(No Model.)

# H. BARBER.

## SPRING DRAFT ATTACHMENT.

No. 493,469. Patented Mar. 14, 1893.

Fig. 1.

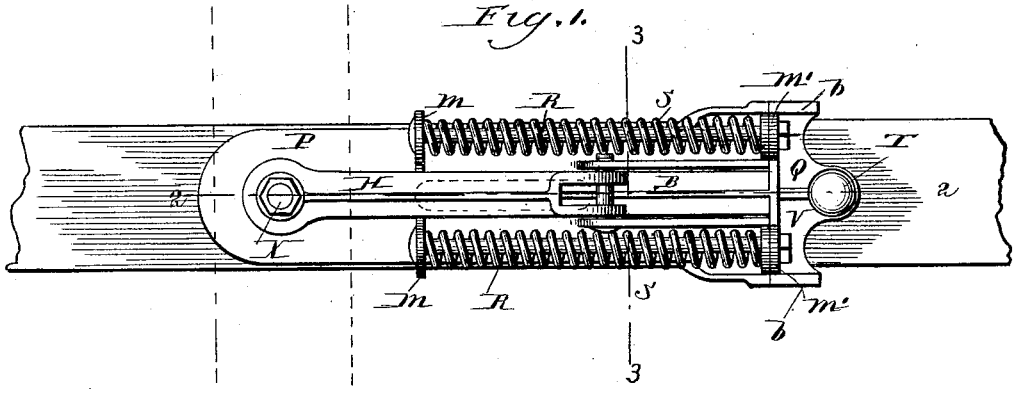



Fig. 2.

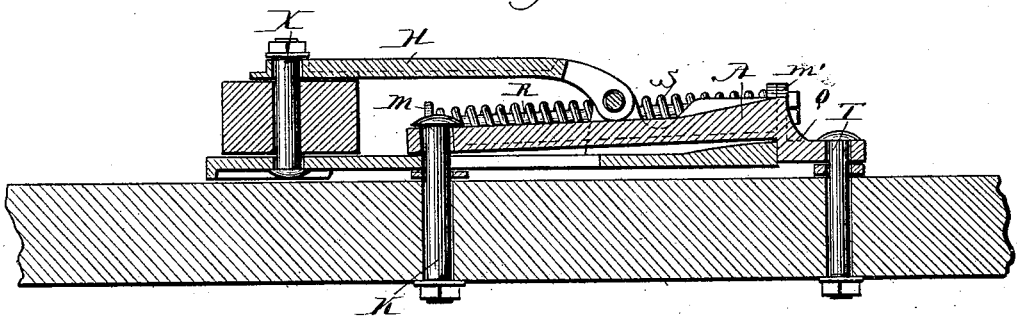



Fig. 3.

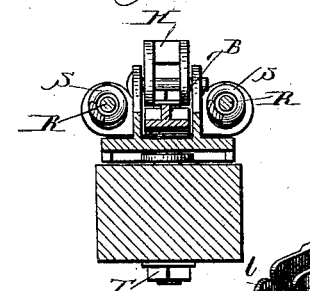
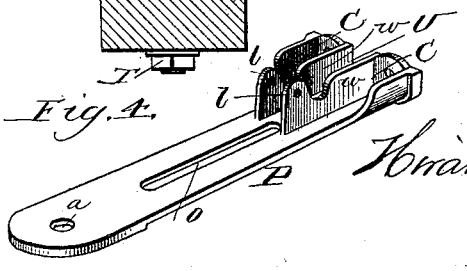



Fig. 4.




Witnesses
W. Bossler
Fredk. A. Mills.

Inventor
Hiram Barber

# UNITED STATES PATENT OFFICE.

HIRAM BARBER, OF CHICAGO, ILLINOIS.

## SPRING DRAFT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 493,469, dated March 14, 1893.

Application filed September 20, 1890. Serial No. 365,644. (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 Wagons, &c., of which the following is a specification.

Of the drawings herewith submitted Figure 1, is a plan view of my spring draft attachment showing the same in position upon the upper surface of the pole of a wagon. Fig. 2, is a sectional view of my invention on the dotted line 2—2. Fig. 3, is a sectional view of my invention on the dotted line 3—3. Fig. 4, is a view in perspective of the draw-plate P, in my spring draft attachment.

The object and purpose of my invention are to provide a cheap and compact yielding connection between the draft animal and the fixed point of attachment to the wagon or other vehicle. Such yielding connection is calculated to relieve the shoulder of the draft animal from the blow or concusion to which it is otherwise subjected when the wagon or other vehicle strikes an obstruction.

It will be observed that in the construction of the machine or device herein described I make use of the draw-plate P, the draw-bar B, the hammer-strap H, the rods R—R, the coil-springs S—S, and the bolts T, K, and X. The draw-plate P, is provided upon the upper surface of the rear end thereof with the recess U, and the two corresponding open chambers C—C, and also with the central longitudinal slot O. The recess U, is designed for the reception and movement therein of the shaft A, of the draw-bar B. The draw-bar B, is provided at the front and rear ends thereof with the laterally projecting arms or plates $m$—$m$, and $m'$—$m'$. The interior ends of the arms or plates are made integral with the shaft A, at the point of contact therewith. The interior faces of the sides of said arms or plates are placed in opposition, on a line parallel with each other and at right angles to the line of the corresponding sides of the shaft A. The rear end of the draw-bar B, is also provided with the bracket V. The upper edge of the forward end of the plate Q, is made integral with the lower edge of the arms or plates $m'$—$m'$, and also with the lower surface of the shaft A, at the extreme rear end thereof. The outward ends of the plates $m'$—$m'$ are supported by the braces $b$—$b$, the inner edges of which braces $b$—$b$, are made integral with the plates $m'$—$m'$, and the plate Q, at the point of contact. The arms or plates $m$—$m$, and $m'$—$m'$, are provided with corresponding apertures for the passage of the stem of the rods R—R. The chambers C C are open at the sides and top to permit the springs to be readily inserted, and their rear walls are perforated similarly to the plates $m$ $m$ for the passage of the stems of the rods R R before mentioned. The lugs $l$—$l$, situated upon the forward upper edge of the side walls $w$—$w$, of the recess U, are also perforated to permit of the attachment thereto of the rear end of the hammer-strap H. The rear end of the plate Q, is perforated so as to permit the passage of the stem of the bolt T, by means of which bolt T, the bracket V, is rigidly attached to the outer surface of the pole or other fixed part of the wagon. The forward end of the shaft A, is also perforated so as to permit the passage of the stem of the bolt K, by which bolt K, the forward end of the shaft A, is held rigidly in position the stem of the bolt K, passing through the forward end of the shaft A, and also through the forward end of the slot O, and thence downward into the pole or other fixed part of the vehicle. The evener E, is held in position by the bolt X, the hammer-strap H, and the forward end of the draw-plate P, which is provided with the aperture $a$, for the passage of the stem of the bolt X. When therefore the several parts of my spring draft attachment are placed in position and forward pressure applied to the evener E, the rear walls of the chambers C—C, of the draw-plate P, are drawn forward against the rear ends of the coil springs S—S. The rods R—R, upon which the springs S—S, are placed are held in position by the arms $m$—$m$, and $m'$—$m'$, and the draw-plate P, moves forward with the evener E, according to the degree of compressibility of the springs S—S. The bolt K, moving in the slot O, offers no resistance to the forward movement of the draw-plate P. In this movement of the plate P, the rear section of the hammer-strap H, may be said to advance over the forward end of the shaft A, of the draw-bar B, and also over the

head of the bolt K, while the rear section of the shaft A, of the bar B, may be said to pass out of the recess U, in the opposite direction. And thus a yielding connection is secured between the draft animal and the fixed point of attachment to the wagon or other vehicle.

By forming the chambers C C with open tops as well as ends, the draw plate may be cast in a two part mold without the use of a core, which materially lessens the cost of construction, while the open tops permit of the more convenient adjustment of the springs than heretofore.

Having thus fully explained the method of construction and the mode of operation and the object and purpose of my spring draft attachment herein described, what I claim as novel and as of my invention, for which I seek Letters Patent, is as follows:

1. In a spring draft attachment for vehicles, the draw-plate having open chambers at its rear end, and provided with a longitudinal slot and a bolt aperture at its front, in combination with the intermediate draw-bar and the lateral longitudinal stems and their surrounding springs, substantially as specified.

2. In a spring draft attachment for vehicles, the combination of a draw plate having a bolt aperture at its forward end, chambers at each side, open at their forward ends and tops and an intermediate recess at its rear end, a draw bar extending longitudinally over the draw plate to the rear thereof, through said recess, and having lateral plates at its front and rear ends, the springs having their rear ends located in the side chambers of the draw plate and bearing against the forward lateral arms of the draw bar, the draw-bar being provided with apertures by which it may be bolted to a wagon, and the draw plates with a longitudinal slot through which the forward bolt may be passed to permit longitudinal play thereon, substantially as and for the purpose specified.

3. The combination in a draft equalizer of the draw plate P having a bolt aperture in its forward end, lateral chambers and a vertical space at its rear end, the draw bar B extending through the said central space to the rear thereof, and provided with lateral plates *m m'* at its respective ends; the hammer strap H pivoted between the lugs *l l* of the draw-bar and having a bolt aperture at its forward end, the bolt X connecting the hammer strap and draw bar, the rods R R extending through the lateral plates *m m'* and the coiled springs S S surrounding said rods and bearing against the plates *m* and the rear ends of the chambers C C, and the bolts T and K by which the device is attached to the pole of a wagon, the latter passing through a longitudinal slot in the draw bar to permit the draw bar to play back and forth longitudinally, substantially as specified.

HIRAM BARBER.

Witnesses:
CHESTER H. GROVER,
SHERMAN BARBER.