(No Model.)

A. G. OLSON & J. S. LINDQUIST.

DRAFT TUG.

No. 419,545. Patented Jan. 14, 1890.

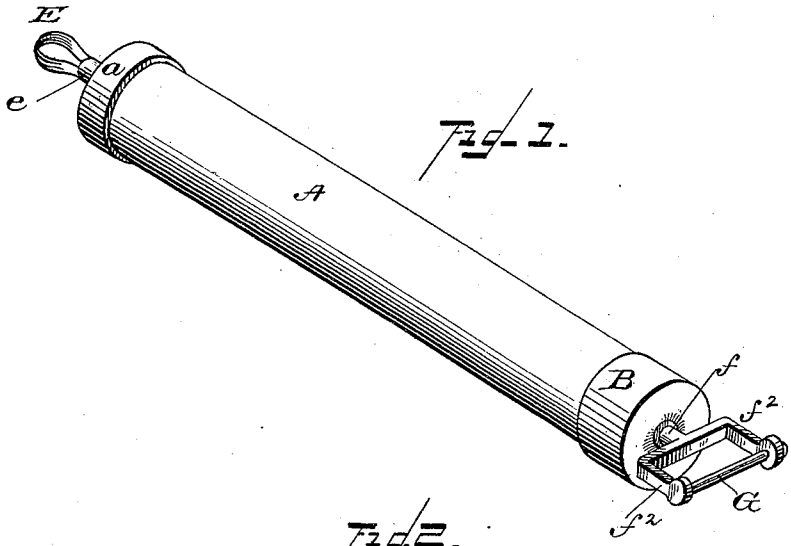


Fig. 1.

Fig. 2.

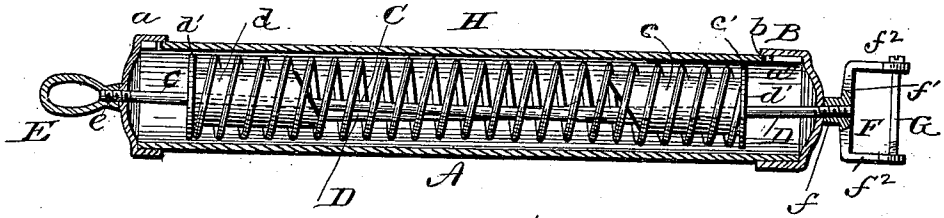
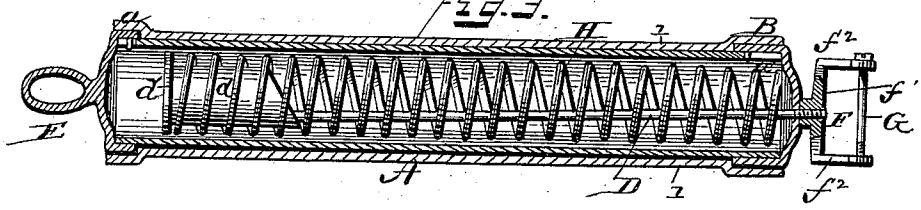


Fig. 3.



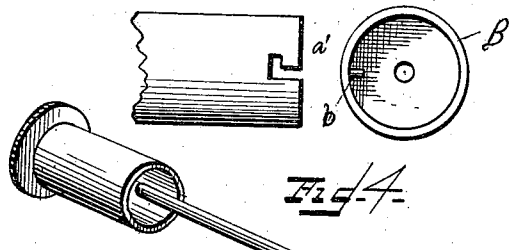


Fig. 4.

WITNESSES:
F. L. Ourand
C. F. Chisholm

INVENTORS:
Andrew G. Olson 2nd
John S. Lindquist
by Louis Bagger & Co
Attorneys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ANDREW G. OLSON AND JOHN S. LINDQUIST, OF SWEDEBURG, NEBRASKA.

DRAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 419,545, dated January 14, 1890.

Application filed July 27, 1889. Serial No. 318,940. (No model.)

To all whom it may concern:

Be it known that we, ANDREW G. OLSON and JOHN S. LINDQUIST, both residents of Swedeburg, in the county of Saunders and State of Nebraska, have invented certain new and useful Improvements in Draft-Tugs; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to improvements in draft-tugs, being designed to prevent the constant jerking motion of the harness when traveling over rough roads, which motion is liable to cause the harness to abrade the skin of the horse or to produce the disease called "swinney;" and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the appended claims.

Figure 1 of the drawings represents a perspective view of the device. Fig. 2 represents an axial section thereof. Fig. 3 represents a similar section of a modification of the device, and Fig. 4 represents details of parts of the device.

Similar letters of reference designate corresponding parts in the figures of the drawings.

Referring to the drawings by letter, A designates the tubular casing of the device, having the centrally-perforated cap *a* secured to its top and the bayonet-slot *a'* extending from its lower edge.

B designates a sleeve perforated centrally and having a pin *b* standing at right angles from its inner surface to engage within the bayonet-slot *a'*, and thereby to hold the sleeve B upon the lower end of the tubular casing.

C is a rod that passes upward through the perforations in the cap *a*, and has its end outside of said cap threaded. The lower end of said rod C is secured by solder or otherwise within a thimble *c*, that is within the casing A, and has at its lower end a circumferential flange *c'*, which stands normally in the sleeve B.

D is a rod within the casing A with its upper end secured by solder or otherwise within a thimble *d*, having at its upper end a circumferential flange *d'*, which stands normally in the cap *a*. The rods C and D are therefore parallel or nearly so, and the threaded end of the rod C is engaged by the hollow internally-threaded stem *e* of the ring or loop E outside of the cap *a*. The lower threaded end of the rod D is engaged outside of the sleeve B in the hollow internally-threaded boss *f* of the buckle F, which boss stands centrally on the transverse bar *f'* of said buckle. From the ends of the bar *f'* depend the similar arms f^2, one having an unthreaded perforation and the other an opposite threaded perforation. G is a screw that passes through the said unthreaded perforation and engages in the threaded perforation, thereby binding the arms f^2 toward each other.

H is a coiled spring that bears between the flanges *c'* and *d'* of the respective thimbles *c* and *d*, so that the rods C and D can be pulled outward from the respective upper and lower end of the casing A against the action of said spring.

Fig. 3 shows a modification of the device, in which the rod C is dispensed with, there being but a single rod D. In this modification the ring or loop E is secured to the cap *a*, and the spring H at its lower end bears directly against the sleeve B, there being no thimble *c*. The loop or ring E attaches to the tug or tug-chain and the buckle to the singletree, when the vehicle to which the horse is harnessed has a tongue.

In vehicles having thills the buckle is attached to the hames and the loop or ring to the tug. In this case the shell or casing A is surrounded by a cushion *l*, to prevent it from injuring the skin of the horse.

Having described our invention, we claim—

1. In draft-tugs, the combination of the two parallel rods, the flanged thimbles secured to opposite ends of said rods, the ring or loop attached to the outer end of one rod, the buckle attached to the outer or opposite end of the second rod, and the coiled spring surrounding the two rods and bearing against the flanges of the thimbles, substantially as described.

2. In draft-tugs, the combination, with the tubular shell or casing, the perforated cap secured to one end of the casing and the perforated shell attached to the opposite end of the casing, of the two parallel rods, the similarly-flanged thimbles attached to opposite

ends of said rods, the loop on the outer end of one of said rods, the buckle on the outer or opposite end of the second rod, and the coiled spring surrounding the rods between the flanges of the thimbles, substantially as specified.

3. In a draft-tug, the combination, with the shell or casing A, having the perforated cap *a* on one end and the bayonet-slot *a'* at the opposite end, and the sleeve B, having the pin *b*, to engage in said slot, of the rods C and D, the thimbles *c d*, respectively provided with the flanges *c' d'*, the ring or loop E, the buckle F, having the screw G, and the coiled spring H, bearing against the flanges *c' d'*, all constructed and arranged substantially as and for the purpose specified.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

ANDREW G. OLSON.
JOHN S. LINDQUIST.

Witnesses:
PETER ANDERSON,
JOSEPH CHEZ.