

(No Model.)

L. BURG.

SHAFT TUG.

No. 391,835.

Patented Oct. 30, 1888.

Fig. 1.

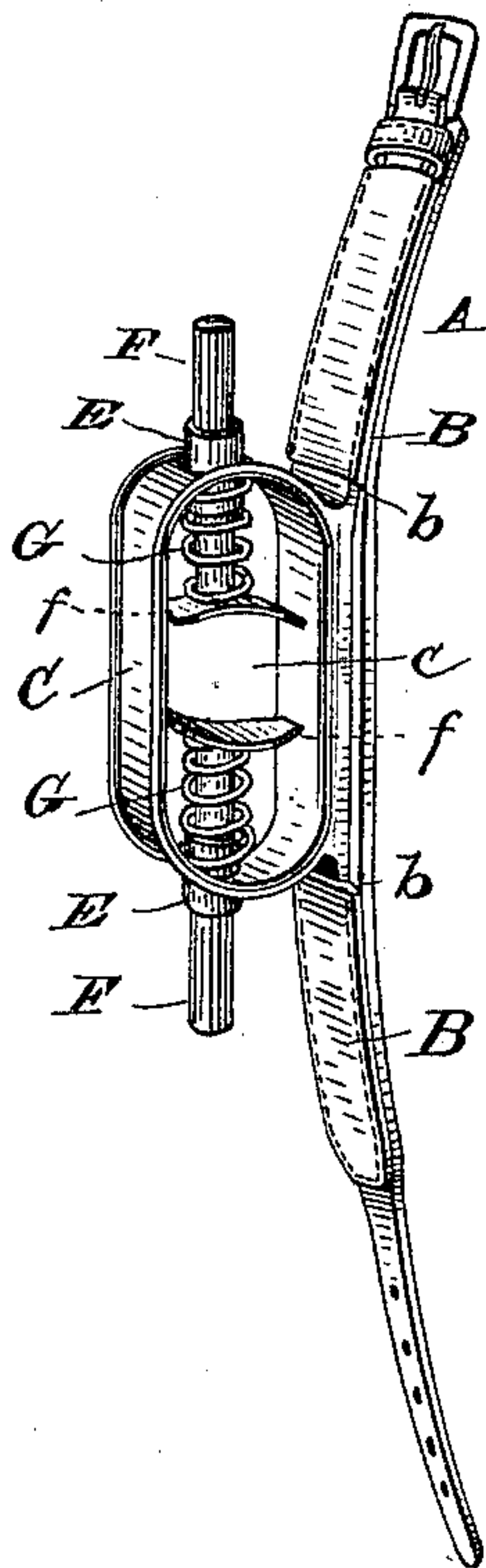


Fig. 2.

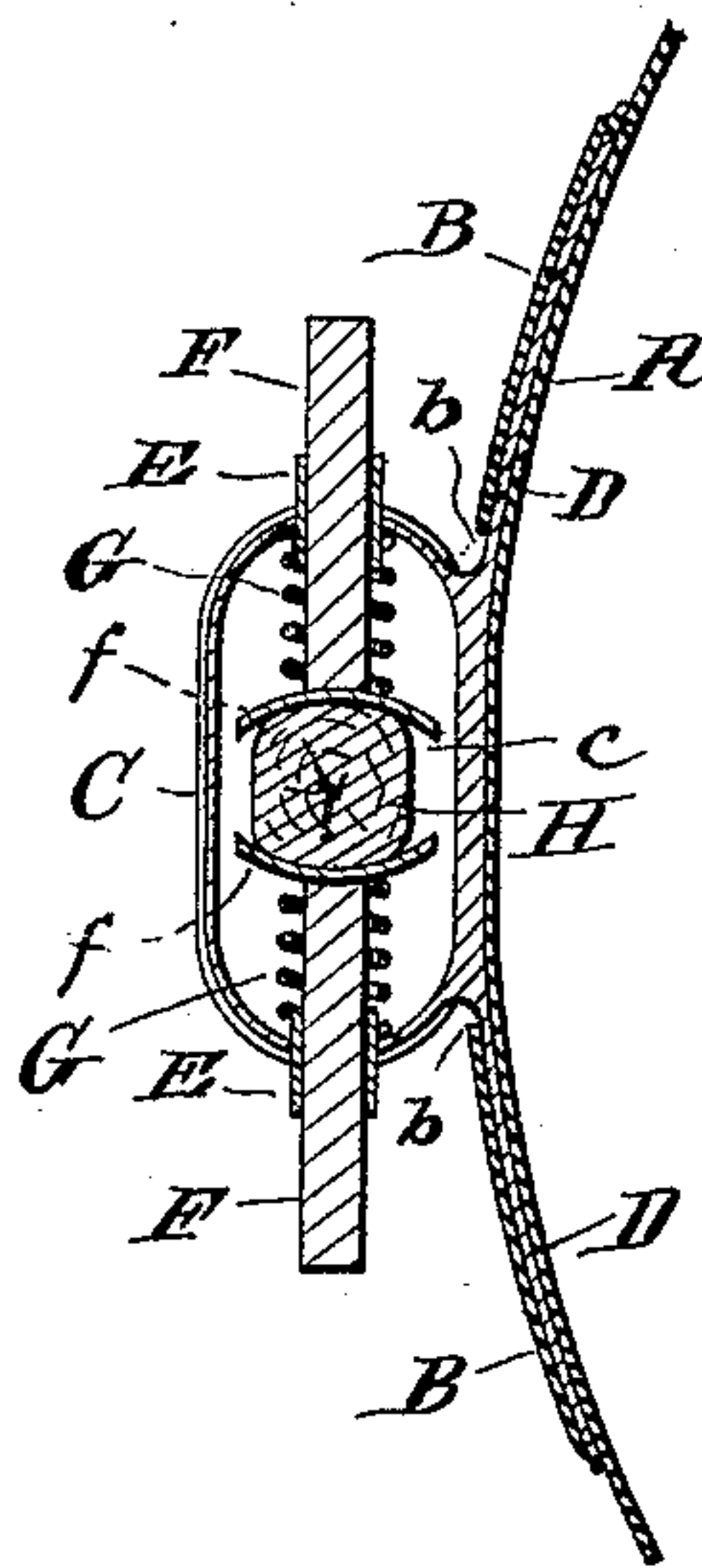
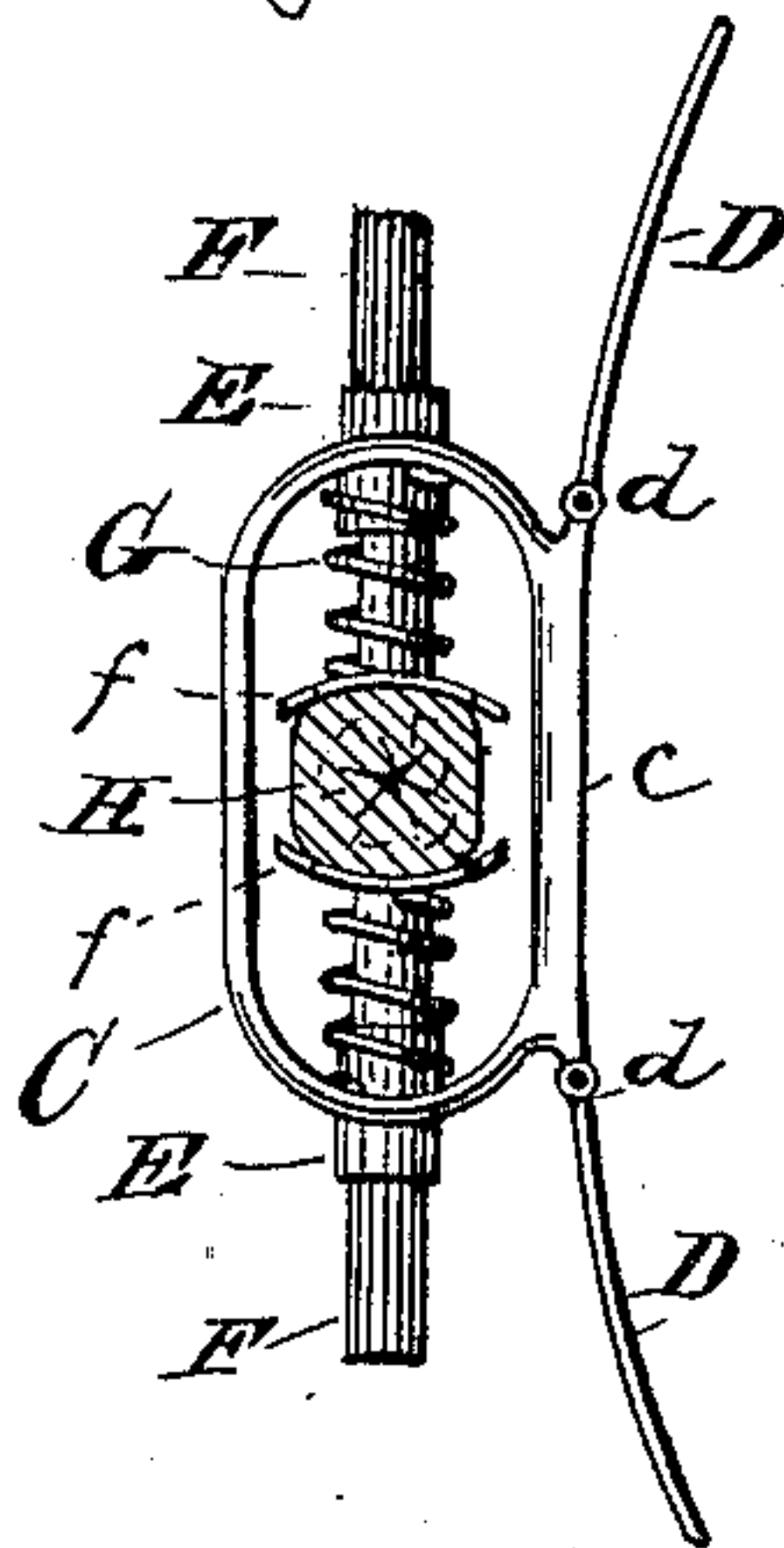


Fig. 3.



WITNESSES:

H. D. Neely.
E. F. Drew.

INVENTOR.

Lewis Burg.

M. D. Peck.
Attorney.

UNITED STATES PATENT OFFICE.

LEWIS BURG, OF FARMINGTON, IOWA.

SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 391,835, dated October 30, 1888.

Application filed July 6, 1888. Serial No. 279,192. (No model.)

To all whom it may concern:

Be it known that I, LEWIS BURG, a citizen of the United States, residing at Farmington, in the county of Van Buren and State of Iowa, have invented certain new and useful Improvements in Harness Shaft-Tugs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in shaft or thill tugs or holders for harness, and has for its object to prevent sudden jerks on the saddle by the movement of the vehicle and to relieve the vehicle from the horse motion, which is so annoying, more especially in village-carts or two-wheel vehicles; and it consists in the construction and arrangement of parts, hereinafter fully described, and more particularly pointed out in the claims.

In the drawings like letters of reference indicate corresponding parts in the several views. Figure 1 is a perspective view of my improvement. Fig. 2 is a vertical section, and Fig. 3 is a side view of a slightly-modified form.

A represents the saddle-strap of a harness, extending between the saddle and girth.

B represents pockets formed in the saddle-strap by an outer layer of leather secured thereto corresponding in width to the said strap. The openings in these pockets are at their inner ends, *b*, opposite to each other, a space being left between them.

C represents an oval or oblong yoke or supporting tug-frame having a re-enforced or enlarged inner side, *c*, from the ends of which extend outwardly-curved fixed arms D, diverging in opposite directions. These arms D are fitted in the pockets B when the saddle-straps are made and occupy the entire space therein, thus rigidly holding the yoke in place.

When it is desired to manufacture the elastic thill-tug for used upon old harness to enable the arms D to be inserted in pockets B, one or both of the arms may be hinged at *d* near the re-enforced portion *c*, as shown in Fig. 3. With this construction of tug the pocket may be formed by a mere cross-section through the outer thickness of the side strap without rip-

ping the stitches and resewing the leather. The ends of the side strap are then turned inward, throwing the ends of the pockets outward, when upon turning the arms of the tug inward upon the hinge away from the tug they are readily inserted in the pockets, and the strap then assumes the natural position, the same as when upon the horse, rendering their removal impossible until the strap is again placed in position for that purpose.

The yoke C of the elastic shaft-tug is constructed of metal having re-enforcing or strengthening ribs on its edges and openings through its upper and lower sides diametrically opposite to each other. There are rigidly secured in these openings vertically-arranged sleeves E, which project above and below and on the inside of the yoke and register with each other.

There are located within the sleeves E guide-clamp bars F, which are adapted to move vertically, and which have curved clamp-plates *f* on their inner ends at right angles to the bars to fit the sides of the shafts H, which are inserted between them. The length of the clamp-bars is sufficient to permit of the plates *f* on their inner ends coming in contact with each other at any point within the yoke C without their slipping out of the sleeves E.

Around the bars F, on the inner side of the yoke, there are preferably coiled spiral springs G, though other springs—as rubber—may be used, with their ends abutting against the inner walls of the upper and lower inner sides of the yoke and the curved plates *f* on their inner ends. The length and strength of these springs are sufficient to force the plates *f* down and up, respectively, into close proximity to each other, leaving sufficient space between the curved plates for the admission of the ends of the thills.

To prevent the clamp guide-bars F from rattling in the sleeves E, a cushion of anti-rattling material—such as felt, rubber, or leather—may be secured within the sleeves or upon the contacting portion of the bars, and also upon the faces of the curved plates *f* coming in contact with the thills.

The operation of my elastic shaft-tug is as follows: When the animal is attached to the vehicle, the shafts H are inserted between the curved clamp-plates *f* and extended through

between them the desired distance, crowding the plates apart, and the bars F through the sleeves E above and below the yoke. By constant pressure of the springs forcing the clamp-plates *f* down and up the shafts are held in place.

As the motion of the horse is such as to cause a short disagreeable vibratory movement of the vehicle, as well as one injurious to health, I construct my device in a manner to overcome such defects and objections as well as to relieve the horse from the sudden jerks or movements of the shafts. The springs surrounding the clamp-bars *f* permit the movement of the shafts up and down in the yoke and serve as cushions or buffers to receive the shock or sudden movements of the shafts, one spring expanding as the other contracts, thereby equalizing each other's force and strength.

In providing the curved clamp-plates *f* with clamp guide-bars F a more secure and better working device is made for use with two-wheeled carts than without them; but where the tug is only desired for use to relieve the thills of the horse motion, as in a carriage, the guide-bars may be dispensed with and the springs G secured to the clamp-plates and the upper and under inner sides of the yoke C.

I am also aware that many minor changes in the construction and arrangement of the parts of my device can be made and substituted for those shown and described without

in the least departing from the nature and principle of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a shaft-tug having openings in its upper and lower sides, of guide-bars working in said openings and springs surrounding said bars within the tug, as set forth.

2. The combination, with a shaft-tug for harness, consisting of a metallic yoke having vertical sleeves in its upper and lower sides, of clamp-bars working in said sleeves and clamp-plates on their inner ends and springs surrounding said bars within the tug, as set forth.

3. The combination, with a shaft-tug for harness, consisting of a yoke having spring clamp-bars working through sleeves in its upper and lower sides, the said bars having curved clamp-plates on their inner ends and coiled springs around the bars between the plates and the inner, upper, and lower sides of the yoke, of oppositely-diverging hinged arms on one side of the yoke, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS BURG.

Witnesses:

W. D. McCORMICK,
FRANK D. CARR.