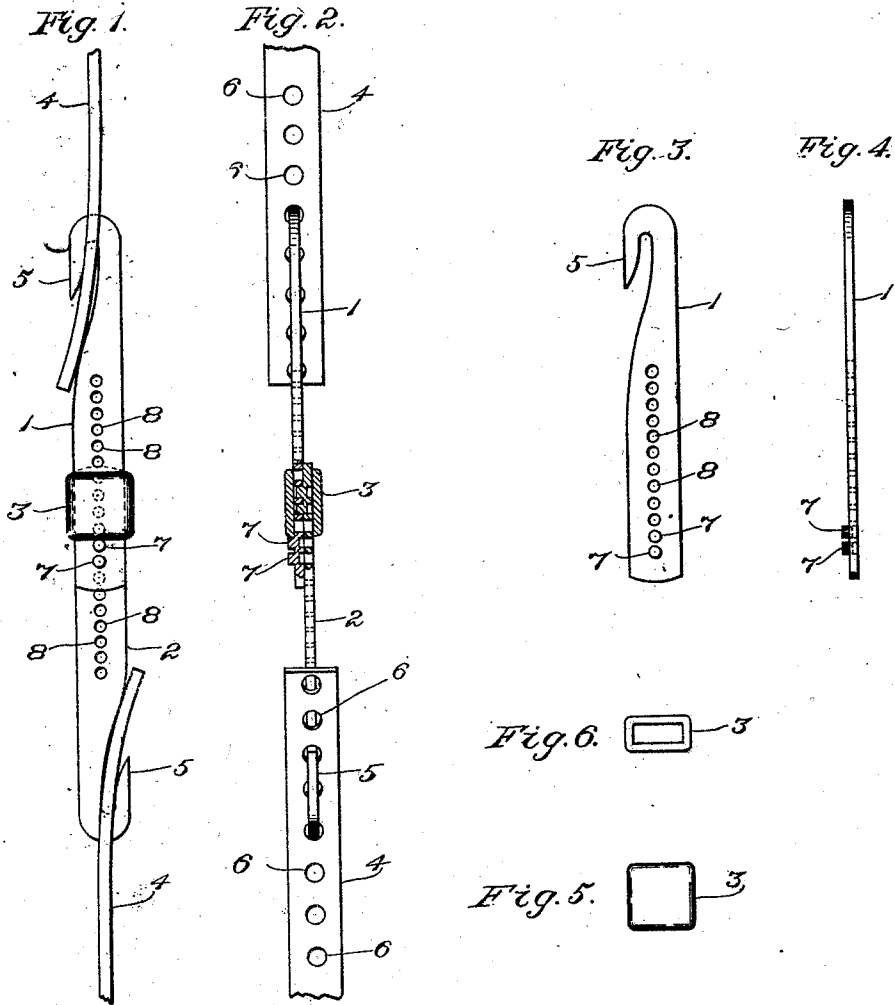


F. LACEY.
ADJUSTABLE HARNESS LINK FOR LOOMS.
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1,009,533.

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UNITED STATES PATENT OFFICE.

FRED LACEY, OF LOWELL, MASSACHUSETTS.

ADJUSTABLE HARNESS-LINK FOR LOOMS.

1,009,533.

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To all whom it may concern:

Be it known that I, FRED LACEY, a citizen of the United States, residing at Lowell, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Adjustable Harness-Links for Looms, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention resides in a link of novel and improved construction more especially designed for use as a part of the connections employed in looms for operating the harness-frames of the latter.

Described in general terms, such link comprises two members each having one end thereof hooked or otherwise adapted for engagement with an adjoining element of the train of connections of which the link constitutes one element, the other ends of the said members overlapping for a portion of the length of the link. One of the members has a longitudinal series of perforations or holes, and the other one or more studs adapted to enter the respective perforations or holes of the said series. A movable keeper embraces both members, when in its working position, and thereby holds the two members close together and keeps the stud or studs in the hole or holes in which it or they may be set. The construction provides for relative adjustment of the members so as to lengthen or shorten the link as may be required.

One feature of the invention consists in making the said members of pieces which are of uniform thickness throughout, and placing them together with their flat surfaces in contact.

Another feature thereof consists in providing means to arrest said keeper in its locking position.

Another feature consists in producing the stud by pressing out an integral portion of one of the members.

In the preferred embodiment of the invention the two members are alike or identical, for convenience and economy in the manufacture, each having a longitudinal series of holes and one or more studs projecting therefrom, and in the assembled condition of the parts the stud or studs of one member occupies or occupy a hole or holes of the other member, one of the studs of the latter member serving as a stop by which the keeper is arrested in the position in which it

holds the members locked together in working relations.

The features of the invention may be variously embodied in practice.

Figure 1 shows in front elevation the preferred embodiment of the various features of the invention, portions of straps being represented in engagement with the members. Fig. 2 is an edge view of the harness-link of Fig. 1, small portions being broken away, and the width of the straps being shown. Fig. 3 is a front elevation of one of the members, and Fig. 4 an edge view thereof. Fig. 5 is a front elevation of the keeper, and Fig. 6 a top view thereof.

The two members of the harness-link are marked 1 and 2, the keeper being marked 3, and the straps with which the engaging ends of the members are shown engaged are marked 4, 4. The said members are made of flat strips of the required thickness, preferably of metal rolled to such thickness. The inner ends of the said members overlap longitudinally for part of the length of the members, the opposing flat surfaces of the overlapping portions making contact with each other. The said overlapping portions are engaged with each other as presently will be described, and are kept locked in engagement by means of the keeper 3. The outer ends of the members are shown formed into hooks 5, 5, which enter holes 6, 6, in the straps 4, 4. Such hooks may be shifted from hole to hole of the straps as may be required in securing the required adjustment of the train of connections.

The mode of engagement of the link-members with the straps or other members of the train may be varied, with corresponding modification of the form of the engaging portions of the said members.

The overlapping portions of the link-members 1 and 2 are engaged with each other by means of studs 7, 7, projecting from the member 2 and occupying two of the holes 8, 8, of a series of perforations or holes formed in the member 1, such series extending in the direction of the length of the link. The engagement is maintained by means of the keeper embracing the said overlapping portions as in Figs. 1 and 2 so as to hold the link-members in close contact, with the studs in the holes in which they have been placed. When the keeper is slid along the link, away from the place where the link-members overlap, and the studs are disengaged

from holes of the member 1 by moving the two members apart, the members may be shifted lengthwise relative to each other and the said studs set in the proper holes to give the required effective length to the link.

The keeper 3 is of the character of a short sleeve, capable of sliding upon the link-members longitudinally of the latter. The internal dimensions of the keeper are proportioned suitably to correspond with the width of the link-members, and with the combined thickness of the overlapping portions of the said members, so as to hold such portions close together face to face, with the studs 7, 7, of one occupying holes 8, 8, in the other.

In assembling the parts, the two members 1 and 2 have the faces thereof bearing the studs 7, 7, faced in the same direction, so that the studs of one member (as 2) shall enter holes of the other member (1), and the studs of the latter member shall project from the outer face thereof. One of the outturned studs acts as a stop for the keeper, to arrest it in its locking position as it is slipped down over the overlapping portions of the two members.

By forming the two members 1 and 2 exactly alike they may be struck out by the same dies, and by forming the studs 7, 7, by

punching out small portions of the metal so as to project from the members 1 and 2 without becoming detached from the latter, a member in complete shape may be produced by a single punching or stamping operation.

The construction of the link may be varied more or less in different respects.

I claim as my invention,—

In harness-frame connections for looms, an adjustable harness-link comprising two similar members overlapping lengthwise and having engaging ends, each of said members having a longitudinal series of holes and a projecting stud adapted to enter the respective holes of the other member, and a keeper sliding on the said members, the stud of one member occupying a hole of the other member, and the stud of the latter member constituting a stop by which the keeper is arrested in the position in which it holds the members locked together in working relations.

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

FRED LACEY.

Witnesses:

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