(No Model.)

E. C. CURREY.

WHIFFLETREE SPRING.

No. 382,353. Patented May 8, 1888.

Fig. 1

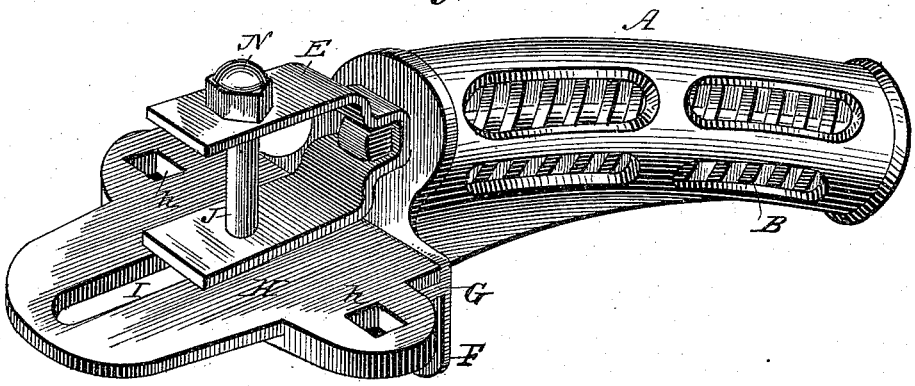


Fig. 2.

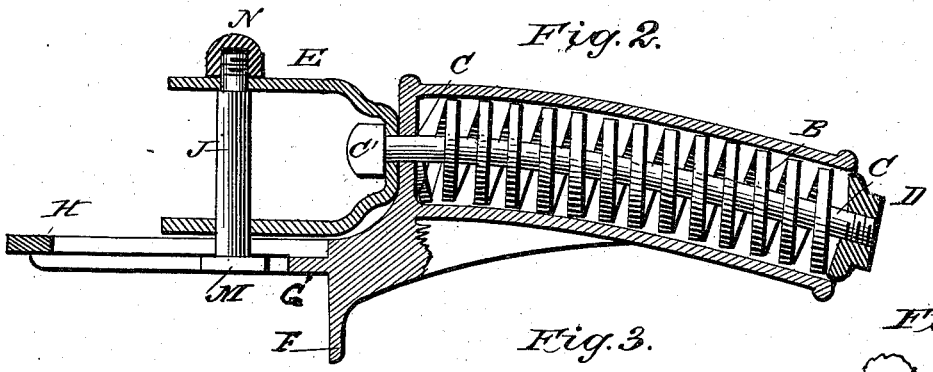


Fig. 3.

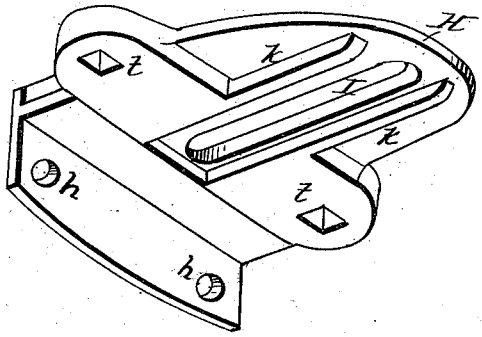
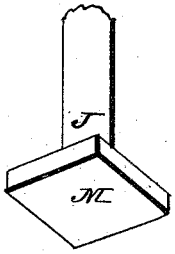


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD C. CURREY, OF SOUTH EVANSTON, ILLINOIS, ASSIGNOR TO THE EVENER SPRING COMPANY, OF NEW YORK.

WHIFFLETREE-SPRING.

SPECIFICATION forming part of Letters Patent No. 382,353, dated May 8, 1888.

Application filed October 14, 1886. Renewed October 10, 1887. Serial No. 251,925. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. CURREY, residing at South Evanston, in the State of Illinois, have invented certain new and useful Improvements in Whiffletree and Evener Springs, of which the following is a description.

My invention relates to an improvement in draft attachments for vehicles, agricultural machinery, &c.; and its object is to relieve draft-animals from the shock and strain usually incident to starting heavy loads and when an obstruction is encountered.

It consists in certain details of construction and arrangement of parts, hereinafter more particularly described, and pointed out in the accompanying drawings, in which—

Figure 1 is a perspective view of my improvement; Fig. 2, a longitudinal vertical section. Fig. 3 is a view of the front extension reversed. Fig. 4 is a detail showing the head of the clevis-bolt.

In the drawings, A is a tubular metallic frame designed to inclose a strong spiral steel spring, B, which fits loosely within it. This frame may be straight or curved, as shown, in order to conform to the usual curvature of the shafts of a vehicle. The outer or rear end of the frame is open to admit the spring, and the opposite or front end is closed, with the exception of a small aperture to admit a bolt or rod, C, upon which the clevis E is secured by a head, C'. This bolt or rod extends back through the clevis and frame, through the interior of the spiral spring, and terminates in a nut or washer, D, at the rear open end of the frame, which fits within the frame and closes the opening, as shown in Fig. 2. This nut or washer D is of suitable size to slide within the frame as the spring is compressed. At the front and under side of this spring-frame is a short vertical flange, F, adapted to fit against the rear face of the cross-bar, and a similar horizontal flange, G, designed to fit upon the top or upper surface of the cross-bar. These flanges are provided with holes or openings *h* for bolts, by means of which the device may be bolted to the cross-bar. Upon the horizontal flange G is bolted or secured a plate, H, extending forward, over, and beyond the cross-bar of the shafts beneath the clevis. This plate is provided with a narrow central slot, I, extending back from its front end to the cross-bar, and designed to admit the end of the bolt J, which passes up through the clevis E. Upon the under side of plate H, and on either side of the slot, is a rib, *k*, the space between which forms a track or groove for the head M of the clevis-bolt, which fits between them.

N is a nut on the opposite end of the clevis-bolt, which holds it in place when it (the bolt) is inserted from the bottom up through the plate and clevis, for the purpose of securing the whiffletree or evener. The clevis is always compelled to maintain a vertical position, because of the slot I in the plate through which the bolt passes and the track between the ribs *k*, between which the head of the bolt is confined.

When desired to operate my device, it is secured by bolts to the cross-bar of the shafts or to any other suitable part of the vehicle or machine to which the draft is to be applied. The whiffletree or evener is then placed within the clevis and secured by the bolt, and the power attached. As the power of the draft is applied, the spring is compressed by means of the nut or washer D on the outer end of rod C, which moves within the tubular frame. The head M of the bolt J, meantime sliding forward through the slot I, maintains the clevis in an upright or vertical position, and at the same time prevents lateral strain on the rod C, which would bend and render it useless, until the resistance is gradually overcome and the vehicle is started without jar or strain and without bending or injuring rod C by lateral strain upon the team, when the spring again resumes its normal position as nearly as the weight of the load will permit. In case an obstruction is suddenly encountered the jar and shock are received by the spring, which yields and relieves the team.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a draft attachment for vehicles, the combination, with the tubular frame secured to the tongue or cross-bar and inclosing the spiral spring, having the compressing-rod extending through its interior, provided with a

nut or washer at its rear end adapted to slide within the frame and a clevis on its front end, of the slotted plate extending forward beyond the frame and provided on its under side with the downward-projecting ribs, forming a track or recess for the head of the clevis-bolt, substantially as specified.

2. In a draft-equalizer for vehicles, the combination, with the cross-bar of the shafts, of the tubular frame adapted to inclose the spiral spring and its compressing-rod, having a horizontal and a vertical flange at its front end cast integral therewith, and provided with suitable bolt-openings whereby it may be secured to said cross-bar, substantially as and for the purpose specified.

3. In a draft attachment for vehicles, the combination, with the tubular spring-frame having the horizontal and the vertical flanges at its front end, of the spiral spring, the spring-compressing rod having a nut or washer at its rear end and a clevis at its front end, and the slotted front extension-plate adapted to receive the end of the clevis-bolt, substantially as and for the purpose described.

4. In a draft attachment for vehicles, the combination, with the spring-frame having the vertical and the horizontal attaching-flanges at its front end, of the interior spiral spring, the spring-compressing rod having a clevis secured to its front end, and the slotted front extension-plate provided with a recess on its under side for the head of the clevis-bolt, substantially as and for the purpose described.

EDWARD C. CURREY.

Attest:
I. H. MACDONALD,
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