurs being arranged in two lines on each side of the longitudinal center line of the fastener and bent in the same direction and substantially at right angles to the body of the fastener; all for the purpose of forming a fastener having a continuous zigzag or sinuous body which can be produced with a straight-line feed without waste of material, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 2d day of July, 1897.

WILLIAM H. BRISTOL.

Witnesses:

EUGENIE A. PERSIDES,

GEO. W. A. EISENBRAUN.