

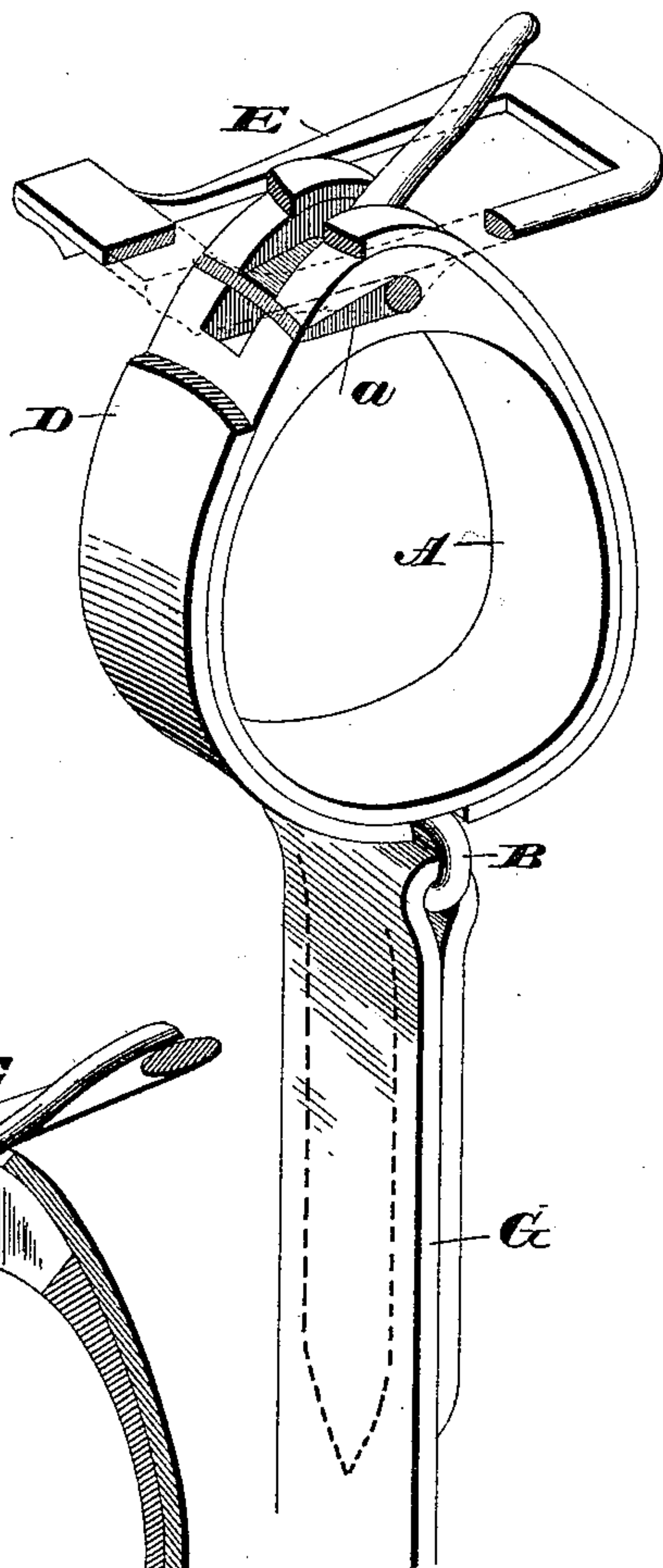
(No Model.)

C. W. HAAS.  
SHAFT TUG.

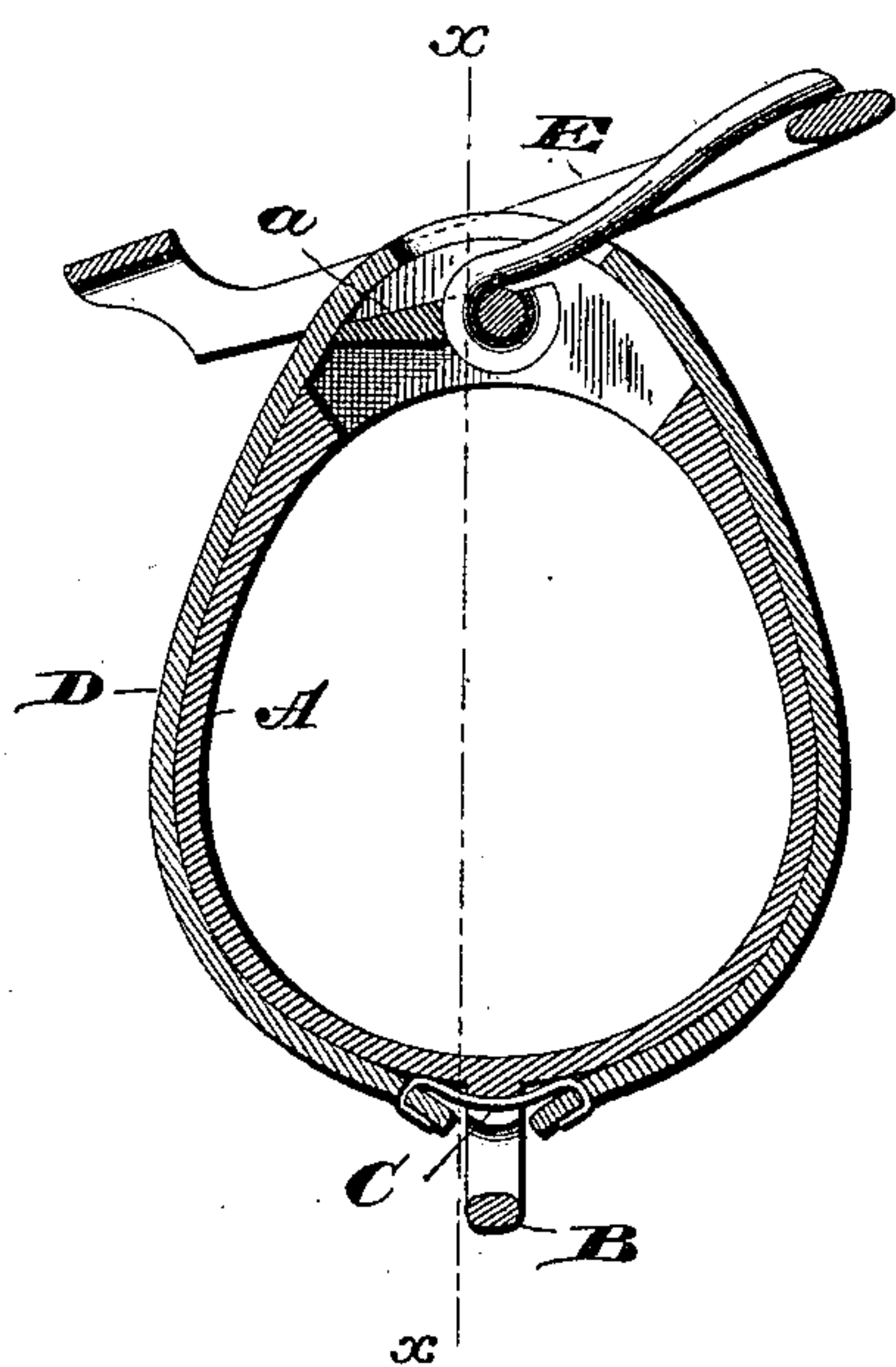
No. 439,002.

Patented Oct. 21, 1890.

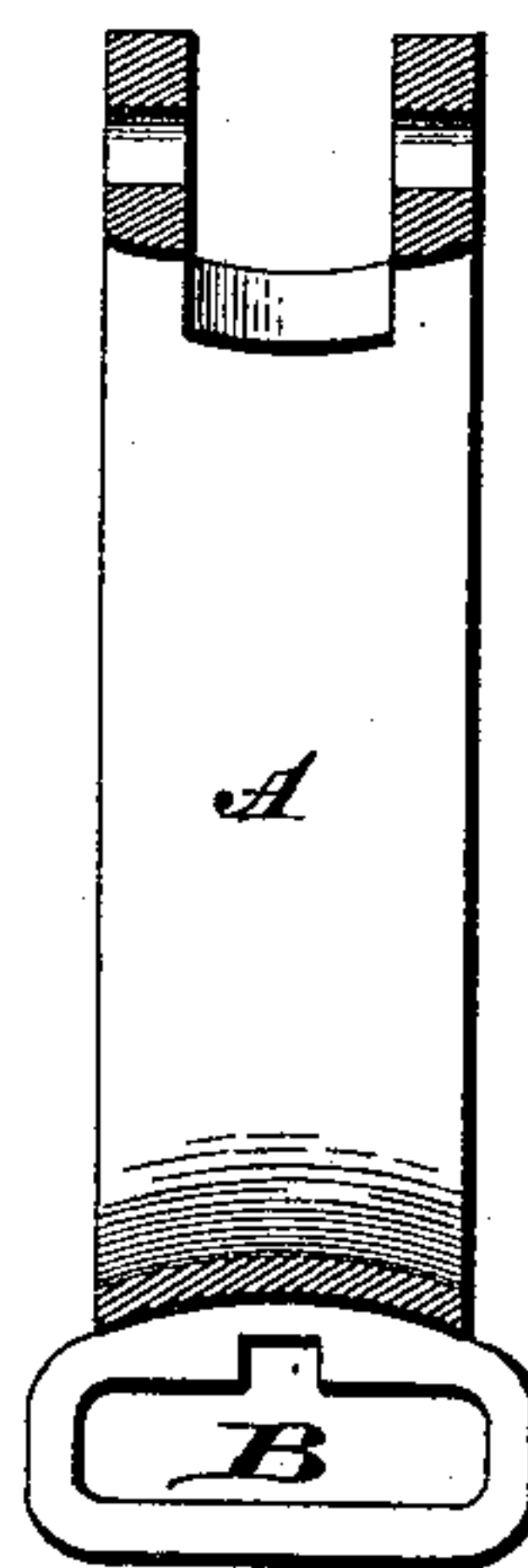
*Fig. 1.*



*Fig. 2.*

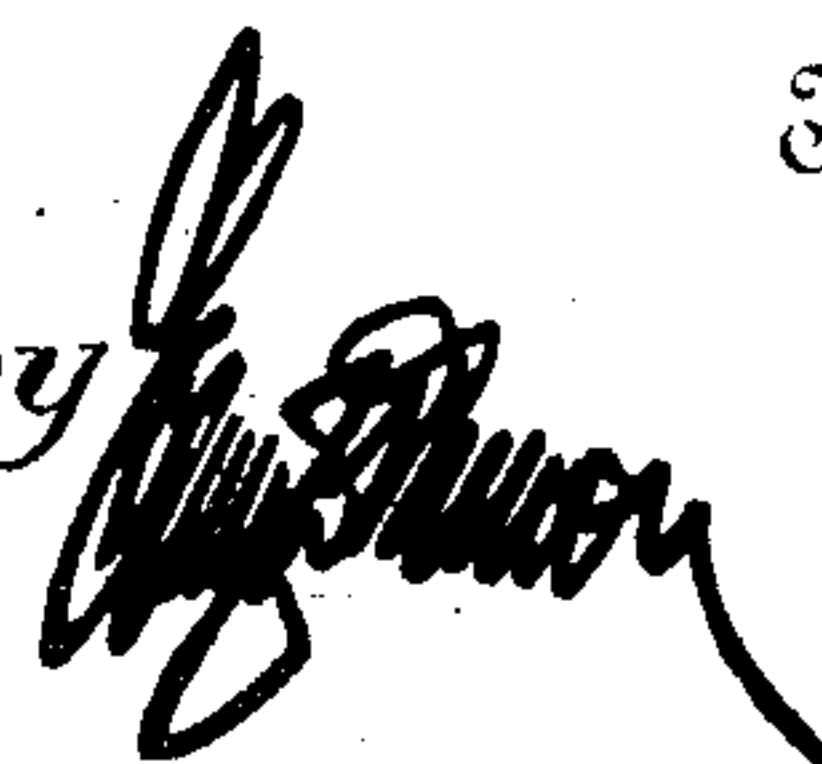


*Fig. 3.*




Charles W. Haas.

Inventor

by 

Attorney

Witnesses  
  




# UNITED STATES PATENT OFFICE.

CHARLES W. HAAS, OF ALLENTOWN, PENNSYLVANIA.

## SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 439,002, dated October 21, 1890.

Application filed July 17, 1890. Serial No. 359,020. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. HAAS, a citizen of the United States of America, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in 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, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in shaft-tugs.

The object of the invention is to provide a shaft-tug, the inner or wearing portion of which will be entirely of metal, the upper part thereof having a buckle secured thereto, while the lower portion has formed thereon a loop, the outer face of the metallic portion of the tug being concave in cross-section so as to better retain thereon a leather covering-strap secured thereto by a metallic fastening device passed through the free ends of the covering-strap to connect them to each other, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view, partly in section, of a shaft-tug constructed in accordance with my invention. Fig. 2 is a transverse sectional view. Fig. 3 is a sectional view taken through the line  $x x$  of Fig. 2.

A refers to the metallic portion of the shaft-tug, which is made up of a single casting having at its upper portion an open-ended slot, the metal above the same being adapted to be turned down upon the metal adjacent thereto below, so as to confine in place a triangular packing of flexible material. The metal portion A is open at its upper portion except the side edges, so as to provide a hollow space beneath the buckle, which materially lightens the metallic portion of the tug. The wedge or triangular shaped leather strip  $a$ , which lies within the open-ended slot, is cut away centrally or recessed, so that the tongue of the buckle will abut against the same. Upon the lower portion of the tug A is formed a loop B, a central recess being formed be-

tween the transverse portion of this loop adjacent to the tug, and within this recess lies the central part of the metallic fastening device C, which engages with perforations formed in the ends of the leather cover D. This metallic fastening device may be simply a bar of metal, having bent ends, which are upset upon the leather cover to retain the same in place, the ends of said leather cover D abutting against the transverse portion of the loop adjacent to the tug. Through this loop passes the usual connecting-strap G.

The interior portion of the metallic tug is convex in cross-section while the exterior is concave, and within the concave portion lies the covering-strap D, through which passes the tongue of the buckle E, as well as the metallic fastening C hereinbefore referred to. Thus it will be observed that all the strain is upon the central portion of the covering-strap, which will have a tendency to draw the same within the concave portion of the tug A and hold the edges of the covering-strap in close contact with the edges of the metallic portion.

In my prior patent, No. 300,865, dated January 24, 1884, the metallic portion of the tug was provided with an open-ended slot and a filling piece. The ends of the bifurcated portions which pass beneath the buckle in said patent were not upset as they are in the present instance, so as to embrace the filling-piece, and said filling-piece was therefore liable to fall out, which would materially affect the appearance of the tug, as a space would be left into which the covering-strap would partially lie. Further, in the present instance I hollow out the upper portion of the tug and render it much lighter.

Having thus described my invention, I claim—

1. A shaft-tug constructed substantially as shown and comprising an inner metallic portion provided at its upper end with a buckle and having formed integral therewith at its lower end a loop, a recess being formed in the central portion of said loop, together with a leather covering-strap having its ends terminating adjacent to said loop, and a metallic fastening device lying in said central recess and engaging said ends, substantially as set forth.

2. The combination, in a shaft-tug, of an

inner metallic portion provided at its upper end with a slot into which a cross-bar of a buckle having a keeper may be passed, thus providing bifurcated ends above said cross-  
5 bar, a filling-piece retained in said slot by the upset bifurcated ends, said inner metallic portion having a concave outer surface and integral lower loop provided with a recess, a covering-strap lying in said concave surface,  
10 and a metallic fastening device located in said central recess and engaging the ends of the strap, substantially as set forth.

3. In combination with a shaft-tug constructed substantially as shown, the exterior  
15 thereof being concave in cross-section, a loop

formed integral therewith upon the lower portion of said tug, the upper cross-bar of said loop having a recess, a strap or covering secured over the outer portion of the tug and retained thereon by a metallic fastening device secured to the ends of said strap, said  
20 metallic fastening device lying partially within the recess in the upper portion of the loop, substantially as set forth.

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

CHARLES W. HAAS.

Witnesses:

EDWIN H. STINE,  
EDWARD RUHE.