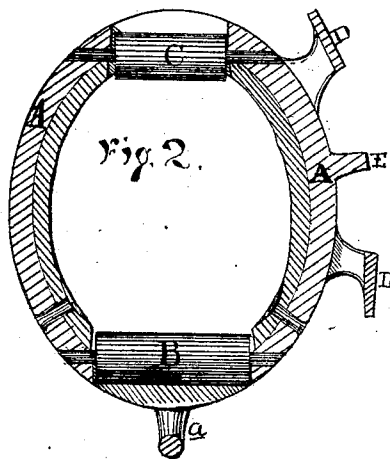
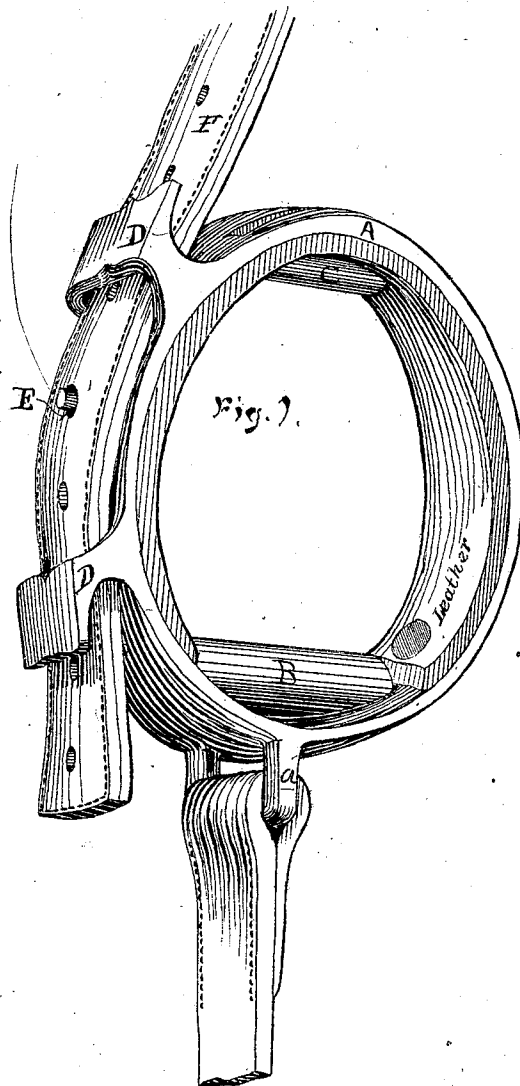


CHARLES C. LEE.

Improvement in Shaft Tugs for Harness.

No. 121,177.

Patented Nov. 21, 1871.



Witnesses,

J. C. Lyons

Maggie Smith

Inventor.

Chas. C. Lee

By his atty

W. J. Smith

# UNITED STATES PATENT OFFICE.

CHARLES C. LEE, OF FALLS CHURCH, VIRGINIA.

## IMPROVEMENT IN SHAFT-TUGS FOR HARNESS.

Specification forming part of Letters Patent No. 121,177, dated November 21, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES C. LEE, of Falls Church, in the county of Fairfax and State of Virginia, have invented a new and useful Improvement in Shaft-Tugs for Harness; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a longitudinal section of the same.

The shaft-tug in general use is made wholly of leather, and the disadvantages attending its use are found particularly in the fact that the shaft does not slide freely through said tug, and, therefore, there is not only an unpleasant strain upon the harness, but the shaft is subject to much wear from the continued chafing of the tug.

My tug is designed to remedy the above disadvantages by making it of rigid form, of metal, and by inserting friction-rollers to prevent the chafing of the shaft against the tug. My invention obviates the necessity also of the labor of attaching buckles, &c., to the tug, as well as the labor of stitching together the various pieces of which the tug is composed; and it consists in a metallic ring, having attached to it suitable connections for the straps necessary to connect it with the harness, and friction-rollers located at its upper and lower sides to receive the shaft and prevent the same from chafing. It also consists in constructing the metallic tug with a sta-

tionary tongue-buckle formed of one piece with the tug.

That others may fully understand my invention, I will more particularly describe it.

A is the tug, constructed preferably of cast metal. At its upper and lower sides there are recesses for the partial reception of the rollers B C, between which the shaft passes. A leather lining may be placed in the tug A, as shown, if desired; though the shaft will be chafed less, probably, by smooth metal than by leather. A loop, *a*, for the attachment of the belly-strap, is cast with the tug A. At the side of the tug I propose to form the loops D D and stationary stud E to form a buckle for the back-strap F.

In this way a tug is produced which can be made ornamental to any degree, and, at the same time, more durable and less injurious to the carriage-shafts than the tugs ordinarily used. Being constructed in one piece with the belly-strap loop and back-strap buckle, it can be attached to the harness or removed therefrom with facility.

Having described my invention, what I claim as new is—

The metallic shaft-tug A constructed with stationary loops D D and tongue E, and provided with friction-rollers B C, as described and shown.

CHARLES C. LEE.

Witnesses:

R. D. O. SMITH,  
E. R. MCKEAN.

(72)