(No Model.)

J. B. NORTON.

BELT FASTENER.

No. 401,201. Patented Apr. 9, 1889.

Fig. 1.

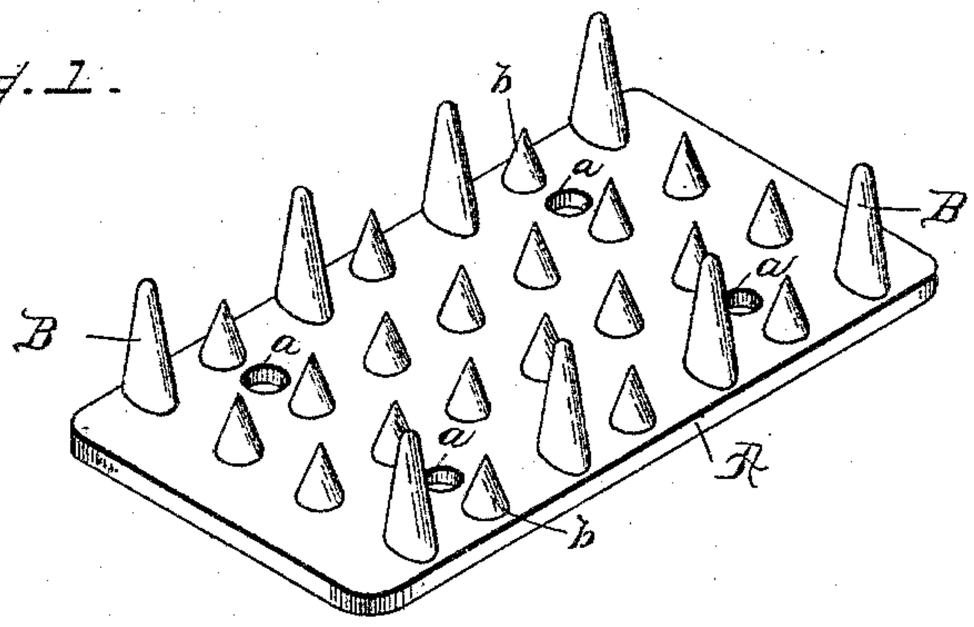


Fig. 2.

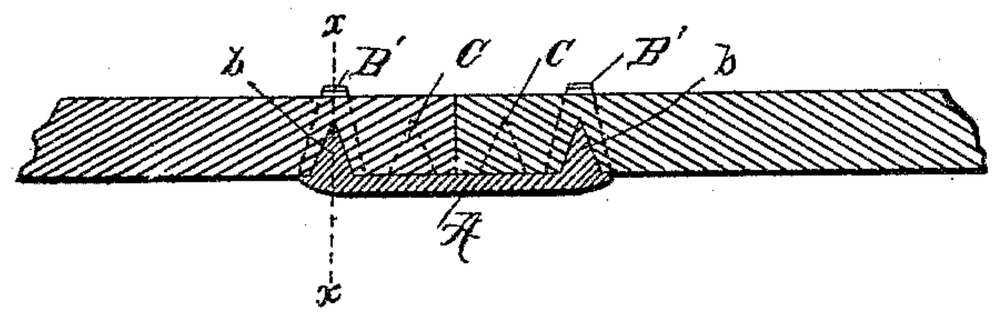
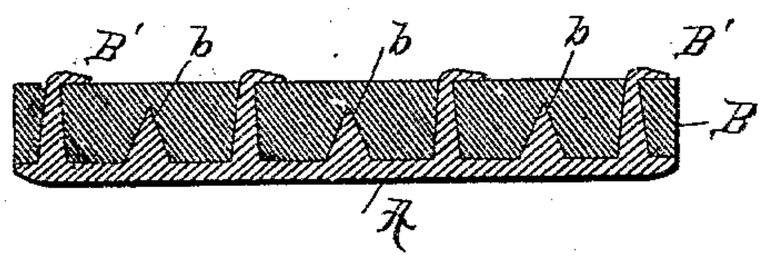


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN BROWN NORTON, OF PHILADELPHIA, PENNSYLVANIA.

BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 401,201, dated April 9, 1889.

Application filed December 6, 1888. Serial No. 292,860. (No model.)

To all whom it may concern:

Be it known that I, JOHN BROWN NORTON, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Belt-Fasteners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved belt-fastener. Fig. 2 is a longitudinal sectional view of the same as applied to a belt; and Fig. 3 is a cross-section on line *x x*, Fig. 2.

Like letters of reference denote corresponding parts in all the figures.

My invention has relation to that class of belt-fasteners which consist of a metallic plate provided on one side with several rows of prongs or teeth adapted to be inserted through the meeting ends of the belt and then clinched, thereby fastening the plate upon the belt and at the same time firmly uniting its ends. In this class of belt-fasteners as heretofore constructed, however, the connecting ends of the belt are greatly weakened by the large number of teeth passing entirely through the body of the belt, thereby breaking and cutting the fibers of the leather or other material of which the belt is made; and the object of my invention is to overcome this drawback by diminishing the number of long clinching-teeth and to so construct the fastening-plate that it shall combine a maximum of holding-power with a minimum of injury to the leather.

With this object in view my invention consists in the improved construction of the fastening device, which will be hereinafter more fully described and claimed.

In the accompanying drawings, the letter A designates the rectangular plate or body of my improved fastener, which may be made of iron or other suitable metal, and of proper dimensions to fit the belt for which it is intended to be used. This plate is provided on one side with two parallel rows of teeth, B B—one row along each edge—said teeth being flattened in the direction of the width of the plate, and the several teeth of each row being separated from one another by intermediate short teeth, *b*, of conical shape and terminating in sharp points.

Between and parallel to the two outer rows, B *b*, are two or more other rows of short teeth, C, similar to *b* in size and shape, but so arranged as to intersect or "break joints" with the edge teeth, B and *b*. At opposite ends plate A is further provided with apertures *a*, located in the triangular end spaces between the short teeth *b* C C.

In applying this fastener to a belt the flattened long teeth B are forced entirely through the leather or other material of which the belt is made, and then clinched down upon the belt, as shown at B′, this process of clinching being facilitated by the flattened shape of the teeth. By this shape, also, it will be seen that only a narrow slot is cut through the leather, and that the fibers of the metal in the teeth are not unduly strained in the process of bending the points in clinching. By this clinching of the long and flattened teeth it will further be seen that the plate will be secured firmly upon the belt. By reference to Figs. 2 and 3 of the drawings it will also be seen that the short conical teeth *b* and *c* will only enter the fabric D of the belt without passing through its entire thickness, thereby not unduly weakening the material of which the belt is made by dislocation or disintegration of its fibers, while at the same time these short teeth hold the meeting ends of the belt with sufficient tenacity to prevent them from being pulled apart. In cases, however, where the belt is subjected to very great tension my improved fastener admits of additional means of connecting the ends of the belt—viz., by rivets E inserted through the apertures *a* in the plate and clinched in the usual manner. By the peculiar location of these rivet-holes *a a* between the teeth the rivets inserted through them will not in the least interfere with the function of the teeth.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

As an improved article of manufacture, the herein-described belt-fastener, consisting of a rectangular metallic plate having rivet-apertures *a*, arranged as described, and provided on opposite sides with a row of flattened clinchable teeth separated from one another by short conical non-clinchable teeth, and with intermediate rows of short conical non-clinchable teeth intersecting or breaking joints with the side rows of alternate long and short teeth, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN BROWN NORTON.

Witnesses:
CHAS. F. HALL,
JOSEPH THOMASSON.