

D. R. McCLURE.
Whiffletree.

No. 218,305.

Patented Aug. 5, 1879.

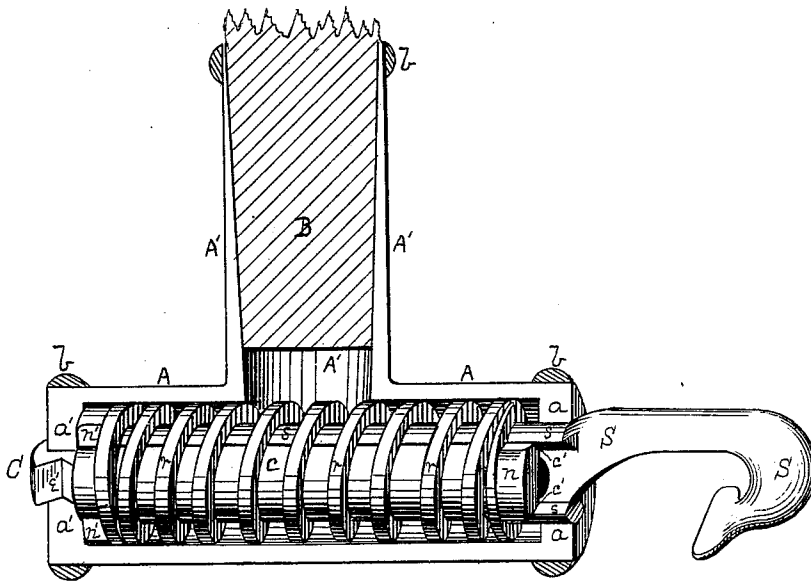


Fig. 1.

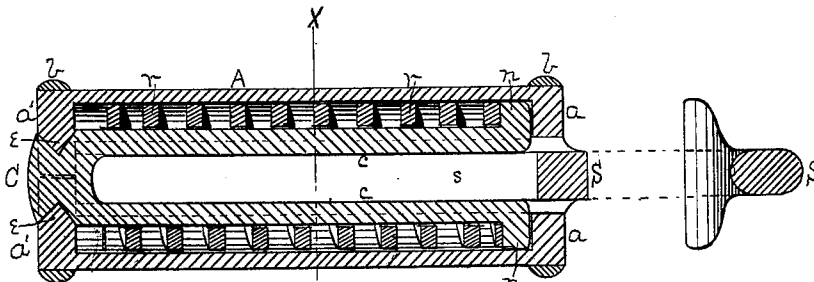


Fig. 2.

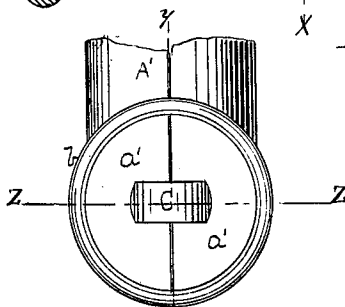


Fig. 3.

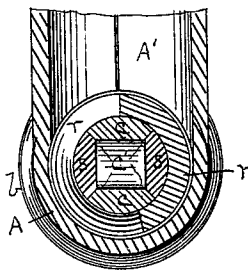


Fig. 4.

Witnessed
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UNITED STATES PATENT OFFICE.

DANIEL R. McCLURE, OF MIFFLIN TOWNSHIP, ALLEGHENY COUNTY,
ASSIGNOR OF TWO-THIRDS HIS RIGHT TO DANIEL RISHER, OF
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IMPROVEMENT IN WHIFFLETREES.

Specification forming part of Letters Patent No. **218,305**, dated August 5, 1879; application filed
April 11, 1879.

To all whom it may concern:

Be it known that I, DANIEL R. McCLURE, of Mifflin township, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in Draft-Springs; and I do hereby declare the following to be a full, clear, concise and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—like letters indicating like parts—

Figure 1 illustrates, by a perspective view, my improved draft-spring, the adjacent half or part of the case or cover being removed to show the interior arrangement, and the end of the whiffletree being represented by a sectional view. Fig. 2 is a vertical longitudinal sectional view, taken in the line *zz*, Fig. 3. Fig. 3 is a rear view of the case or box; and Fig. 4 is a transverse sectional view in the line *xx*, Fig. 2.

My invention relates to draft-springs; and consists, in general terms, in arranging the yielding draft device within a case or covering, which case not only forms a part of the draft device proper, but also furnishes a means of permanent attachment of such device to the end of the whiffletree, substantially as hereinafter described and claimed.

My improved draft-spring is designed to prevent rattling, afford a convenient means of attachment to the whiffletree, and also furnish a neat and ornamental covering, which forms a part of the draft device itself.

It is constructed as follows: A tubular case or box, *A A'*, is made of size and strength adapted to the use for which it is designed.

The part *A'* leads off from the part *A*, preferably at right angles thereto, and from the middle or near the middle of *A*. This part *A'* of the case is designed to fit onto or inclose the end *B* of the whiffletree, and it may be fastened thereon by rivets, bolts, or in other convenient way, so as to secure a permanent and tight attachment.

The tubular part *A* of the box or case incloses the yielding draft device. I have shown this case *A A'* made in two parts, meeting in a horizontal plane, and the two parts or halves

are bound together by rings or bands *b*, encircling the case at its three extremities. Equivalent bolts or screw-caps may, however, be employed for this purpose, if preferred.

The yielding draft device, which consists of an endwise-extensible draft-bar made in two parts, with a coiled spring seated between such parts, is constructed, arranged, and secured within the tube *A* as follows: The rear part of the draft-bar (see Fig. 2) is composed of two segmental bars, *c c*, connected at their rear ends to a block or head, *C*. These bars *c c* are extended forward by preference to or against the inner face of the front end, *a*, of the case and at a uniform distance apart. Their outer surfaces are by preference rounded and their edges *c'* beveled, so as to form, in effect, opposite quarters or segments of a cylinder, while their inner surfaces or faces are flat, as seen in Fig. 4.

The block *C* is secured to the end *a'* of the case by passing through an opening in such end, while wedge-shaped edges *e* on two opposite sides of the opening enter corresponding notches *e'* in the block *C*. The band *b*, which encircles this end of the case, will securely clamp or hold the block *C* in place. Also, since the bars *c c* are stationary within the case, their front ends may bear against the end *a* of the case, and thus receive additional support as against end strain.

Two other segmental bars, *s s*, having the same form as the bars *c c*, are arranged to move endwise between the latter, and they are connected at their front ends to the base of a draft-hook, *S*, they being the same distance apart as the bars *c c*. These bars *s s* extend, by preference, from the front face of the end *a* to the inner face of end *a'*, and constitute, along with the bars *c c*, an extensible hollow cylinder, around or upon which a coiled spring, *r*, is arranged, one end of which seats against lugs *n*, made on the front ends of bars *c c*, while the other end seats against similar lugs *n'*, made on the back ends of the bars *s s*, so that endwise strain or draft exerted on the hook *S* will tend to compress the spring, and thus furnish a yielding resistance to such draft or strain.

The block *C* and the base of the hook *S* are,

by preference, made flat, their thickness being equal to the distance between the opposite bars *s s* and *c c*, respectively. These ends can thus slide in and out between the open ends of the bars, and greater economy of space secured than if they were wholly outside of the bars. Also, the parts *s s* and *c c* can more readily be put together.

The opening through the end *a* is made to conform to the I-form of the base of the hook, the bars being of greater width than the thickness of the hook, and also being rounded on their outer faces and beveled on their edges. The end *a* thus serves as a guide to keep the parts of the device in proper line and prevent them from turning within the case, so as to preserve their proper relation to the whiffletree *B*, and at the same time a tight case or covering is secured for the inclosed parts, which will exclude snow, mud, and other like injurious substances. If desired, the exposed parts of the device may be plated or otherwise ornamented, making it suitable for use on pleasure-carriages, or it may be made of materials and in a style adapted for other and heavier work.

Instead of making the case *A A'* in two parts it may be cast in one piece; but in such case the ends *a* and *a'* may be screwed or otherwise fastened on the case instead of being cast solid therewith, as shown. Also, if desired, the block *C* and the base of hook *S* may, one or both, be made round, and the inner faces of bars *s s* and *c c* made of corresponding form.

Instead of the hook *S* an equivalent block may be used, to which the bars *s s* may be attached, and any convenient or desired means be used in connection therewith for attaching the trace to such block. Also, instead of attaching the block *C* to the end *a'* by projec-

tions and notches *e e'*, the outer protruding end of the block may be made round and threaded, and a nut screwed thereon. I prefer, however, to make that part of the block which passes through the end *a'* of other than a round form, in order the better to prevent the inclosed devices from turning. Any desired form or construction of coiled or spiral spring *r* may be used which is adapted to the purpose mentioned.

I am aware that draw-bars and draft-springs of street-cars have been attached under and to the bottom of the car, with an outside boxing to exclude mud, dirt, &c.; and I am also aware that it is not new to pivot the inclosing-case of a single-bar draft-spring to the end of a double-tree, and hence I make no claim to such features of construction. My improvement is designed for other uses, and accordingly is differently constructed.

I claim herein as my invention—

1. As a new article of manufacture, a draft-spring device having in combination a case for the draft-bars and spring, a laterally-projecting socket as a whiffletree attachment, two draw-bars, one affixed to one end of the case and the other movable through the opposite end, and a spring interposed between the bearings of said bars, all substantially as set forth.

2. The combination of case *A A'*, hook *S*, and segment-bars *s s*, block *C*, and segment-bars *c c*, lugs *n* and *n'*, and spring *r*, substantially as set forth.

In testimony whereof I have hereunto set my hand.

DANIEL R. McCLURE.

Witnesses:

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