(No Model.)

# J. H. LAUTH.

## SPRING TUG LINK.

No. 347,812. Patented Aug. 24, 1886.

Fig. 1

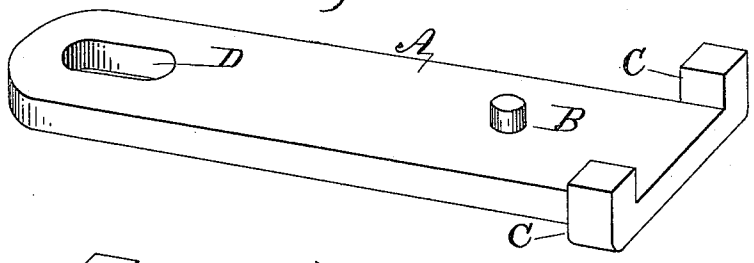



Fig. 2

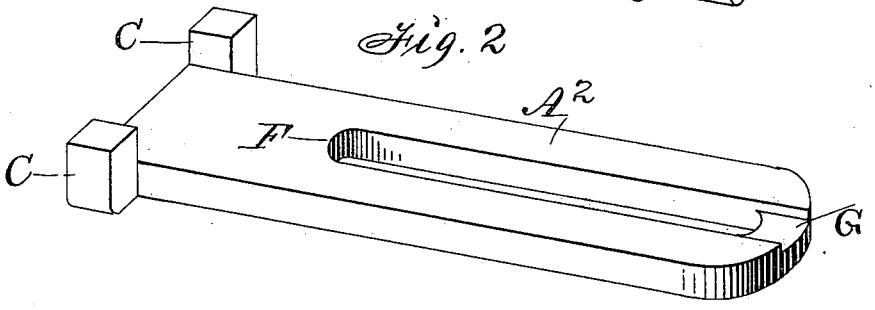



Fig. 3

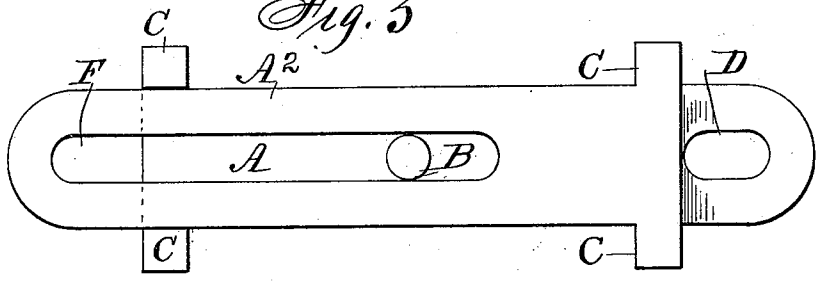
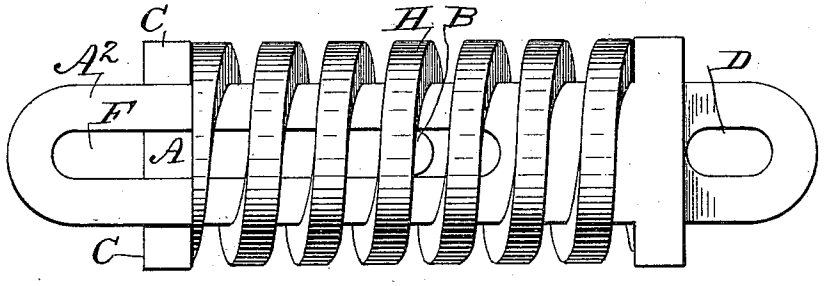



Fig. 4




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# UNITED STATES PATENT OFFICE.

JOSEPH H. LAUTH, OF FREMONT, NEBRASKA.

## SPRING TUG-LINK.

SPECIFICATION forming part of Letters Patent No. 347,812, dated August 24, 1886.

Application filed January 13, 1886. Serial No. 188,457. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH H. LAUTH, a citizen of the United States of America, and a resident of Fremont, in the county of Dodge and State of Nebraska, have invented an Improved Spring Tug-Link, of which the following is a specification.

Heretofore U-shaped bars and staples have been provided with bearings and shoulders to direct and restrict their longitudinal and reciprocal sliding motions relative to each other, and a coiled spring, within which they were jointly fitted and inclosed to produce a spring tug-link.

My invention consists in the construction and combination of two flat bars and a coiled spring, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of one of the bars having an integral pin, and Fig. 2 a perspective view of a mating bar having a longitudinal slot adapted to receive the said pin. Fig. 3 is a top view showing the two bars in position relative to each other as required when operated within a spring. Fig. 4 is a perspective view of the complete device, in which the sliding bars are inclosed in a coil-spring.

A is a flat and straight malleable iron bar, that may vary in size and weight as desired. It has a pin, B, projecting at right angles from its inside flat face, and lugs C from the corners at its end, that are cast integral with the bar.

D is an elongated eye at the opposite end of the bar.

$A^2$ is a bar corresponding in size with the bar A. It is also provided with lugs C, and has a central slot, F, adapted to admit the pin B, projecting from its counterpart bar A.

G represents a groove in the inside face of the bar, extending from the end of the slot F outward, to facilitate the entrance of the pin B into the slot F when the two mating bars A and $A^2$ are jointly pressed into a coiled spring, H, in such a manner that the ends of the bars will project from the opposite ends of the spring and expose the openings D and F, as shown in Figs. 3 and 4, as required to connect the complete device with a hook on the end of a harness-trace and a hook on the end of a single-tree, and the lugs C will engage the opposite ends of the spring as required to restrict the sliding motions of the two bars relative to each other and the spring when force is applied that will compress the spring and lengthen the link as the two overlapping bars slide in opposite directions and are reciprocally directed by the lugs C, bearing on the edges, and the pin B in the slot F.

I claim as my invention—

1. In a spring tug-link, the bar A, having a pin, B, lugs C, and an eye, D, and the counterpart or mating bar $A^2$, having lugs C and a slot, F, for the purposes stated.

2. An improved spring tug-link composed of a straight flat bar having a pin projecting at right angles from its inside face and lugs projecting at right angles from the opposite corners of one of its ends, and an eye at its other end, a mating bar having corresponding lugs at one of its ends and a longitudinal slot extending from its central portion to near its opposite end, and a coiled spring, to operate in the manner set forth.

3. The combination of the bar A, having a pin, B, and lugs C, and an eye, D, the mating bar A, having lugs C and a slot, F, and a coiled spring, H, substantially as shown and described, for the purposes stated.

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