

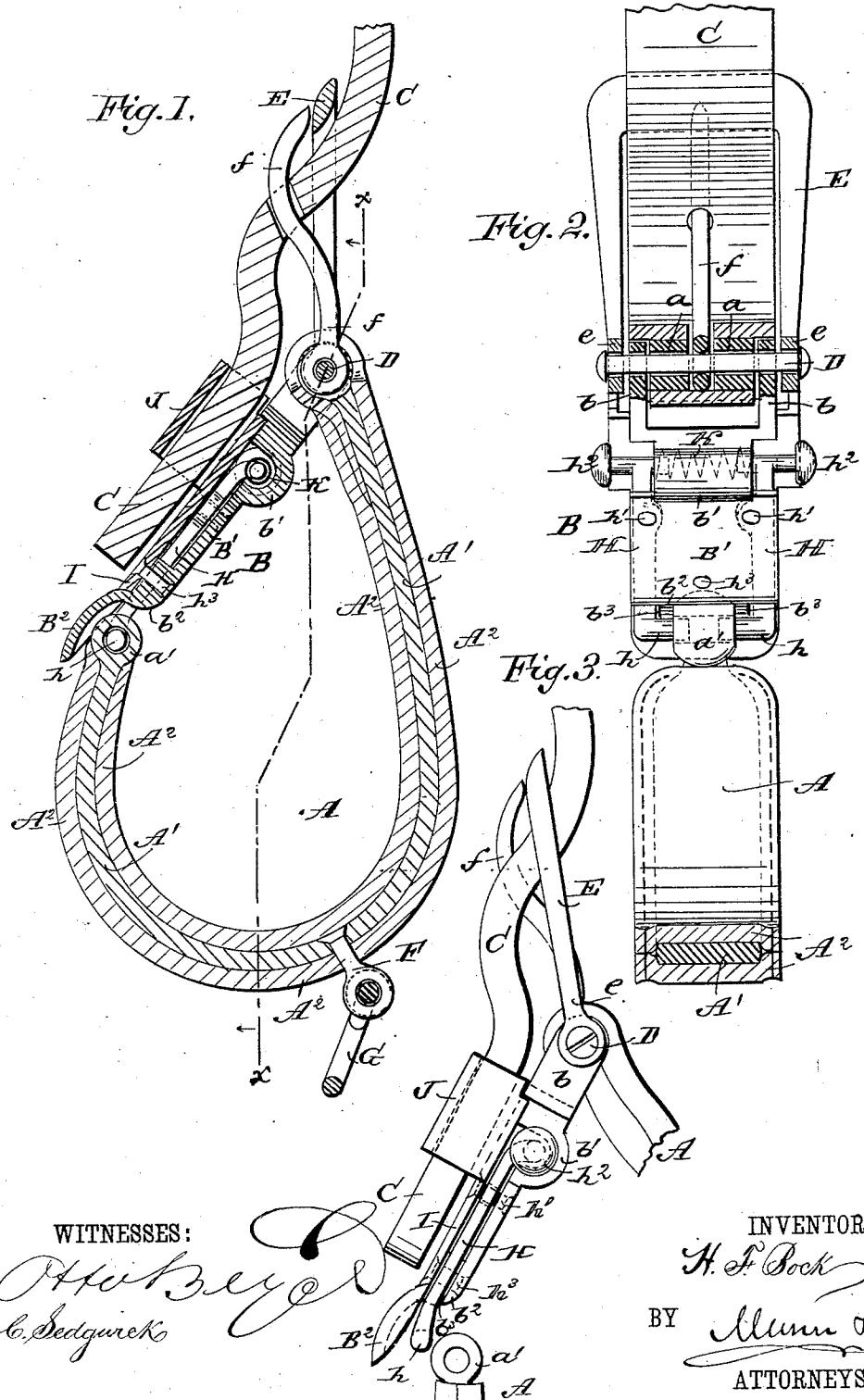
(No Model.)

H. F. BOCK.

SHAFT TUG.

No. 310,366.

Patented Jan. 6, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY FERDINAND BOCK, OF LANSING, ILLINOIS.

## SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 310,366, dated January 6, 1885.

Application filed June 25, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY F. BOCK, of Lansing, in the county of Cook and State of Illinois, have invented a new and Improved 5 Shaft-Loop, of which the following is a full, clear, and exact description.

My invention relates to harness-loops for supporting the shafts of vehicles, and has for its object to facilitate harnessing and unharnessing the draft-animal.

The invention consists in the construction and arrangement of parts, as will be herein-after fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front longitudinal sectional elevation of my improved shaft-loop. Fig. 2 20 is a cross-sectional elevation on the line  $x-x$ , Fig. 1, and Fig. 3 is a side elevation of the upper portion of the shaft-loop.

My improved shaft-loop is made in two principal sections or portions—the loop proper, 25 shown at A, and the metallic fastening B, by which the loop is held so as to open and close to enter and remove the shaft from it in harnessing and unharnessing the draft-animal, and by which also the entire loop is held to 30 the back-strap C of the saddle of the harness. I make the open loop A with eyes a a, and the fastening B with lugs b b, so that a strong pivot-pin, D, passed through the eyes a a and lugs b b, will hinge the loop A to the fastening 35 B. The ends e e of the frame of the buckle E pass at the sides of the lugs b b, and the eye of the tongue f of the buckle is placed between the eyes a a of the loop A, so that the buckle E is attached to the shaft-loop by the 40 same pin D by which the open loop A is hinged to the fastening B. The eyes a a are formed upon the upper end of a metal plate, A', which forms an inner metallic core to the loop part A, and is bent around to give the required 45 shape to the loop, as in Fig. 1. This core-plate A' is covered with plates or strips of leather, as at A<sup>2</sup> A<sup>2</sup>, which are stitched together at the edges, to inclose the core-plate A' and give a better appearance to the shaft-loop 50 by presenting a leather finish corresponding to the rest of the harness. The leather cov-

ering A<sup>2</sup> also prevents the excessive wear on the shafts which a metal loop would cause, and also makes the loop much more agreeable to handle, especially in cold weather. The 55 metal core-plate A' has fixed to it the eye F, to which the eye or frame G for the under strap is pivoted. The end of the core-plate A', which locks with the fastening B, has an eye, a', ranging transversely, and into which 60 eye the ends h h of the catches H H pass from opposite sides. These catches H H are pivoted on pins h' h', to and between the lower plate portion, B', of the fastening B and a back plate, I, on which latter plate is fixed or formed 65 the loop J, by or in which the end of the back-strap C is held after it passes through the buckle E. The plate B' of the fastening B is pressed or bulged out transversely, as at b', to form a recess behind it, in which is placed the 70 spring K, and so as to press outward by its opposite ends against the upper parts, h<sup>2</sup> h<sup>2</sup>, of the catches H H, above their pivots, and thereby force their lower bent ends, h' h', toward each other. The lower end of the plate B' is 75 bent outward, as at b<sup>2</sup>, and then is shaped at its extremity in the form of a shallow cup or bowl, B<sup>2</sup>, into which the eye a' of the loop A may pass for a guard when the eye is engaged by the catches H H. Where the plate B' is 80 bent at b<sup>2</sup> past the catches shoulders b<sup>3</sup> are formed, against which the catches strike to limit their throw by the action of the spring K. The pivot-pins h' of the catches serve, together with a lower rivet, h<sup>4</sup>, to bind the plates 85 I and B' of the fastening B firmly to each other, and so as to inclose the spring-catches H between them.

In harnessing the animal to a vehicle, the shafts or thills will be passed into the loop A 90 when it is swung back on its pivot D, whereupon the eye a' of the loop is swung around and engaged by the catches H H, which will firmly lock the shafts to place. It will be seen that the shafts are engaged and held by the loops 95 without passing the ends of the shafts through the loops. In unharnessing, the upper ends, h<sup>2</sup>, of the catches H H will be pressed toward each other, which will release the loop-eye a', and the loops may then be turned back on the 100 pivots D to remove the shafts from them. The ends h<sup>2</sup> of the catches H do not project in-

ward beyond the raised part  $b'$  of the plates  $B'$ , so that any lifting movements of the shafts in the loops can have no tendency to loosen or disable the catches.

5 I do not limit myself to the use of a leather covering for the metallic core-plate  $A'$  of the shaft-loop, as the same may be coated or covered with rubber or any other suitable fabric or material which will give a proper finish to the loop to correspond with the rest of the harness.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A shaft-loop constructed with a loop part,  $A$ , hinged with the buckle  $E$ , by which the loop is hung from the saddle-strap  $C$ , and provided with a transverse eye,  $a'$ , at its joint end, and the fastening  $B$ , connecting with the top of the loop, and provided with the spring-  
15 catches  $H H$ , adapted to enter the eye  $a'$ , substantially as shown and described.

2. In a shaft-loop, the fastening  $B$ , provided with the pivoted catches  $H H$ , having inturned locking ends  $h h$ , head portions  $h^2 h^2$ , and a spring,  $K$ , interposed between the parts  $h^2 h^2$ , 25 substantially as shown and described.

3. In a shaft-loop, the fastening  $B$ , bent at  $b'$ , and extended to form the rest and guard  $B^2$  for the eye  $a'$  at the loop-joint, substantially as shown and described.

30 4. A shaft-loop constructed with a loop,  $A$ , having a metallic core,  $A'$ , and an eye,  $a'$ , and hinged with the fastening  $B$  and buckle  $E$  on a pivot-pin,  $D$ , said fastening  $B$  having the back-strap loop  $J$  secured to it, and also having the pivoted catches  $H H$ , adapted to engage the eye  $a'$  of the loop part  $A$ , substantially as shown and described.

HENRY FERDINAND BOCK.

Witnesses:

JOHN BENZ,  
JOSEF PHILLIPS.