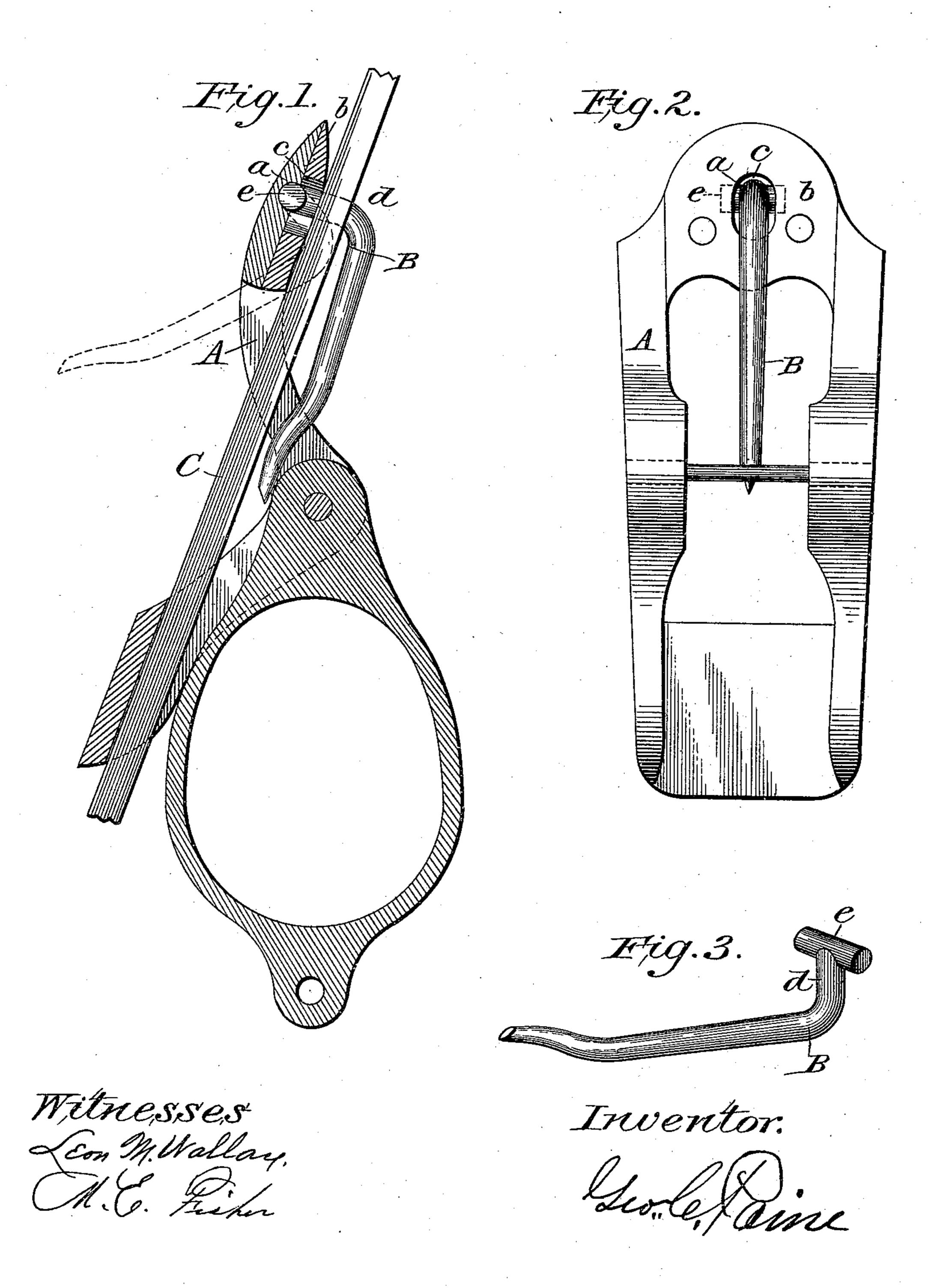
G. C. PAINE.
SHAFT TUG.

No. 446,390.

Patented Feb. 10, 1891.



## United States Patent Office.

GEORGE C. PAINE, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JOSEPH S. HEALY, OF SAME PLACE.

## SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 446,390, dated February 10, 1891.

Application filed March 1, 1890. Serial No. 342, 314. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. PAINE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Buckles, of which the follow-

ing is a specification.

This invention relates to improvements in that class of buckles usually employed upon harnesses and in connection with thill-lugs; and the object of the invention is to provide a buckle with its tongue arranged and constructed in a manner to permit the strap to which it may be attached to remain in a perfectly straight condition, and in which the tongue of the buckle does not show at the upper side of the strap when a strap is attached to the buckle, all of which is hereinafter explained more fully, and illustrated in the accompanying drawings, in which similar letters of reference refer to similar parts.

Figure 1 represents a side sectional view of the buckle and lug with which it is connected, together with the strap. Fig. 2 represents the underneath side of the buckle, and Fig. 3 is a view of the tongue detached.

A represents the frame of the buckle, on the under side at the forward or upper end of which the tongue B is pivoted at A, the 30 frame of the buckle being properly recessed to receive the tongue, and the tongue being held in place by the plate b, the plate being secured to the buckle by rivets or similar means, and the plate b being provided with 35 an aperture or opening c, by which means the tongue B is permitted to swing upon its pivot.

The tongue B consists of a shank, and near one end d is bent at a right angle, the bend or right-angle part being of a length about equal to the thickness of a strap, such as it is designed to be attached to, (which in most cases would be the saddle-strap of a harness.) The end of the bend or right angle d is provided with a transverse bar e, which bar forms the pivot upon which the tongue swings.

C, Fig. 1, is the strap to which the buckle

is attached, and the relation and position of the various parts are clearly shown in Fig. 1, the position of the tongue when swung up 50 to affix the strap being shown in the broken lines. It will be observed that from the shape of the tongue the strap remains perfectly straight, thus avoiding the tendency to break at the point where the tongue passes 55 through it, as is usually the case when used with buckles of the ordinary construction.

The free end of the tongue will rest against a cross-bar at the center of the buckle or against the top of the lug when strain comes 60 upon the strap. The buckle-frame is constructed so as to present a broad bearing-surface to the strap at the point where the tongue passes through the strap, and the tongue is secured to the buckle-frame in a 65 manner so that no part of the tongue shows from the upper or outside of the strap or buckle when it is attached to a strap, by which means the frame of the buckle may be constructed of brass or a similar metal, while 70 the tongue may be of iron or a metal of less expense than the frame.

I claim—

1. The buckle comprising the side and end bars, the intermediate cross-bar, and the bent 75 tongue B, pivoted to the under side of the upper cross-bar, the free end of which rests upon the upper side of the intermediate bar, substantially as described.

2. A buckle comprising the rectangular 80 frame centrally depressed, with a bar in the centrally-depressed post adapted to receive a turn loop and provided with the right-angular tongue pivoted to the under side of the upper bar of the frame and held in place 85 by the plate c, said plate secured by rivets or otherwise, the loose end of said tongue resting against the upper side of said central bar, substantially as described.

GEO. C. PAINE.

Witnesses:

I. J. GILLAM, M. L. STEPHENSON.