

(No Model.)

G. W. BLAIR.
THILL COUPLING.

No. 311,464.

Patented Feb. 3, 1885.

Fig. 1.

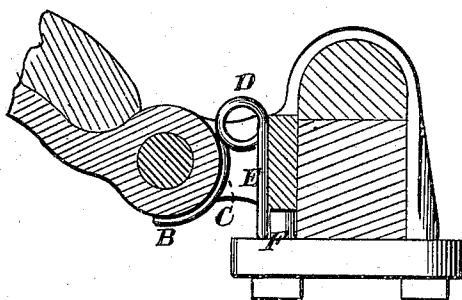


Fig. 2.

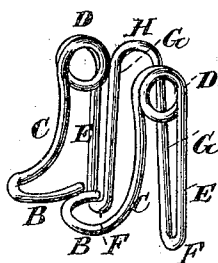


Fig. 3.

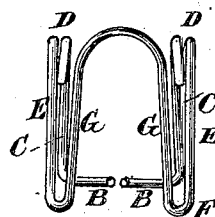


Fig. 4.

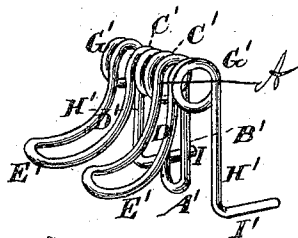


Fig. 5.

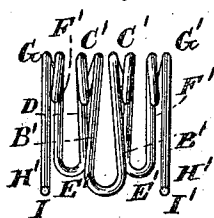
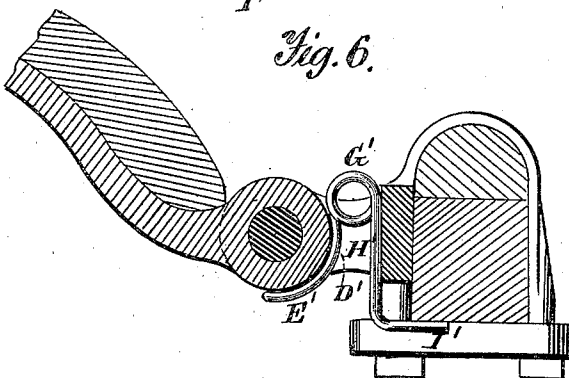


Fig. 6.



Witnesses.
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by
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UNITED STATES PATENT OFFICE.

GEORGE W. BLAIR, OF WABASH, INDIANA, ASSIGNOR OF TWO-THIRDS TO
LOUIS H. FOUGERES AND JAMES M. HAAS, BOTH OF SAME PLACE.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 311,464, dated February 3, 1885.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BLAIR, a citizen of the United States, residing at Wabash, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Anti-Rattlers for Shaft-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in anti-rattlers for thill-couplings; and it consists in a spring which is formed of a single piece of wire, which is adapted to be placed between the shackle and the eye of the draft-iron, whereby the coupling will be prevented from rattling, as will be more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a section of a thill-coupling with one form of my anti-rattler attached thereto. Fig. 2 is a detailed perspective of the spring. Fig. 3 is a rear elevation of the same. Fig. 4 is a detailed perspective of a modification of my invention, showing a preferred form of spring. Fig. 5 is a rear elevation of the same. Fig. 6 is a vertical section of a thill-coupling, showing a modified form of the spring attached thereto.

A represents the spring, which is formed of a single piece of wire, which may be made of brass, steel, or any suitable material. As shown in Figs. 1, 2, and 3, the ends of the wire are bent into the shape of an open loop, as at B. From these loops the ends of the wire curve rearwardly and upwardly, forming arms C, which conform in shape to the eye of the draft-iron, and against which they are adapted to press. Coils D are then formed in the wire, and from these coils the wire extends downwardly, forming arms E, which bear against the shackle, as shown in Fig. 1. At the lower extremities of the arms E are formed the semicircular bends F, from which bends the connecting-arms G extend upwardly and inwardly, and are connected together by the semicircular loop H. The coils D distribute the tension of the spring evenly and adapt it to couplings of varying breadths between the shackle and the eye of the draft-iron. When the space between the shackle

and the eye of the draft-iron is very limited, the coils D can be compressed accordingly, and when this space is unusually broad the coils may be expanded correspondingly. This construction enables the spring to be applied to any of the shaft-couplings in common use, and without the necessity of using special tools.

As shown in Figs. 4, 5, and 6, the wire which forms the spring is first bent in its center at A', from which point arms B' extend upwardly, approaching each other. At their upper extremities are formed the coils C', and from these coils extend downwardly and outwardly the curved arms D'. At the outer ends of these arms are formed the semicircular bends E', from which extend arms F', which correspond in shape to the arms D', and which approach said arms at their upper end, as shown in Figs. 4 and 5. Coils G' are formed at these points, which coils correspond in size and shape to the coils C' and are in a line therewith. Arms H' depend from these coils G' in a vertical line with the arms B'. The extremities of the wire are bent at right angles to the arms H', forming projecting arms I', which extend rearwardly from the spring, as shown. These arms I' bear against the underside of the axle when the spring is placed in position in a thill-coupling and prevent the spring from working upward out of place, as shown at Fig. 6.

An anti-rattler that is constructed as hereinbefore described is exceedingly light, cheap, and durable, and performs its functions thoroughly.

It will be apparent that the spring may be expanded or contracted laterally, owing to the formation of the arms and coils, to adapt it to be fitted between the ears of a shackle of any width.

I am aware that a spring for thill-couplings having curved arms for bearing against the eye of the draft-iron, compressible coils, and arms for bearing against the shackle, has been patented heretofore; but this spring is applied to the coupling in an inverted position from that in which my spring is adapted to be applied, and experience has shown that said spring frequently works out of place and be-

comes lost—an objection to which my spring is not open, and which it is the object of my invention to overcome.

Having thus described my invention, I
5 claim—

A spring for thill-couplings which is formed from a single piece of wire consisting of the bend A', arms B', coils C', curved arms D', semi-circular bends E', curved arms F', approaching
10 said arms D' at their upper ends, coils G', in a

line with the coils C', arms H', and projecting terminal arms I', for bearing against the under side of the axle, substantially as described.

In testimony whereof I affix my signature in 15 presence of two witnesses.

GEORGE W. BLAIR.

Witnesses:

C. E. SACKETT,

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