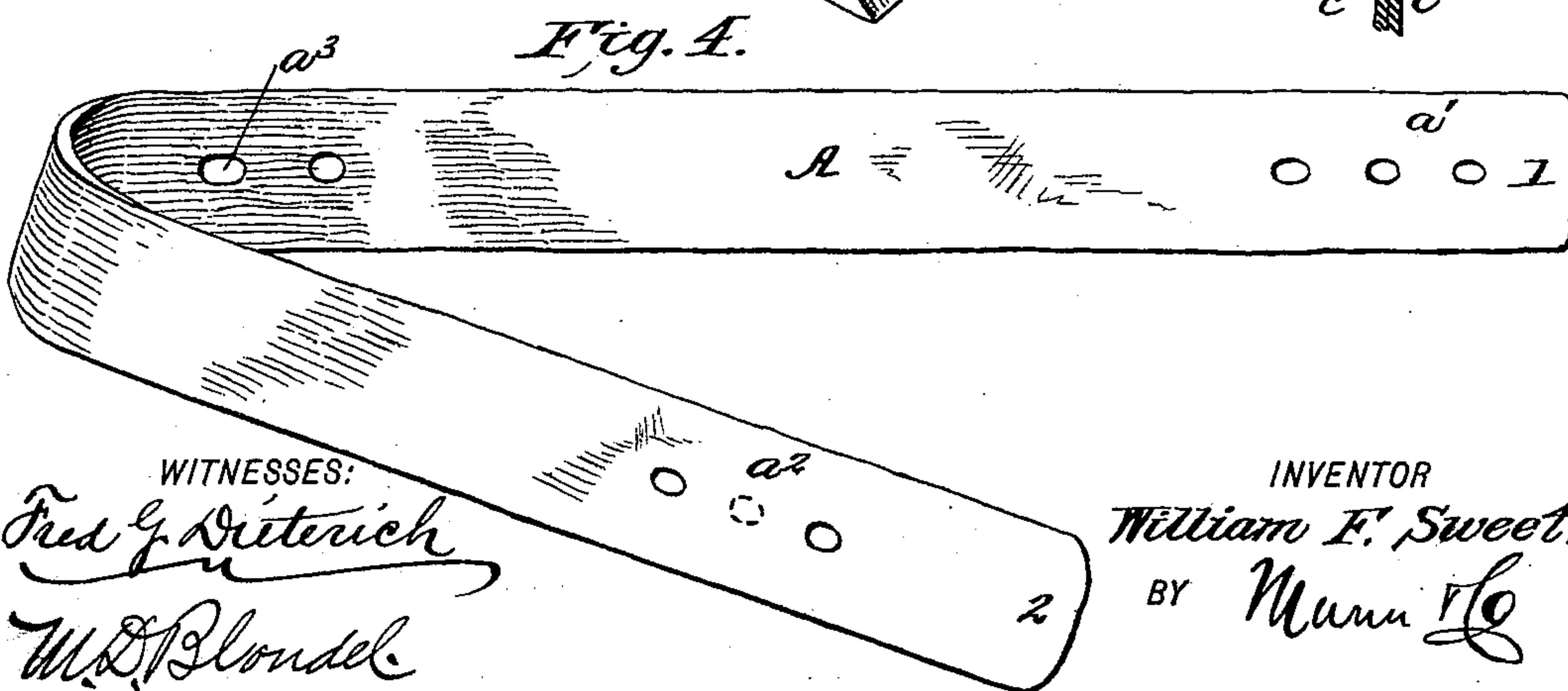
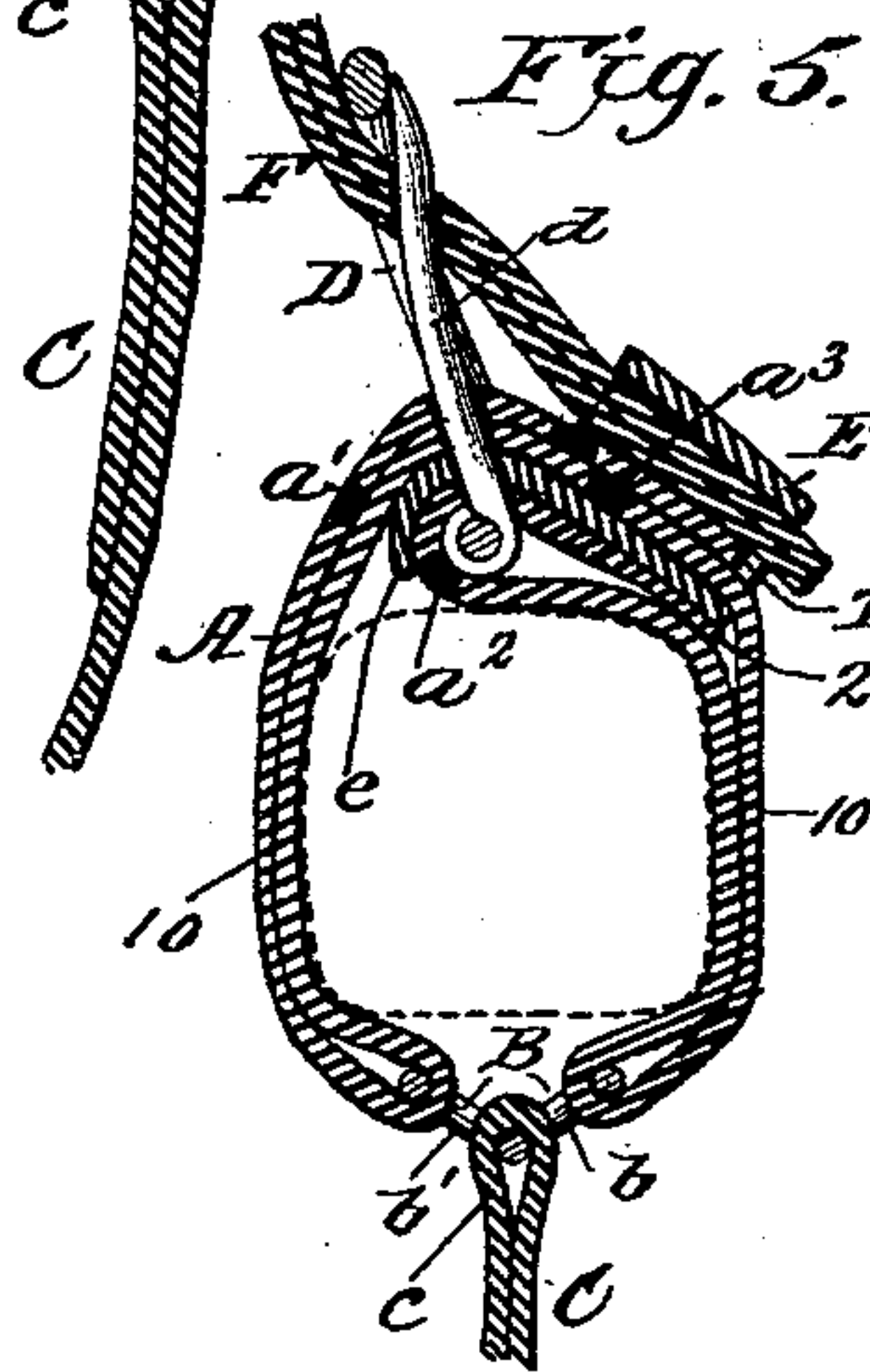
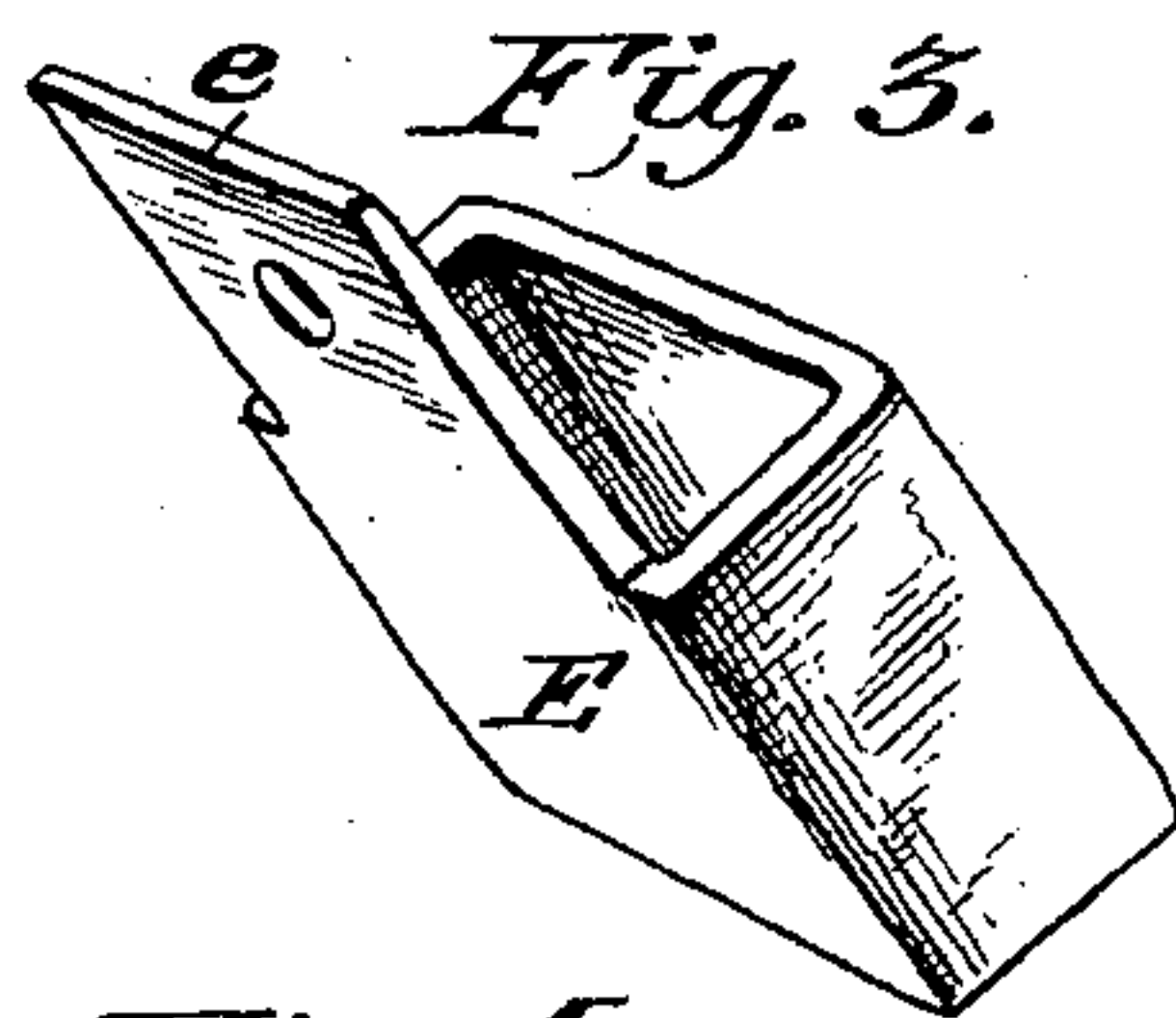
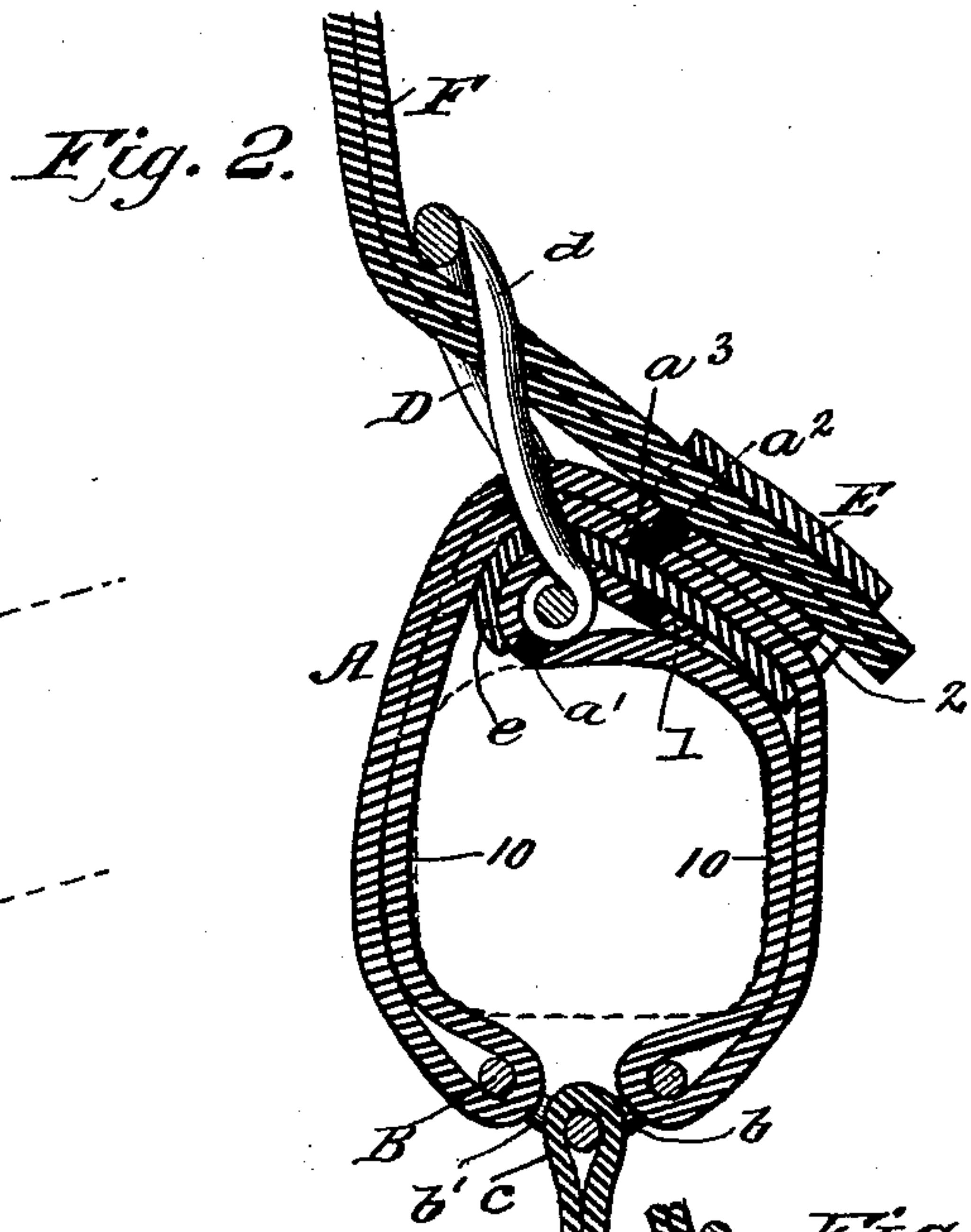
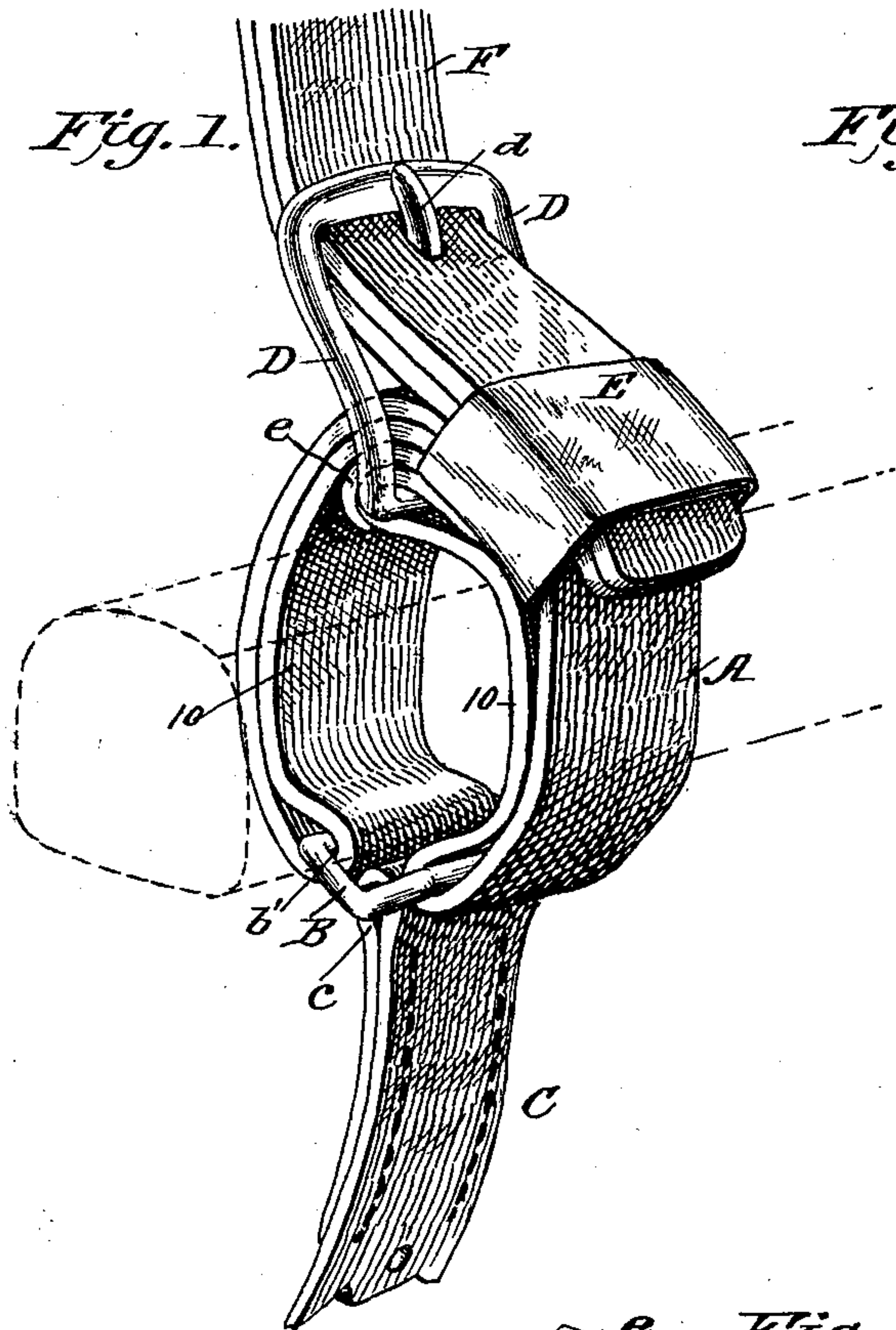


(No Model.)

W. F. SWEET.
SHAFT TUG.

No. 500,441.

Patented June 27, 1893.



WITNESSES:
Fred G. Dietrich
W. D. Blondel

INVENTOR
William F. Sweet.
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM F. SWEET, OF WEBB'S MILLS, NEW YORK, ASSIGNOR OF FIFTY-
ONE ONE-HUNDREDTHS TO WENTWORTH D. VEDDER, OF MANSFIELD,
PENNSYLVANIA.

SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 500,441, dated June 27, 1893.

Application filed March 23, 1893. Serial No. 467,296. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SWEET, residing at Webb's Mills, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Shaft-Tugs, of which the following is a specification.

Shaft tugs or thill loops are subject to rapid wear, by reason of friction with the shafts or thills, and therefore frequently require to be replaced by new ones, while other portions of a harness remain strong and serviceable.

I have devised a shaft tug whose inner or wearing surface may be changed in position so that a fresh or unworn surface is brought into contact with the shaft, making as it were, a loop or tug with changeable bearing portions, so that as one portion thereof becomes worn, such portion can be moved out of contact with the shaft, and an unworn portion of the tug strap brought into position to support the shaft.

My invention consists in the peculiar construction and arrangement of parts as will hereinafter be described, and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved shaft tug. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a perspective view of the keeper. Fig. 4 is a perspective view of the strap, and Fig. 5 is a section of the same with the strap in its reversed position.

In the drawings A indicates the reversible, detachable leather strap, which when folded and joined as shown in Fig. 1 forms the body of the shaft tug.

B indicates a metal loop or link member connected with the bottom of the tug body, to which is connected the end c of the girth strap C.

D indicates the buckle, and E a detachable keeper connected with the buckle tongue, and arranged in connection with the strap A as hereinafter described.

The strap A is provided with one or more holes in each end, as indicated by a' a^2 and a series of holes a^3 about centrally thereof.

The manner in which the strap A is folded

and joined will be best understood by reference to Fig. 2 of the drawings, it being folded in the following manner.

The end 1 of the strap A, is first connected to the buckle, the tongue d of which passes through one of the holes a' . It is then passed through the eye b of the loop B. At this point it should be stated the keeper E is secured to the buckle, it being provided with an apertured tongue portion e through which the tongue d of the buckle passes as shown, the keeper body proper being arranged to extend in an outward direction. After the keeper is put in position in the manner stated, the free end of the strap A is folded back upon itself and passed through the buckle, the tongue d at this time passing through one of the central holes a^3 . It is then passed down and through the eye b' of the loop B, then back upon itself again and its free end 2, passed through the buckle D, the tongue at this time passing through one of the openings a^2 . The skirt strap F is then connected with the buckle D and its end passed through the keeper E. The tug is then in a complete form and ready for use. It will thus be seen that the sides of the tug loop are formed of double strap sections, and the buckle passes through the said strap three times, thus forming not only a strong and secure manner of connecting the tug strap, but also providing a very simple means for detachably holding the same, whereby it can be quickly reversed when desired.

When adjusted and arranged as shown in Fig. 2 should the bearing faces 10 10 of the strap become worn by friction such faces can be removed from contact with the thill by reversing the strap, *i. e.* by detaching the same, bringing the end 2 into engagement with the buckle first, and folding as before; and when so folded the worn faces 10 10 will be at the outside as indicated in Fig. 5.

It is obvious that by forming a tug of a single strap and detachably connecting the same in the manner stated, a much longer use of the tug strap is attained, and by making the side walls of the tug of double sections, the inner or bearing face is reinforced and much relieved from strain.

It will be perceived that the tug strap is ad-

justable in length to adapt it for any size of thill.

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

1. In a shaft tug, in combination, a strap having holes at each end and at a point between such ends, a link having opposite eye portions, and a buckle, said straps connected to the buckle tongue at one end, bent to form opposite loops, to which the link eyes are connected the said buckle tongue passing through the center, and the free end holes in the said strap, substantially as shown and described.

2. In a shaft tug, the combination with the skirt buckle, and the girth link, of a strap having holes at each end, and centrally, whereby it can be secured to the buckle tongue at three points, at the ends, and centrally, to form loop portions, said loop portions being

connected to the girth link, and whereby such strap is adapted for a detachable and reversible connection with such buckle and link all substantially as and for the purposes described.

3. In a shaft tug, the combination with the buckle D, and the girth link B, of the strap A, having holes at each end, and centrally, and the keeper E having an apertured tongue e, adapted to fit over the buckle tongue, said strap A connected at its ends, and centrally, to the buckle, and its loop to the link B, and passed with one of its sections through the keeper E, all arranged substantially as in the manner and for the purposes described.

WILLIAM F. SWEET.

Witnesses:

JOHN WELLS,
BYRON J. COSTLEY.