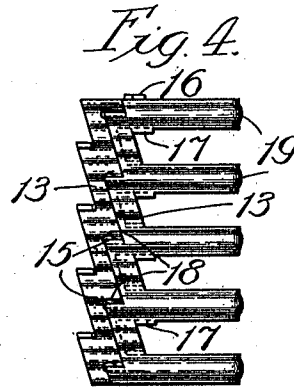
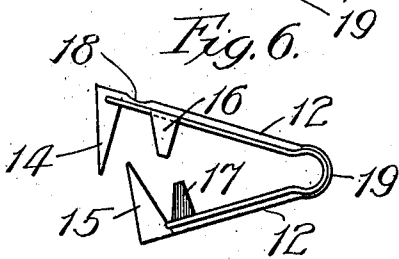
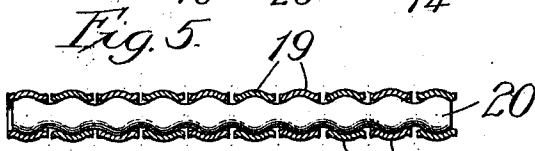
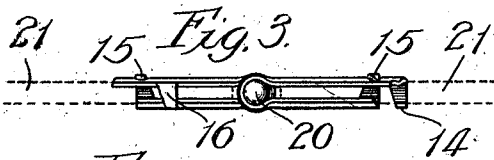
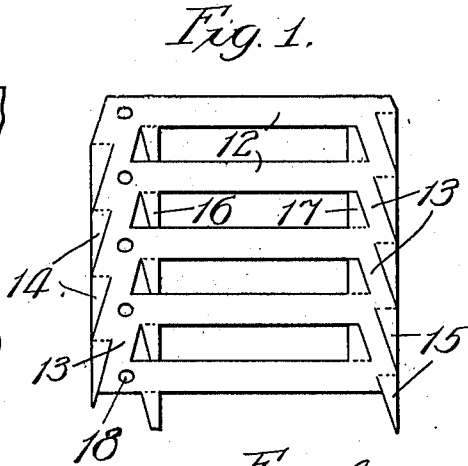
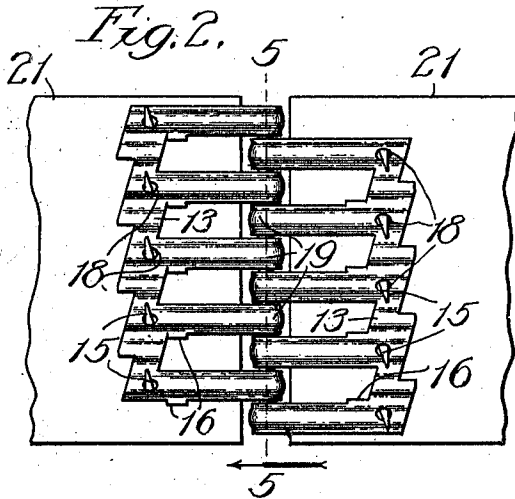


F. M. LINDERMAN.
BELT FASTENER.
APPLICATION FILED AUG. 25, 1910.

982,374.

Patented Jan. 24, 1911.



Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK M. LINDERMAN, OF CHICAGO, ILLINOIS.

BELT-FASTENER.

982,374.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed August 25, 1910. Serial No. 578,814.

To all whom it may concern:

Be it known that I, FRANK M. LINDERMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Belt-Fasteners, of which the following is a specification.

My invention relates to improvement in fastenings or lacings for use, more especially, in coupling together the ends of machine belts.

My object is to provide a coupling of this class of simple and improved construction which may be readily attached to and detached from the belt and operate, when in place, as a particularly strong, durable and efficient means for holding the belt-ends together.

Referring to the accompanying drawing—
Figure 1 shows a sheet-metal blank for one of a pair of hinged belt-fastening members; Fig. 2, a plan view of a hinged belt-fastener of my improved construction, the members of which are each formed from a blank like the one illustrated in Fig. 1, and applied to the ends of a belt; Fig. 3, an edge-view of the belt and hinged fastener; Fig. 4, a plan view of one of the hinged-fastener members; Fig. 5, an enlarged section taken on line 5 in Fig. 2 and showing the pintle; and Fig. 6, a side view of one of the hinged members opened.

In the production of the hinged coupling, blanks, as shown in Fig. 1, are cut from a sheet-metal strip to produce the bar-portions 12 joined together at opposite ends by cross-pieces 13, slit to form the outer pointed prongs 14 and 15 and inner and shorter prongs 16 and 17, and punched to provide the eyes 18, all the parts being disposed with relation to each other, as shown. The prongs 14, 15, 16 and 17 are then bent at the dotted lines indicated in Fig. 1, to extend in the same direction perpendicular to the body formed by the bars 12 and strips 13. The body is then corrugated longitudinally to give to each bar 12 a concavo-convex form, the convex surfaces thereof being at the side of the body opposite the prongs. The body is then bent over between the ends of the bars 12, as shown in Fig. 6, and in a manner to form the semi-cylindrical bearings 19, concave on their inner sides, and to cause the points of the prongs 15 to register with the eyes 18. The two hinged members of each fastener are joined in hinged relation by a pintle, or

the like, 20, having a corrugated annular surface, as shown, to fit the intermeshing bearing-portions 19 of the members.

In applying the fastener to the ends of a belt 21, the parts are assembled as shown and the prongs are driven through the belt-material to cause the prongs 14 and 15 to project well beyond opposite surfaces of the belt. The points of the prongs 15 pass through the eyes 18 and are upset upon the outer surfaces of the bodies, while the points of the prongs 14 are upset upon the belt-surfaces, as indicated in Fig. 3.

The corrugations at the end-portions of the body form stiffened or strengthened driving-heads for the prongs. The prong-driving head-portions of the body are greatly reinforced by the cross-strip portions 13 which also serve to hold the said head-portions in rigid relation to each other, thereby preventing their becoming distorted, while the prongs are being driven. This rigid relation of the heads insures proper driving of the prongs through the belt. The prongs may, as shown, be much greater in width than the thickness of the metal and, when applied to a belt, the prongs extend with their edges lengthwise of the belt and therefore in the direction of the strain, which fact contributes materially to the strength of the fastener. The fact that the construction described provides four rows of belt-engaging prongs at each end of the fastener also contributes very materially to the strength of the fastener.

When the members are opened, as shown in Fig. 6, they may be readily put together in intermeshing relation, or separated, and the pintle 20 may be readily inserted or withdrawn. The corrugated surface of the pintle fits the corrugations of the fastener-members in a manner to afford proper flexibility to the joint and at the same time prevent longitudinal movement of the pintle. Thus in use it is impossible for the pintle to work out and project beyond an edge of the belt. If the pintle is of metal, it should be provided initially of the corrugated form shown. If it is of rawhide, for example, it may be provided initially in straight cylindrical form, because in use the bearings 19 will soon indent the rawhide and mold it into the corrugated form of the pintle 20 shown.

My improved fastener may be variously modified in the matter of details of con-

struction and combinations of parts without departing from the spirit of my invention as defined by the claims.

What I claim as new and desire to secure
5 by Letters Patent is—

1. In a belt-fastener a pair of hinged members having belt-penetrating prongs and formed with corrugated body-portions bent and shaped between their ends to intermesh
10 and form a corrugated pintle-bearing, and a corrugated pintle fitting said bearing to hinge the members together and be held thereby against longitudinal movement.

2. In a belt-fastener, a hinged member having a body formed of longitudinally- 15
extending bars and cross-pieces joining the outer end-portions of the bars, and belt-penetrating prongs projecting from opposite end-portions of the body, the said bars being
20 corrugated and bent between their ends to form concave pintle-engaging surfaces, substantially as set forth.

FRANK M. LINDERMAN.

In presence of—

R. A. RAYMOND,
A. U. THORLEN.