(No Model.)

G. P. KENEHAN.

PROCESS OF MAKING BELT FASTENERS.

No. 448,836. Patented Mar. 24, 1891.

Fig. 1.

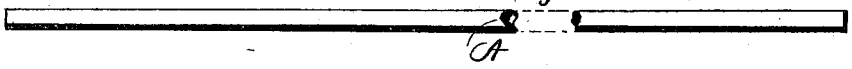


Fig. 2.



Fig. 4.

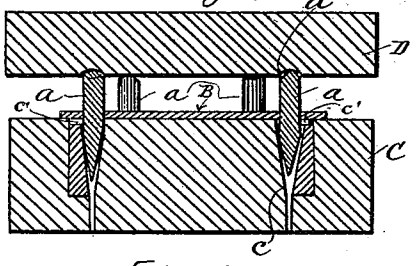


Fig. 5.

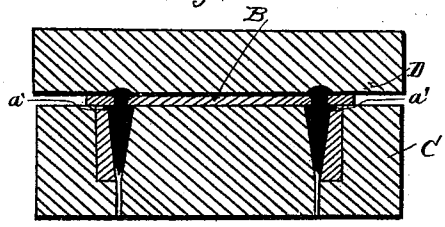
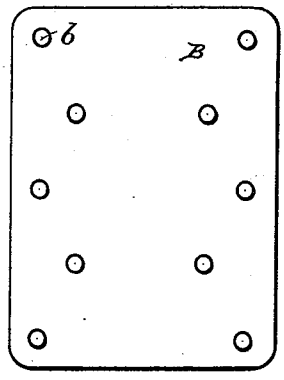


Fig. 3.



Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GILBERT P. KENEHAN, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE STEEL BELT FASTENER COMPANY, OF SAME PLACE.

PROCESS OF MAKING BELT-FASTENERS.

SPECIFICATION forming part of Letters Patent No. 448,836, dated March 24, 1891.

Application filed September 5, 1890. Serial No. 364,045. (No model.)

To all whom it may concern:

Be it known that I, GILBERT P. KENEHAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Process of Manufacturing Belt-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improved process of manufacturing belt-fasteners; and it consists in the steps hereinafter described, and pointed out in the claims, the object being to produce a strong and durable belt-fastener at a minimum cost.

In the accompanying drawings, Figure 1 shows a piece of wire rod or stock from which the teeth of my improved fastener are made. Fig. 2 shows a blank tooth before the same is attached to the body of the fastener. Fig. 3 is a plan view of the plate that constitutes the body of the fastener. Figs. 4 and 5 are vertical sections through the center of the dies employed in my improved process, Fig. 4 showing the work in position to be operated upon, and Fig. 5 showing the finished work. It is not considered necessary to show the frame of the machine in which the dies are held.

A represents the stock or material suitable to be cut into sections of the required length for making the teeth of my improved belt-fastener, and *a* represents a section or blank tooth that has been severed from the stock and rolled or cut to a conical or tapering form approximately one-half its length, as shown.

B represents the plate that constitutes the body of the fastener, the same being provided with holes *b* for the reception of the teeth of the belt-fastener.

C and D represent a pair of dies that are adapted to fasten the teeth to the body of the fastener, die D being adapted to rivet the teeth to the body of the fastener, and die C being adapted to chamfer the teeth from a point above the body of the fastener, preferably to the tip of the teeth, and to simultaneously upset the teeth, forming a shoulder on the teeth abutting the body of the fastener, both dies being adapted to perform their functions simultaneously.

Sections *a*, having been cut from the stock A and rolled or cut, as aforesaid, and plate B having been provided, the latter is placed in position on die C and blank teeth *a* are inserted in the respective holes of plate B, with their sharp ends extending into the holes of die C, and with their shank ends protruding above the plate and adapted to engage depressions *d* in the opposing die D. (See Fig. 4.) Power is then applied and the dies made to perform their respective functions simultaneously. Die C, by means of the peculiar shape of holes *c*, shapes and chamfers the blank tooth and upsets into recess *c'* the material that is chamfered off, forming a shoulder *a'* on the tooth, and die D, by means of depressions *d*, rivets the tooth, the blank tooth, as aforesaid, being fastened to the body of the fastener and finished at one operation. (See Fig. 5.)

Heretofore the chamfering and shouldering of the teeth of belt-fasteners were done separately. The chamfering was done by hand, requiring a great deal of labor and time, and considerably enhancing the cost of such articles; also, the material that was cut from the tooth to produce the flat chamfered side of the tooth was wasted.

With my improved process the chamfering and upsetting are done simultaneously. In fact, all that is required is to place the plate or body of the fastener and the blank teeth in position between the dies, and by the simultaneous action of the latter the finished belt-fastener can be produced at one operation and without waste of any material. Hence the cost of such articles is reduced to a minimum.

What I claim is—

1. The process herein shown and described of manufacturing the teeth of belt-fasteners, and consisting, first, in cutting or rolling the blank tooth approximately tapering or conical a portion of its length, and, secondly, in simultaneously chamfering and upsetting the tooth, substantially as set forth.

2. The process herein shown and described of manufacturing belt-fasteners, and consist-

ing, first, in cutting or rolling the blank tooth approximately tapering or conical a portion of its length, and, secondly, in simultaneously chamfering and upsetting the tooth and fastening the same to the body of the belt-fastener, substantially as set forth.

3. The process herein shown and described of manufacturing belt-fasteners, and consisting, first, in cutting or rolling the blank tooth approximately tapering or conical a portion of its length; secondly, in simultaneously chamfering and upsetting the tooth, and, thirdly, in riveting the tooth, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 19th day of August, 1890.

GILBERT P. KENEHAN.

Witnesses:
C. H. DORER,
WARD HOOVER.