

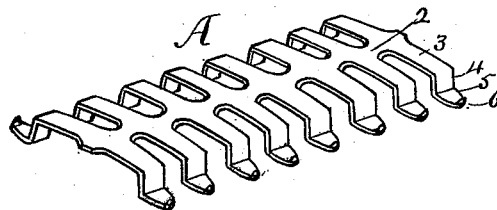
(No Model.)

W. N. PACKER.

BELT FASTENER.

No. 384,465.

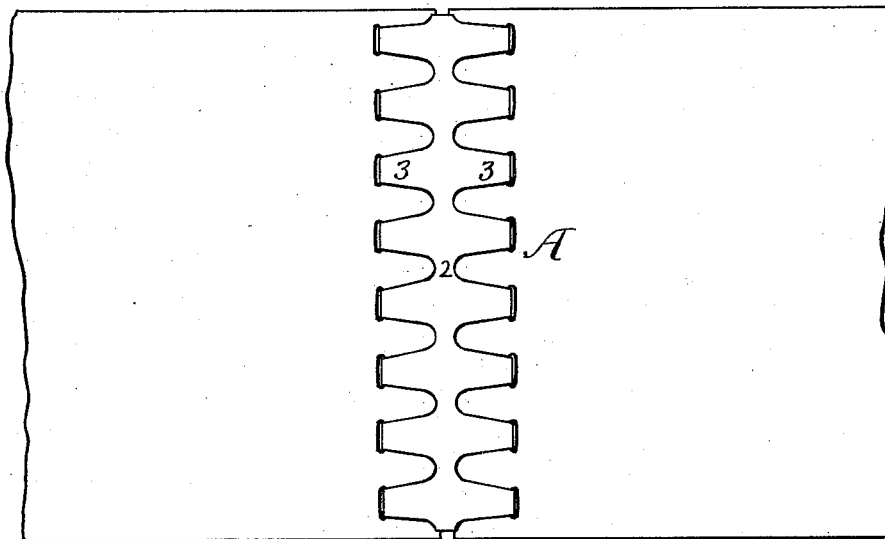
Patented June 12, 1888.



*Fig. 3.*



*Fig. 2.*



*Fig. 1.*

*Witnesses.*  
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# UNITED STATES PATENT OFFICE.

WILLARD N. PACKER, OF CLEVELAND, OHIO.

## BELT-FASTENER.

SPECIFICATION forming part of Letters Patent No. 384,465, dated June 12, 1888

Application filed April 6, 1888. Serial No. 269,844. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD N. PACKER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, 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.

My invention relates to improvements in belt-fasteners; and it consists in a metallic fastener of any desired length, according to the width of belt, and having a series of peculiarly-shaped fingers along either edge, all connected by a common web, substantially as shown and described, and particularly as pointed out in the claims.

In the accompanying drawings, forming part of the specification, Figure 1 is an outside view of sections of a belt connected by my improved fastener. Fig. 2 is a longitudinal section of the same. Fig. 3 is a perspective of the fastener alone.

A represents my improved fastener, made, preferably, of sheet-steel of the best quality and pressed into form, substantially as shown in the drawings. The length of the fastener is not a material matter, except as length contributes to convenience in use. For this reason I prefer to make the fastener originally, say, twelve inches long, which adapts it to a twelve-inch belt. Then, if I wish to use it on a narrower belt, I can easily break it to the lesser length desired.

It will be observed that the fastener has a narrow web, 2, which connects all the fingers along either side and enables the breaking to be done with sufficient readiness, while at the same time it forms a sufficiently-strong support for the fingers and to prevent side play at the ends of the belt where the coupling is made.

It will be observed that the fastener is fashioned with slight convexity in cross section, thus adapting it to the circular form of the pulley, and the fact that it is made of springy material makes it yield readily to the tension and curvature of the particular size of pulley employed. The fingers 3 on either side of the

web project laterally therefrom practically in the same plane with the web, though very slightly curved down to the shoulders 4, which are about at right angles thereto. These shoulders correspond in length to the usual thickness of a belt, and projecting from the shoulders in about parallel lines to the body of the fingers are the extremities 5. These extremities have their points or tips 6 bent inward, so as to penetrate the belt and make the fingers more effective in holding the ends than they might be without them.

In the preparation of the ends of the belt to attach the fastener I find the fastener itself of great convenience, first, in serving as a scratch-guide for the row of perforations from the end of the belt, the space being equal to the distance between the finger-points, and, second, in marking the exact location of the perforations on the scratch by pressing the fingers thereon with firmness enough to make slight indentations. The perforations being made to suit the size of the fingers, the work of securing the ends of the belt is easily and quickly accomplished. This is done by placing the end of the belt at about forty-five degrees angle to the fastener, when the fingers are readily introduced to the perforations and pushed over the shoulders. Then by straightening the parts for work, say, as seen in Fig. 2, nothing more need be done, and the belt is ready for use.

The advantages arising from this construction are numerous and valuable. The simplicity of the fastener and the ease and cheapness with which it can be made are obvious. By making it of such length that it can be broken into suitable size for narrower bands I am never at a loss for a fastener that is long enough for my purpose, and avoid the necessity of carrying a large and varied assortment as to sizes, as would be necessary if it were not thus constructed. The extreme ease and quickness with which the coupling can be effected works important saving of time, frequently worth more than the cost of the fastener. The belt can be taken apart in a moment, and there is no cutting nor breaking of any part to do this or to recouple the ends the next moment, if desired. Coupling and uncoupling are alike

speedy and easy. The web connecting the fingers is strong enough to prevent all side play at the joint, as there would be without the web, and yet is fragile enough to be broken when breaking is required. The main strain on the fastener being on those parts which do not touch the pulley, I am enabled to construct the fingers with such extremities that but slight metal surface is exposed to the pulley, and this surface in a short time practically disappears, for the reason that the fingers soon embed themselves in the belt, thus forming a substantially even belt-surface at the junction of the ends. If one finger or more should be broken, the belt is sustained by the others in the series. The points 6 on the ends of the fingers penetrate the belt and serve to give additional strength and firmness to the fastener. It will be seen that when the belt is on the pulley it cannot by any possibility get loose at the joint without being violently torn asunder. The fastener will wear for an indefinite period without danger of wearing out. The fingers are set opposite each other in series and taper gradually from the base to the top, thus throwing the strength where it is needed.

In case it is preferred, the fastener may be made with fingers, substantially as shown and described, along only one side, while differently-formed fingers or means of attachment to the other end of the belt may be provided for on the other side. If the readiness to attach and detach exists as to one side or one end of the belt, it may by many be deemed amply sufficient, in which case other means or methods of attaching to the other side or end can be adopted without departing from the spirit and intent of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A belt-fastener having a central web and a series of fingers on either side, with shoulders on the fingers corresponding to the thickness of the belt, the tips of the fingers projecting laterally from the body, substantially as set forth.

2. The belt-fastener herein described, having opposite rows of fingers, the body of each finger and the extremity thereof being in different but substantially parallel planes, with a shoulder offset between the body and extremity corresponding to the thickness of the belt, and a web connecting the fingers, substantially as set forth.

3. An improved article of manufacture consisting in a metallic belt-fastener formed in a single piece, with a web at its center and a series of fingers projecting oppositely from said web, each finger having a shoulder near its end at about right angles to the web and the plane of the finger above and below the shoulder, substantially as set forth.

4. A belt-fastener provided with a web along its center and a series of fingers at each side of the web, having their extremities pointed and the points turned inward substantially at right angles to the plane of the fingers, substantially as set forth.

5. The belt-fastener herein described, having a series of fingers, the body and the extremity of each finger being in substantially parallel lines with a shoulder between, and the tips of the fingers extending outward from the body with the end of a belt having the extremities of the fingers directly in contact with the inside thereof, substantially as set forth.

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Witnesses:

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