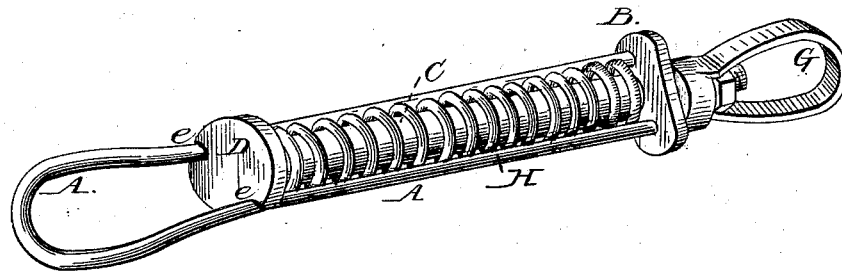


J. B. LAUFFER.  
Spring Tug-Links

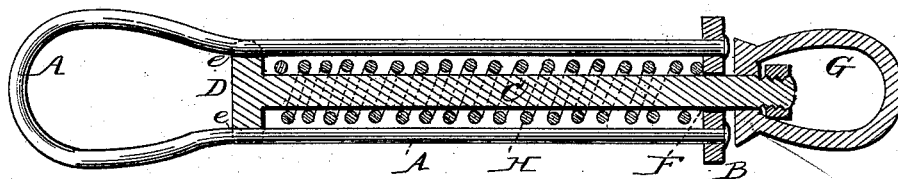
No. 218,888.

Patented Aug. 26, 1879.

*Fig. 1.*



*Fig. 2.*



Witnesses;  
*Ed. G. Dietrich*

*J. M. Littel*

Inventor;  
*Josiah B. Lauffer,*  
by *Ch. Snow & Co.*  
Atty's.

# UNITED STATES PATENT OFFICE.

JOSIAH B. LAUFFER, OF HARRISON CITY, PENNSYLVANIA.

## IMPROVEMENT IN SPRING TUG-LINKS.

Specification forming part of Letters Patent No. **218,888**, dated August 26, 1879; application filed July 1, 1879.

*To all whom it may concern:*

Be it known that I, JOSIAH B. LAUFFER, of Harrison City, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Spring Tug-Links; 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, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view, and Fig. 2 is a longitudinal sectional view.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to an improved spring tug-link for harness, the construction and operation of which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings, A represents a loop or bail, the ends of which are fixed in a plate, B. C is a bolt adjusted between the legs of bail A, its head D being notched at *ee* to guide the bolt when sliding between the legs and through a perforation, F, in plate B. Upon the end of the bolt projecting through plate B is swiveled a ring or link, G. A stout spring, H, is coiled upon bolt C and works against the plate B and the head of the bolt.

The operation of my invention will be readily understood.

The link may be adjusted at either end of the tug or trace, its effect being to prevent the sudden jerk when the horse starts, which, in many cases, results in sore shoulders.

The construction of the device is simple, and it may be made at a small cost.

I am aware that tug-links have been fre-

quently constructed with an inclosing cylindrical case taking the place of the bail A. Aside from the greater expense of such they must also be provided with separate connecting-links, the office of which is performed by the bail A in my improved device. The notched head of the bolt, sliding between the sides of the bail, gives sufficient stability to the device, the parts of which cannot, by ordinary use, become displaced.

From the simplicity of my invention it also follows that if any part—say, the bail A—should break it may easily be replaced by any person, while a cast cylindrical case, such as is generally used, cannot always be readily procured.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination, in a spring tug-link, of a frame consisting of a single wire bail, A, the ends of which are united by a perforated metallic plate, B, a bolt, C, adjusted in the perforation in plate B, and having a notched head, D, fitted and sliding between the legs of bail A, constituting the sides of the frame, a ring, G, swiveled upon the end of bolt C, which projects beyond the perforated plate B, and a spring, H, coiled around bolt C within frame A, and working against the bolt-head D and plate B, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSIAH B. LAUFFER.

Witnesses:

B. F. LAUFFER,  
WATSON MCBRYAS.