(No Model.)

F. BARNHART.

COUPLING LINK FOR REPAIRING DRIVE CHAINS.

No. 593,872. Patented Nov. 16, 1897.

Fig. 1.

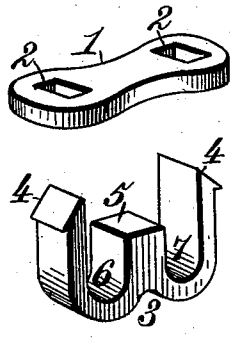
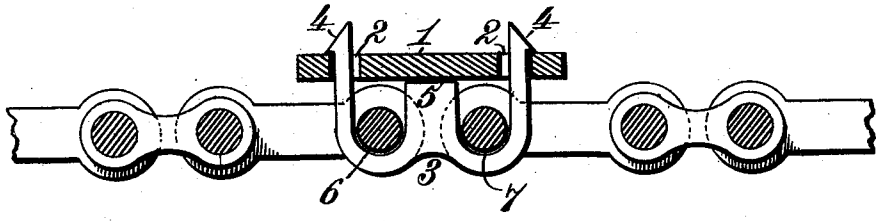


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK BARNHART, OF WARREN, PENNSYLVANIA.

COUPLING-LINK FOR REPAIRING DRIVE-CHAINS.

SPECIFICATION forming part of Letters Patent No. 593,872, dated November 16, 1897.

Application filed August 19, 1897. Serial No. 648,788. (No model.)

To all whom it may concern:

Be it known that I, FRANK BARNHART, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Coupling-Links for Repairing Drive-Chains, of which the following is a specification.

This invention relates to a coupling-link for repairing drive-chains, and has for its object to provide an exceedingly simple, inexpensive, and compact device that may be substituted for a broken link in a chain and which may be instantly applied to the chain without the use of tools; and to these ends my invention consists in the features and in the construction and combination of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a perspective view of my improved coupling-link, the parts being shown separated; and Fig. 2 is a view in elevation, partly in section, showing the coupling-link applied to a chain.

Referring to the drawings, the numeral 1 indicates a plate which is of a length substantially equal to one of the links of the chain and at its opposite ends is provided with slots 2. Adapted to be connected to the plate 1 is a double yoke 3, formed of spring or resilient metal and provided with oppositely-arranged hooked ends 4. An abutment 5 is formed integrally with the double yoke 3 and projects centrally upward between the ends of the latter. The vertical distance between the upper end of the abutment and the lower edges of the hooks 4 should be approximately equal to the thickness of the plate 1.

The ends of the double yoke and the abutment 5 form two loops or yokes 6 and 7, which are of the proper size to embrace the rivets of the chain.

In repairing a broken chain with my improved coupling-link the broken link is removed from the chain and the two end links of the latter are connected by passing the loops 6 and 7 over the two rivets of the end links and forcing the slotted plate 1 over the hooked ends 4 of the double yoke. The hooked ends 4 being beveled, as shown, and formed of spring or resilient metal said hooked ends will yield toward each other to permit of the passage of the slotted plate 1 thereover, and after the hooked ends have passed entirely through the slots they will spring apart and snap over the upper edge of the plate. The vertical distance between the upper end of the abutment and the hooks 4 being equal to the thickness of the plate said abutment will impinge against the under side of the plate the moment the hooks engage the upper side of the latter, and the plate and double yoke will thus be held immovable relative one to the other. The abutment also serves to prevent any endwise movement or play of the links in the yoke, and by filling the space between the two rivets of the end links prevents the access of dirt to the latter.

My improved coupling-link is especially desirable for repairing bicycle drive-chains, for owing to its small size and compactness it may conveniently be carried in the pocket or tool-bag and may be instantly applied to the chain without the use of tools, it being merely necessary to pass the loops about the end rivets and snap the slotted plate over the hooked ends.

Having described my invention, what I claim is—

1. A coupling-link for joining the ends of a broken chain, consisting of a main body constructed with a double yoke to receive the chain-links and provided with an abutment between the link-receiving yokes, oppositely and outwardly beveled spring-hooks formed on the ends of said double yoke, and a plate having slots in its opposite ends arranged to engage the hooked ends of the double yoke, said plate constructed to bear against the abutment intermediate its ends, substantially as described.

2. A coupling-link for joining the ends of a broken chain, consisting of a main body constructed with a double yoke to receive the chain-links and provided with an abutment between the link-receiving yokes, oppositely and outwardly beveled spring-hooks formed on the ends of said double yoke, and a plate having slots in its opposite ends arranged to engage the hooked ends of the double yoke,

the vertical distance between the upper end of the abutment and the lower edge of the hooks being approximately equal to the thickness of the slotted plate, whereby said abutment will impinge the underside of the plate, and the plate and double yoke be thus held immovable relatively one to the other, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK BARNHART.

Witnesses:
EMILE AMANN,
W. R. SCHELLHAMMER.