

(No Model.)

P. KOCH.
BELT FASTENER.

No. 291,202.

Patented Jan. 1, 1884.

Fig. 1.

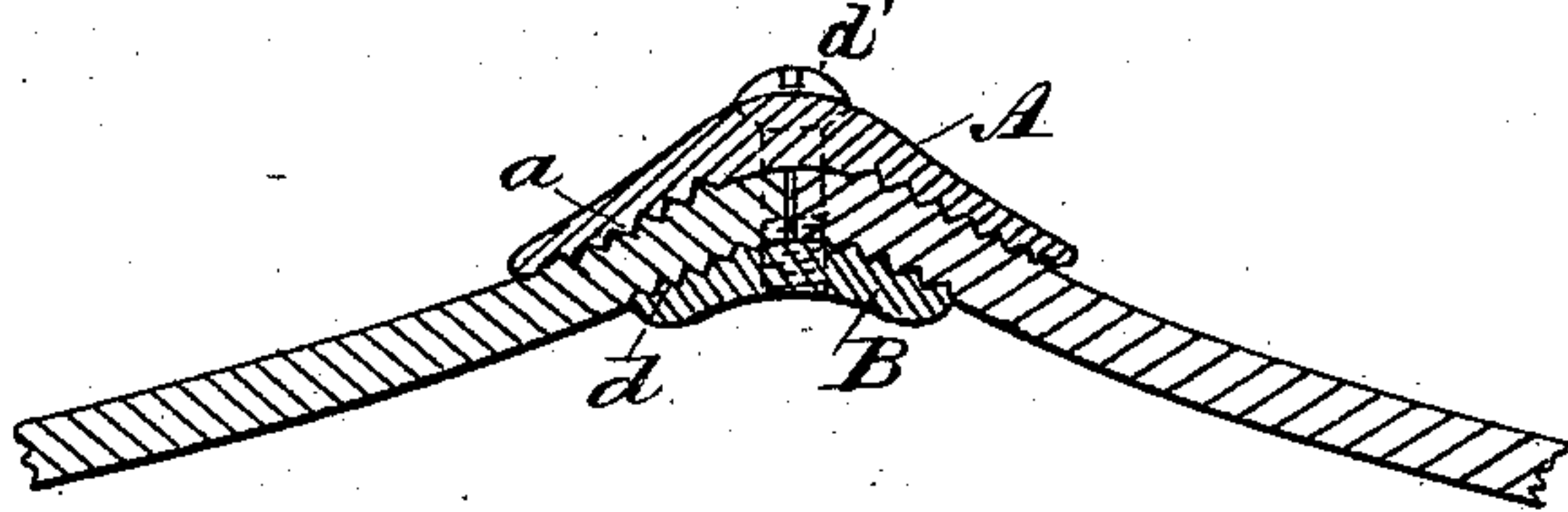


Fig. 2.

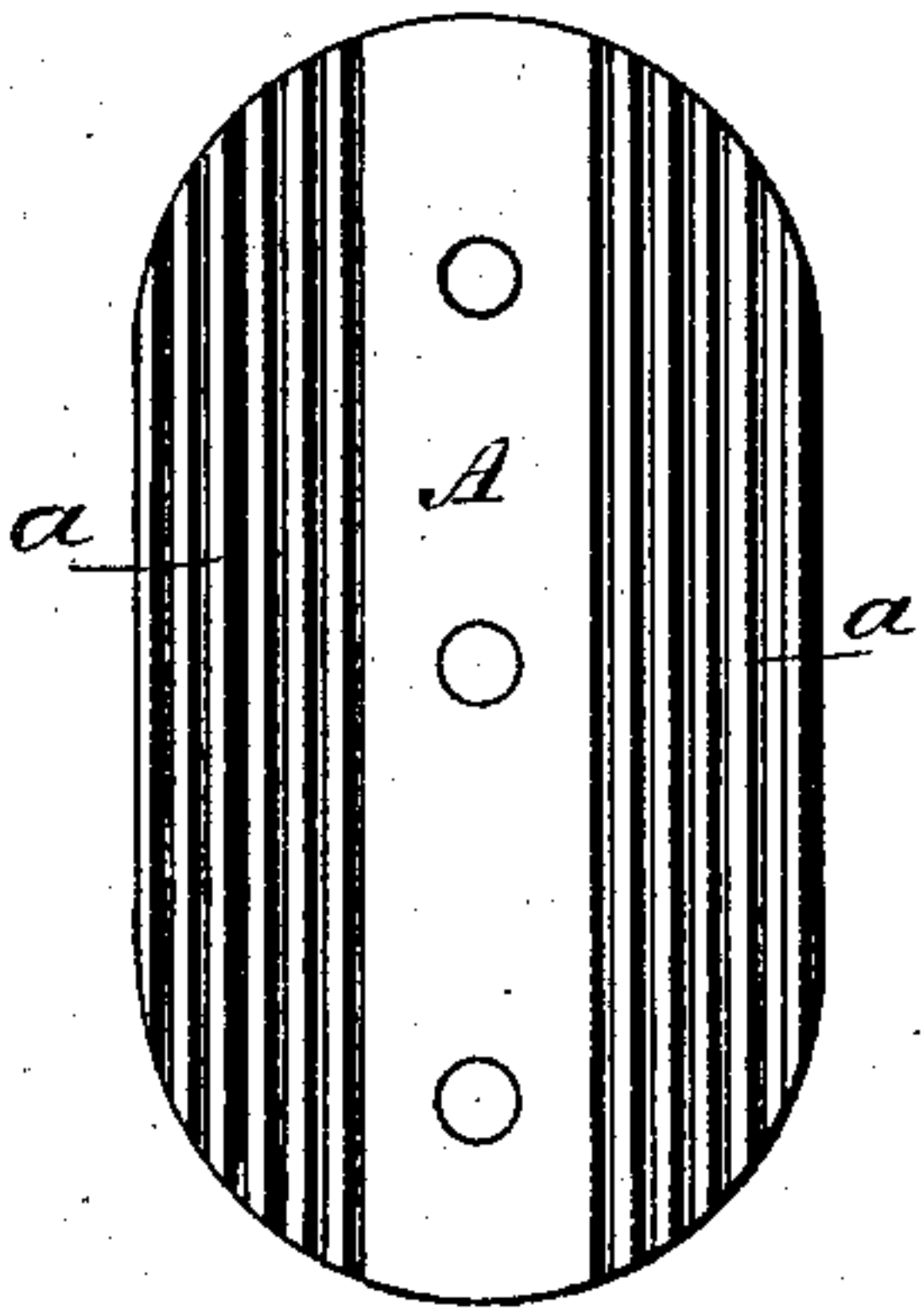


Fig. 7.

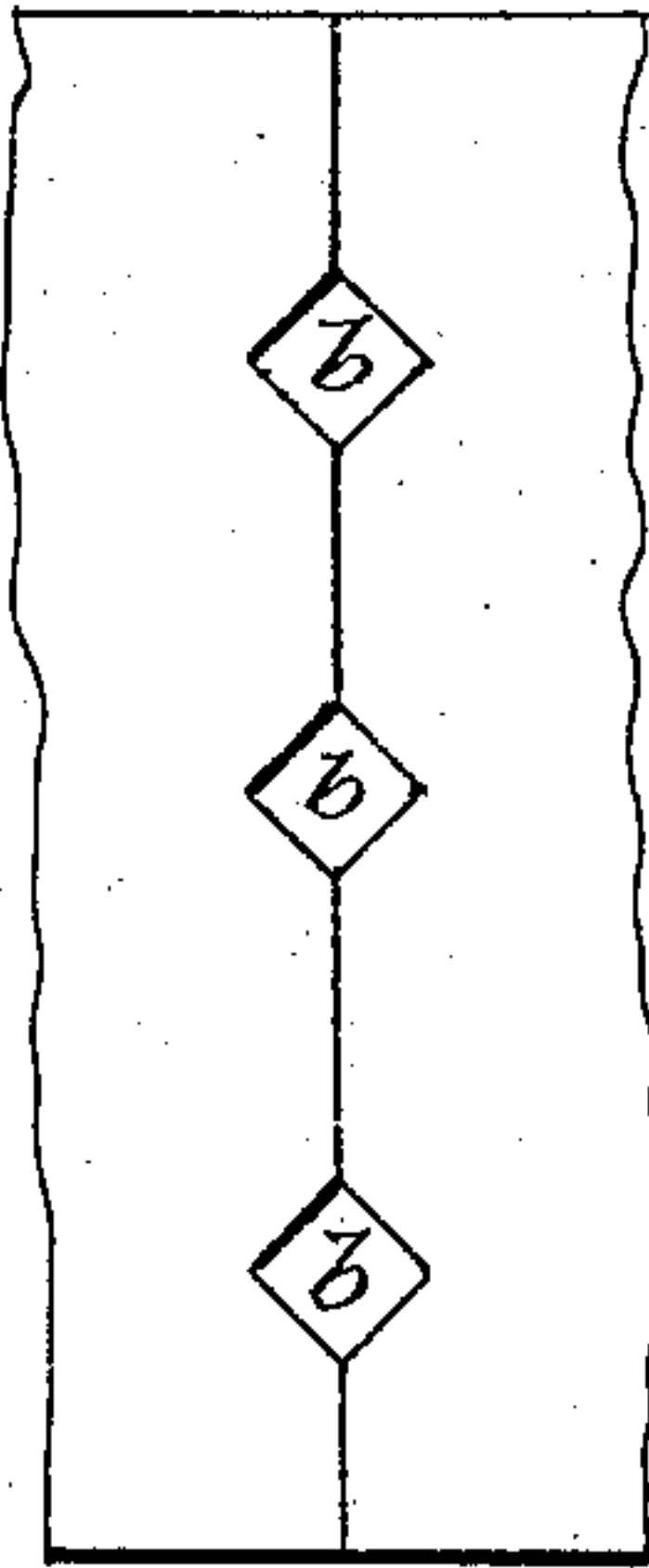


Fig. 3.

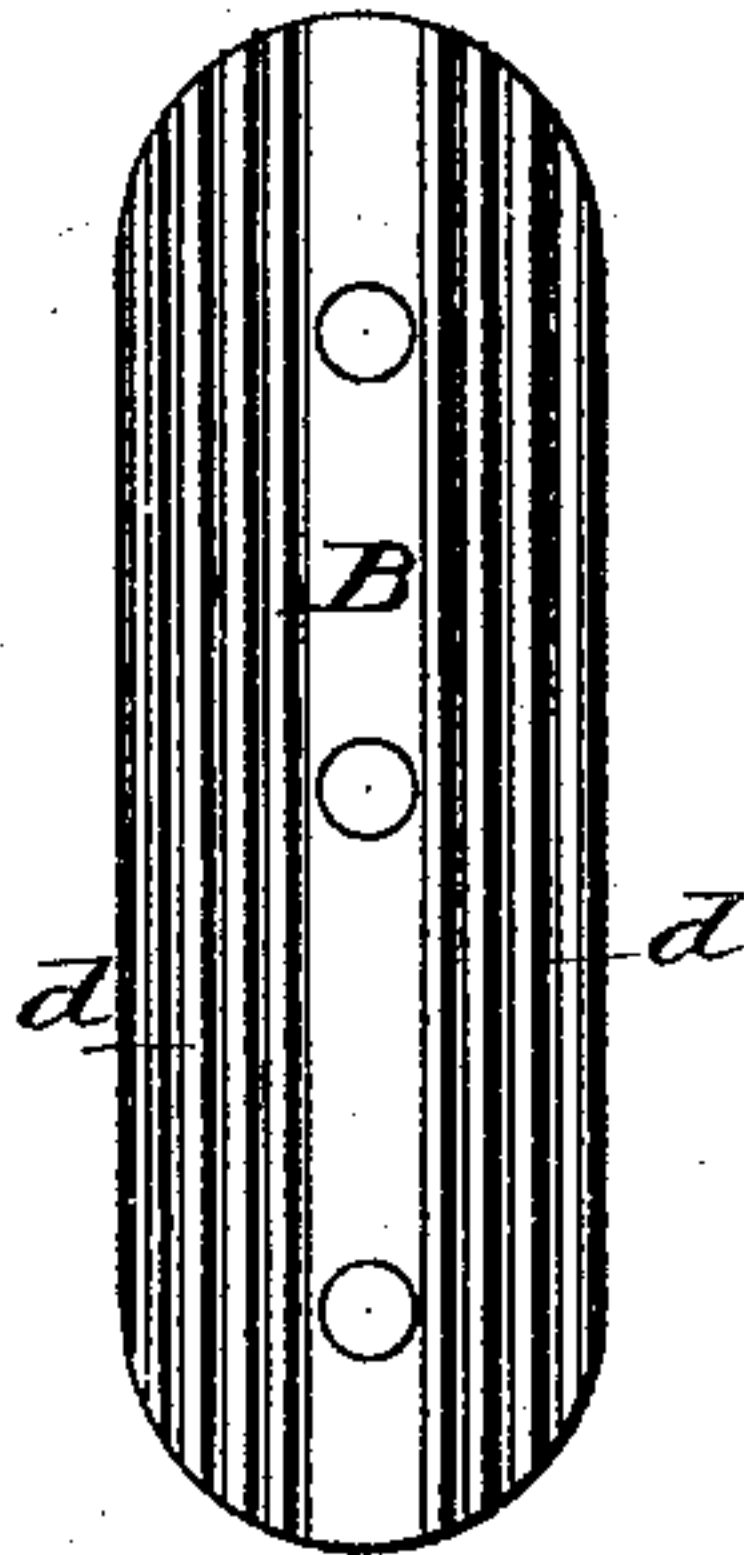


Fig. 4.

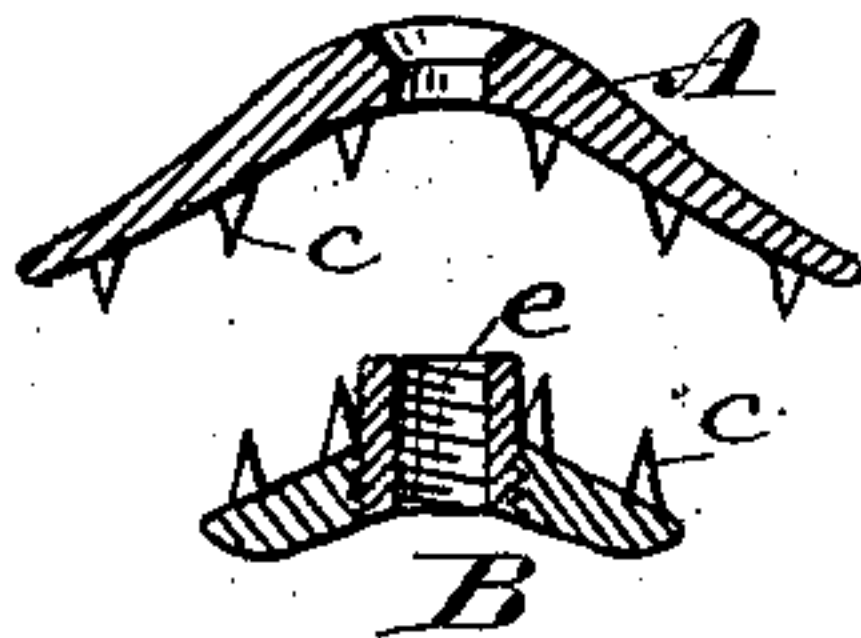


Fig. 5.

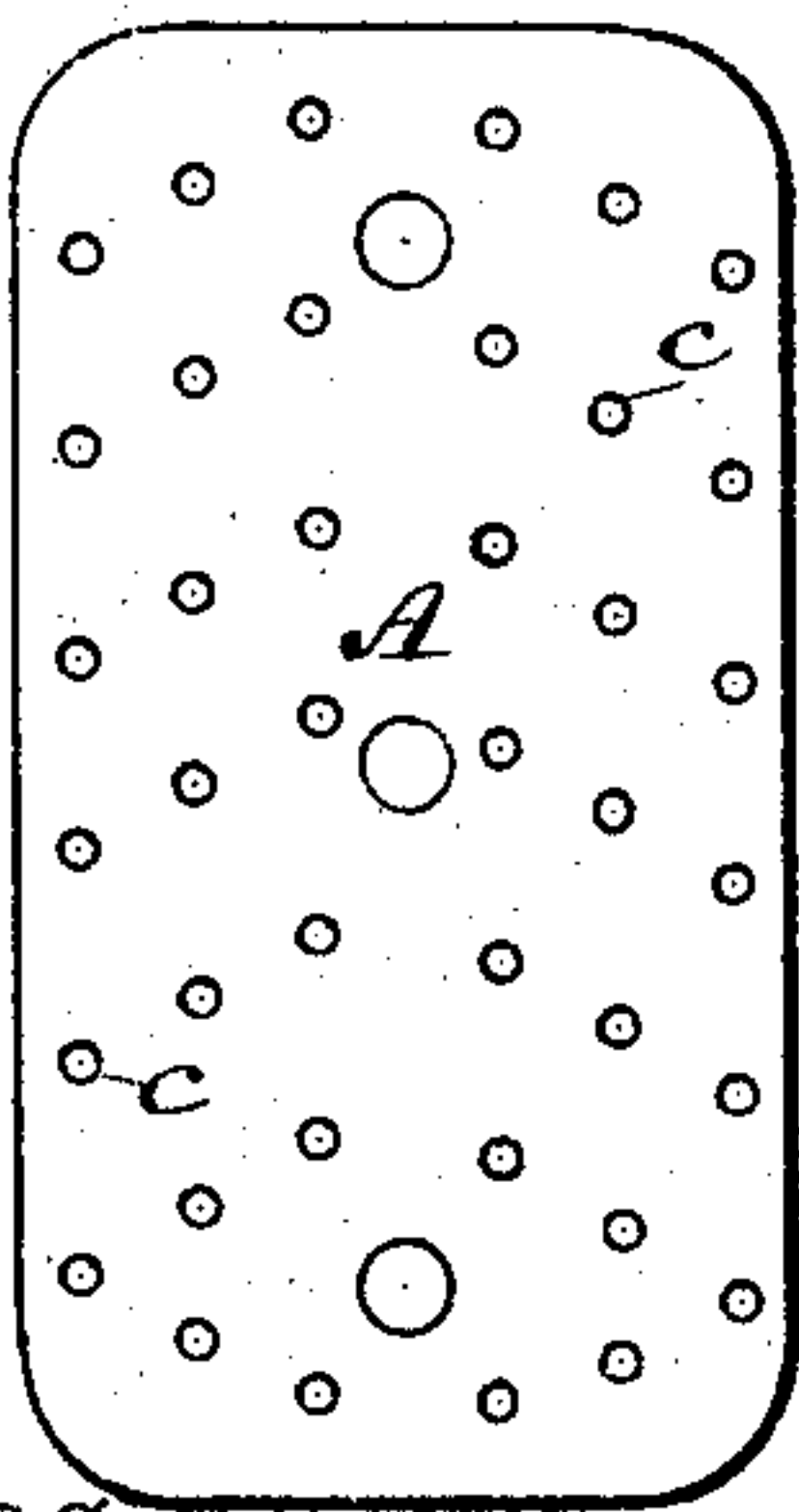
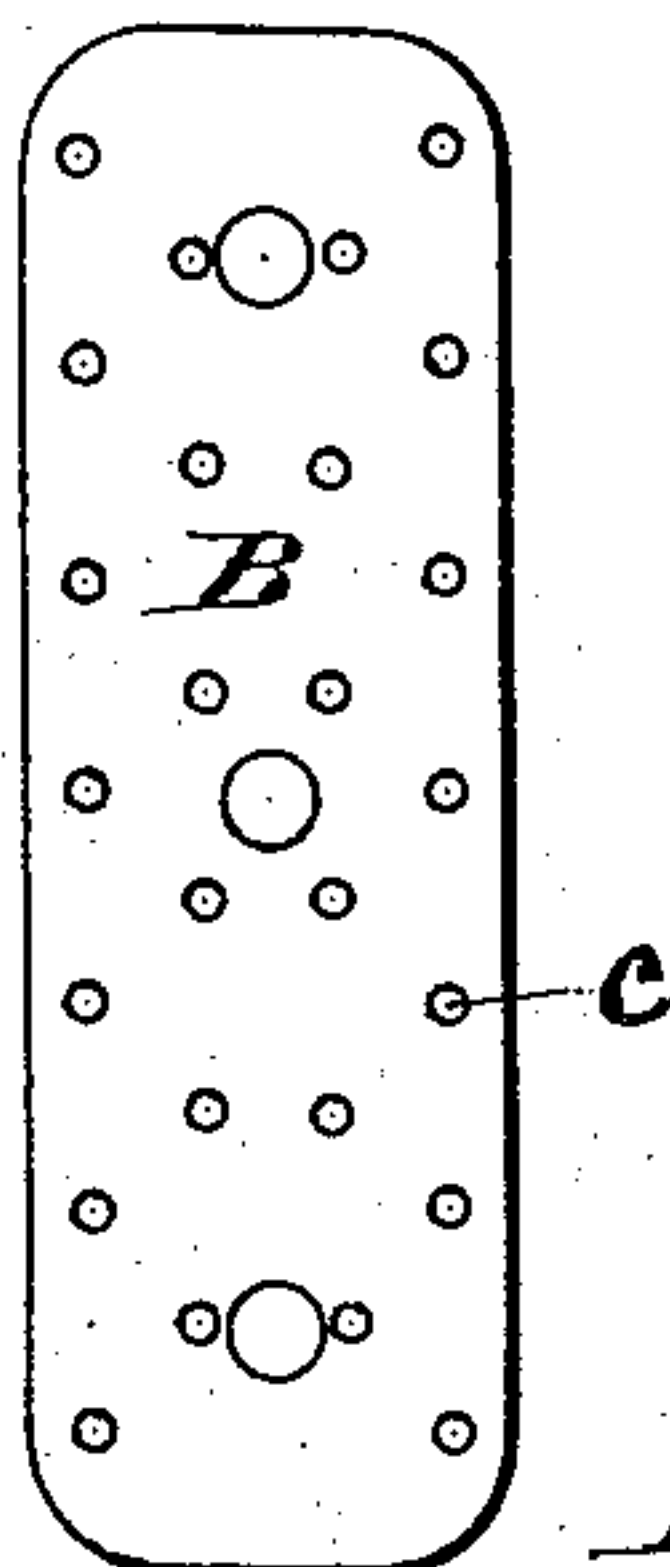


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

PHILIPPE KOCH, OF NEUSS-ON-THE-RHINE, GERMANY, ASSIGNOR TO
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BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 291,202, dated January 1, 1884.

Application filed August 30, 1883. (No model.) Patented in Germany March 24, 1878, No. 3,041, and July 25, 1880, No. 12,203.

To all whom it may concern:

Be it known that I, PHILIPPE KOCH, a citizen of Germany, residing at Neuss-on-the-Rhine, Empire of Germany, have invented certain new and useful Improvements in Belt-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in belt-fasteners; and the object is to produce a belt-fastener that is perfectly reliable and safe, by which the clattering or noise usually occasioned by screws or rivets which come in contact with the face of the pulleys is entirely prevented, which can be easily and quickly applied, and by which the leather itself is not weakened by cutting holes in the ends to unite them.

The invention consists of an upper and lower part, between which the ends of the belt are clamped. The upper part is made of concave shape and the lower part of convex shape, corresponding to the lower side of the upper part. Each part is provided with serrations of saw-tooth shape, or with a series of conically-shaped teeth or points, placed in staggering manner on the lower side of the upper part and the upper side of the lower part. Both parts are united by screws with countersunk heads, and between said parts the ends of the belts are securely clamped. Where the screws pass through the squared ends of the belts small triangular or semicircular notches are cut to prevent crowding or bulging of the belt.

It also consists in certain details of construction, as will be more fully described hereinafter, and more specifically pointed out in the claim, reference being had to the accompanying drawings and the letters of reference marked thereon.

In said drawings, Figure 1 represents a vertical section of the belt-fastener connected to a belt. Fig. 2 is a bottom view of the upper part. Fig. 3 is a top view of the lower part. Fig. 4 is a section of a modification of the upper and lower parts. Fig. 5 is a bottom view of the upper, and Fig. 6 is a top view of the lower, part of the modification shown in Fig. 4. Fig. 7 is a view of the two abutting ends of the belt.

In the drawings, A represents the upper part of the belt-fastener, made of concave form and provided with transverse serrations *a*. The lower part, B, is made of convex shape, and is also provided with similar serrations, *d*. These are made preferably of saw-tooth shape, but the points not sharp enough to cut the ends of the belt. The ends of the belt are cut with notches *b*, to give sufficient space to clear the screws and prevent bulging or crowding of the belt. Suitable screws, *d'*, pass through the upper part, A, and the ends of the belt into the lower part, B, which is provided with proper screw-threads to receive the ends of the screws. The ends of the belt are cut perfectly square, so that they abut squarely against each other, and can be firmly clamped between the upper and lower parts. In the modification shown in Figs. 4, 5, and 6 the upper and lower parts are provided with a series of conically-shaped teeth or projections, *e*, instead of the serrations, and they enter into the ends of the belt and prevent it from slipping. Said teeth are preferably arranged in staggering manner—i. e., the teeth on the upper part are arranged to come opposite the spaces on the lower part. The lower part, B, is provided with thimbles *e*, which can be screwed in place and riveted, or they may be cast in one piece with said part. The inner side of these thimbles is screw-threaded, to receive the ends of the screws, and it will be readily seen that a much longer thread is thus obtained and a firmer hold; and, if desired, the screws can be made shorter than when they pass only into the thickness of the lower part. The ends of the shanks of both parts are rounded off from inside to outside, so as to prevent cutting of the belt. The central part of the lower part, B, may be made inclined, as shown in Fig. 4. It will thus be readily seen that by this construction the belt will not be pressed upon evenly at the point where the belt-fastening is placed, but that the main pressure will occur at the place where the convex shank of the lower part comes opposite the concave part of the upper part. The consequence of this will be that the belt will be pressed together most at that point; that, however, it will assume its natural thickness at the abutting

point. The lower part, B, is rounded slightly at its lower edges, and will be again brought to its natural thickness.

From the form of this belt-fastening it will also be seen that it will never touch the face of even very small pulleys, and therefore all clattering or noise—as, for instance, with the ordinary belt-screws—will be obviated. The belt is also held firmly its entire width, and the belt-fastening can be used with flanged pulleys and form no obstruction.

I am aware that belt-fasteners having an upper and lower part to secure the ends of the belt together are not broadly new, as shown in the patent (No. 9,080) to Smith, and I disclaim the construction therein shown; but this is an improvement on that kind of belt-fasteners.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

The belt-fastener herein described, consisting of an upper part, A, of concave shape, and a lower part, B, of convex shape, corresponding with the curve of the lower side of the upper part, and provided on their faces next to the belt ends with teeth or points, and the lower part with nipples having screw-threads to receive the screws, which hold the parts together and against the belt ends, all substantially as shown and specified.

In testimony whereof I hereto affix my signature in presence of two witnesses.

PHILIPPE KOCH.

Witnesses:

SAMUEL SPACKMAN,
TH. GUTMANN.