

(No Model.)

2 Sheets—Sheet 1.

H. BARBER.
SPRING DRAFT ATTACHMENT.

No. 481,384.

Patented Aug. 23, 1892.

Fig. 1.

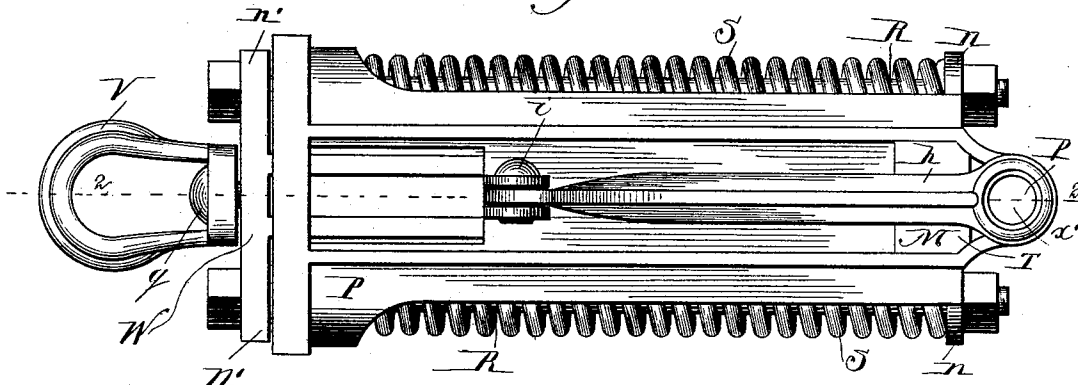


Fig. 2.

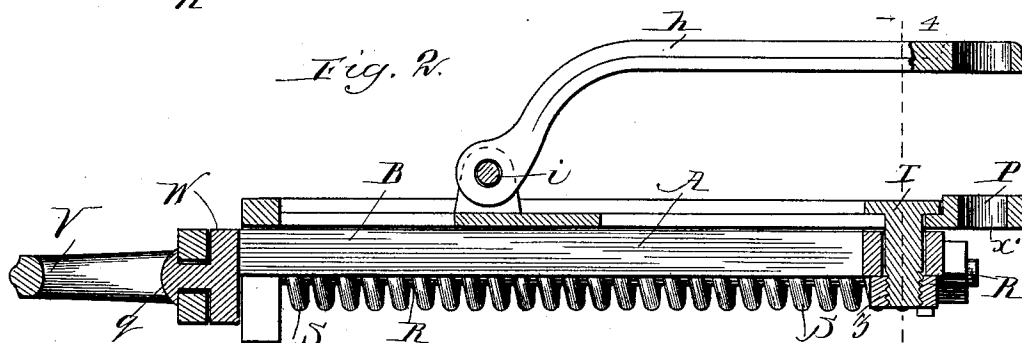


Fig. 3.

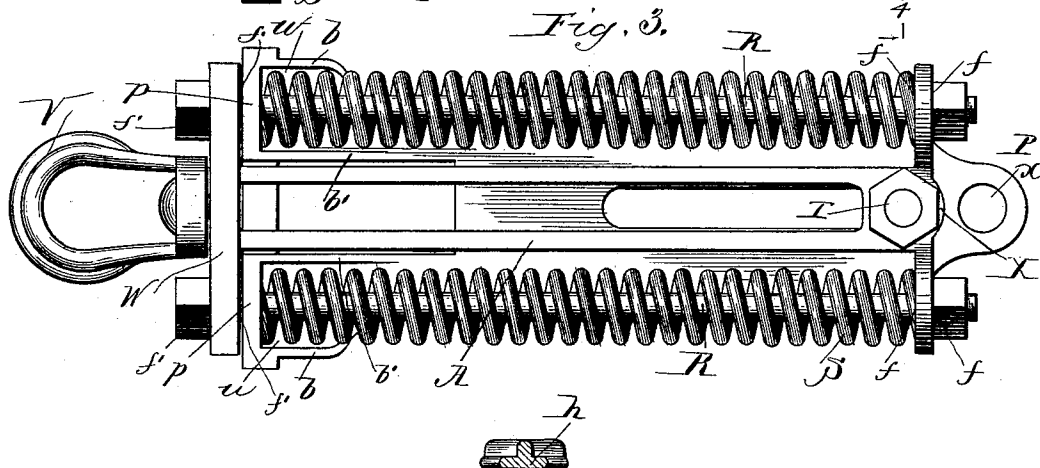
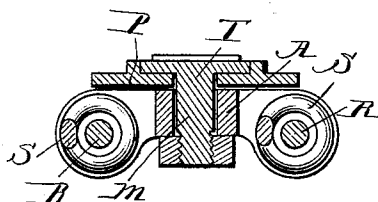


Fig. 4.

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W. Rosseter
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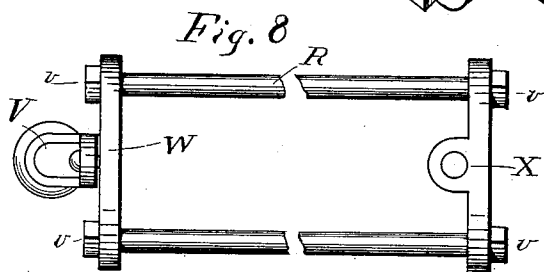
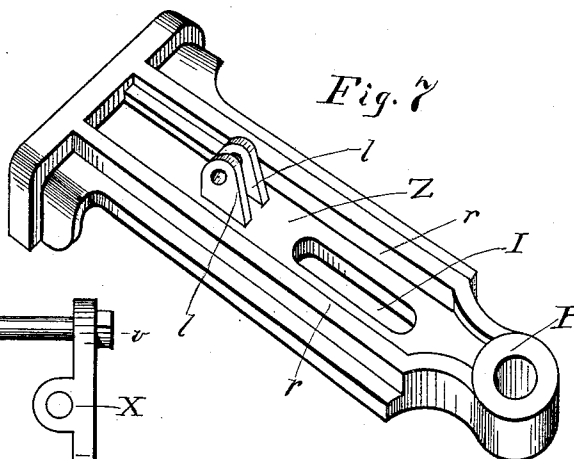
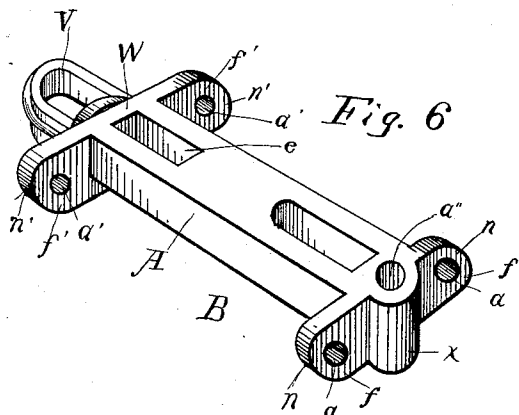
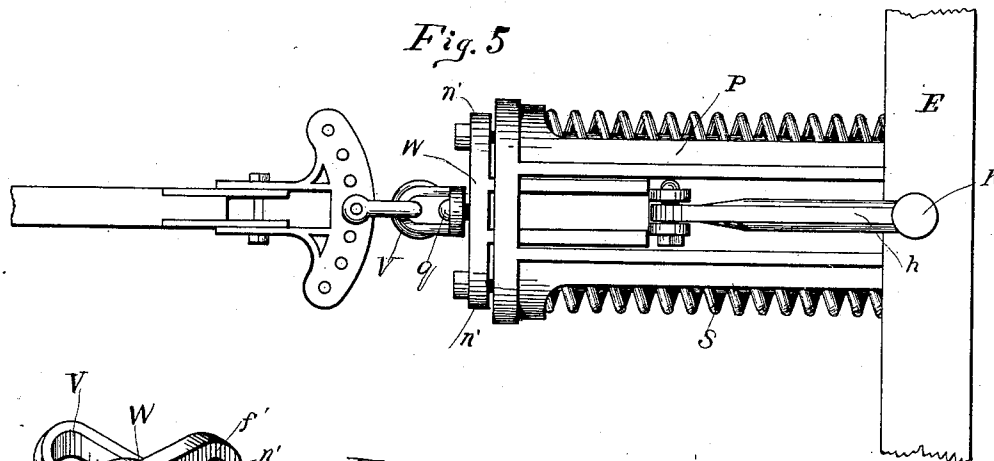
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2 Sheets—Sheet 2.

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SPRING DRAFT ATTACHMENT.

No. 481,384.

Patented Aug. 23, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

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SPRING DRAFT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 481,384, dated August 23, 1892.

Application filed November 21, 1889. Serial No. 331,058. (No model.)

To all whom it may concern:

Be it known that I, HIRAM BARBER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spring Draft Attachments for Use on Plows, Cars, and other Implements, which are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the preferred form of my spring draft attachment as designed for use on plows. Fig. 2 is a sectional view on line 2 2 of Fig. 1. Fig. 3 is an underside plan view of Fig. 7. Fig. 4 is a vertical cross-section on line 4 4 of Fig. 2. Fig. 5 is a plan view showing the preferred form of my spring draft attachment when attached to a plow. Fig. 6 is a perspective view of the draw-bar B with swivel attached in the preferred form of my spring draft attachment as designed for plows. Fig. 7 is a perspective view of the slotted draw-plate P in the preferred form of my spring draft attachment designed for use on plows.

In the construction of the preferable form of my spring draft attachment, more especially designed for use on plows, as herein described, I make use of the slotted draw-plate P, the draw-bar B, the rods R R, the coil-springs S S, the bolt T, the swivel V, attached to the draw-bar B by means of the bolt *g*, and the hammer-strap *h*, hinged to the draw-plate P by means of the lugs *l l* and pin *i*, and the evener-bolt K.

The draw-plate P is provided on the inner side and at the rear end thereof with the two recesses *u u*, Fig. 3, in which the rear ends of the coil-springs S S are respectively held and work. These recesses are formed by the end plates *p p* and the brackets *b' b' b b*, placed at right angles to the inner surface of the draw-plate P and at the point of contact made integral therewith and with each other. The brackets *b' b'* and *b b* are placed parallel with the longitudinal line of the plate P, while the end plates *p p* are placed at right angles thereto. The plates *p p* are provided with the central apertures *o o*, through which the rear ends of the rods R R are passed. The draw-plate P is also provided with the central longitudinal slot I, in which the stem *m* of the bolt T

has movement. The draw-plate P is also provided with the longitudinal recess Z on the outer surface thereof, formed by the ribs *r r*, in which recess the flattened head M of the bolt T has movement beneath the under surface of the evener E.

The draw-bar B is provided at the front end thereof with the cross-piece X and at the rear end thereof with the cross-piece W. The central section of the cross-piece X is identical with the forward end of the shaft A, while the outer ends N N are flattened, with their faces *f f f f* at right angles to the sides of the shaft A.

The ends N N of the cross-piece X are provided with the central apertures *a a* for the passage of the forward ends of the rods R R, while the central section of the cross-piece X is provided with the aperture *a'* for the passage of the stem *m* of the bolt T. The rear end piece W of the draw-bar B has its flattened faces *f' f' f' f'* also at right angles to the sides of the draw-shaft A. The ends N' N' are also provided with the central apertures *a' a'* for the passage of the rear ends of the rods R R, respectively. The cross-pieces X and W of the draw-bar B are connected by the shaft A and are made integral therewith.

The shaft A is provided with the slot or recess E for the insertion of the bolt *q* through the cross-piece W.

The inner braces or brackets *b' b'* on the inner surface of the draw-plate P form the sides of the track or passage Y, in which the rear end of the shaft A of the draw-bar B is held and works. When, therefore, the several parts of the preferable form of my spring draft attachment designed for use on plows herein described are in position, the draw-bar B is placed longitudinally against the inner surface of the draw-plate P, with the front faces *f f* of the cross-piece W in juxtaposition to the rear faces of the plates *p p* and the rear end of the shaft A between the brackets *b' b'*, while the forward end of the shaft A is held in place by the stem *m* of the bolt T, which is inserted through the forward end of the slot I and also through the aperture *a'* in the cross-piece X with the head M resting in the recess Z, formed by the ribs *r r* on the outer surface of the plate P, and is held in place by the nut *z*. The coil-springs S S are placed

longitudinally between the rear faces of the ends N N of the cross-piece X and the front faces of the plates *p p* upon the rods R R, respectively. The forward ends of the rods R R passing, respectively, through the apertures *a a* in the ends N N of the cross-piece X and the rear ends thereof through the apertures *o o* in the plates *p p* and the apertures *a' a'* in the ends N' N' of the cross-piece W, the same are held in place by the nuts *v v v v*. The evener E is mounted on the outer surface of the draw-plate P by means of the hammer-strap *h*, hinged to the outer surface of the draw-plate P and the bolt K, the lower end of which bolt passes through the aperture *x'* in the forward end of the draw-plate P. When, therefore, the swivel V is attached to a plow and forward pressure is applied to the evener E, the plate P is drawn forward and the inner faces of the plates *p p* driven against the rear ends of the coil-spring S S, respectively. At the same time the front ends of the springs S S are held rigidly in position by the ends N N of the cross-piece X, respectively, and the springs S S are thus compressed to the extent of the resistance offered by the plow. In this manner is secured a yielding connection between the plow and the draft-animal.

In the construction of spring draft attachments heretofore for use on plows two difficulties have been encountered—viz., first, the great weight of the devices; second, the removal of the evener too far from the plow. In the devices here shown I have aimed to overcome both of these difficulties.

By cutting away all superfluous material or parts the weight of my spring draft attachment may be reduced to the desired extent without sacrificing its strength, while by mounting the evener upon the outer surface of the draw-plate and above the coil-springs the desired degree of proximity to the plow may be readily obtained.

Having thus explained the object and purpose of my spring draft attachment, its method of construction, and mode of operation, what I claim as my invention, and for which I desire to secure Letters Patent, is—

1. In a spring draft attachment, the combination of the draw-plate P, the draw-bar B, the rods R R, the coil-springs S S, the swivel V, attached to the cross-piece W, the bolt T, and hammer-strap *h*, hinged to the outer surface of the plate P, all constructed and arranged substantially as and for the purposes herein described.

2. In a spring draft attachment, the combination of the slotted draw-plate P, the draw-bar B, the rods R R, the coil-springs S S, the swivel V, attached to the cross-piece W, the bolt T, the hammer-strap *h*, hinged to the plate P, the evener E, and the bolt K, all arranged and constructed substantially as and for the purposes herein described.

Witness my hand this 18th day of November, A. D. 1889.

HIRAM BARBER.

Witnesses:

TIMOTHY D. HURLEY,
S. B. FOSTER.