

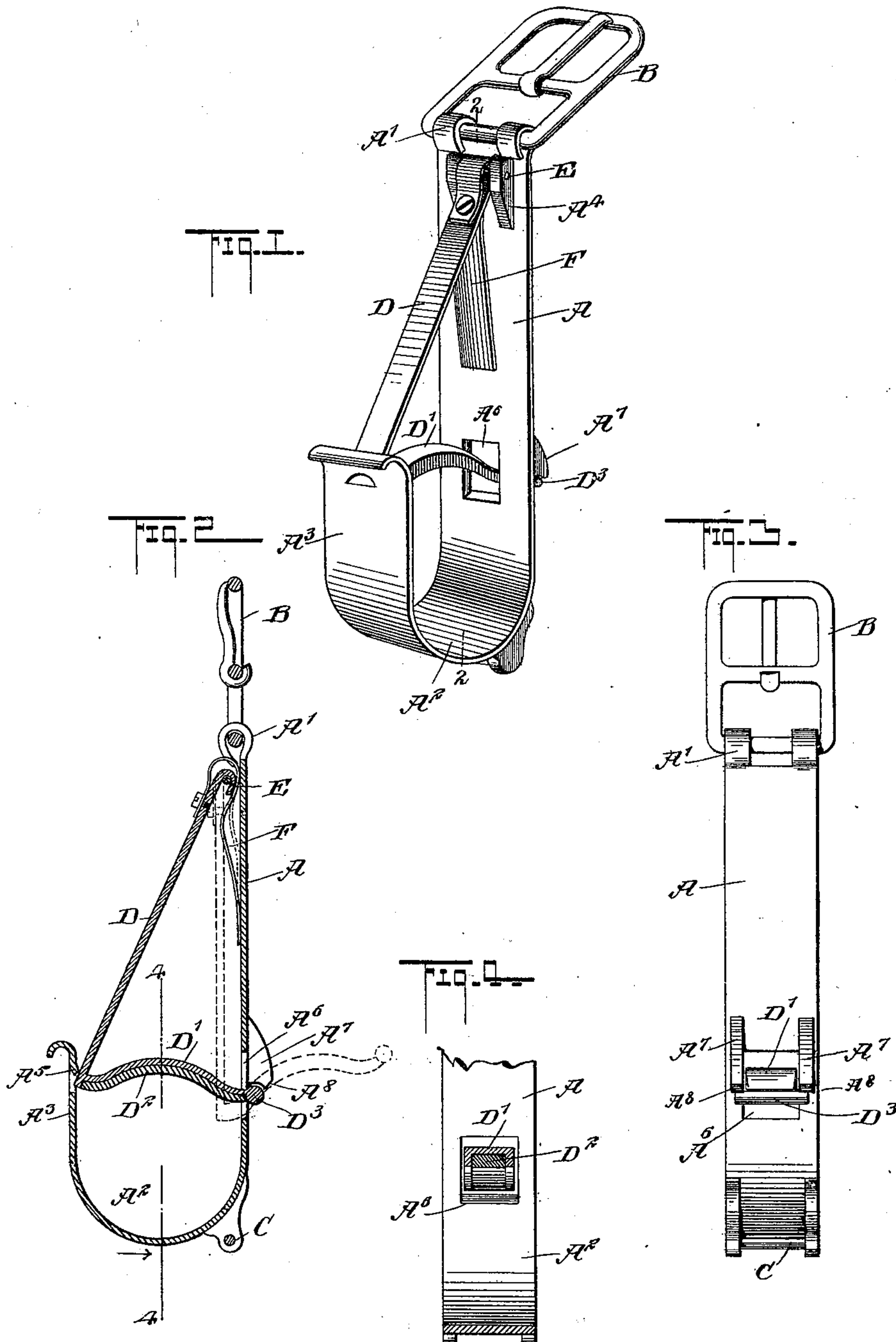
No. 653,036.

Patented July 3, 1900.

J. O'CONNELL.
SHAFT TUG.

(Application filed Mar. 31, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES O'CONNELL, OF MOUNT STERLING, KENTUCKY, ASSIGNOR OF ONE-HALF TO THOMAS HEINRICH, OF SAME PLACE.

SHAFT-TUG.

SPECIFICATION forming part of Letters Patent No. 653,036, dated July 3, 1900.

Application filed March 31, 1900. Serial No. 10,935. (No model.)

To all whom it may concern:

Be it known that I, JAMES O'CONNELL, a citizen of the United States, and a resident of Mount Sterling, in the county of Montgomery and State of Kentucky, have invented a new and Improved Shaft-Tug, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved shaft-tug which is simple and durable in construction and arranged for convenient attachment to any style of harness and adapted to allow an easy, quick, and simultaneous hitching of both shafts to the tugs.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is a sectional elevation of the same on the line 2 2 in Fig. 1. Fig. 3 is a rear elevation of the same, and Fig. 4 is a sectional front view of the same on the line 4 4 in Fig. 2.

The improved shaft-tug is provided with a shank A, made of a piece of flat metal and formed at its upper end with an eye A' for receiving a buckle B for attaching the device to a strap of the harness in the usual manner.

The lower end of the shank A terminates in an oval bearing A², the front member being extended upward, as at A³, and curved to the front at the top edge to permit an easy introduction of the shaft into the bearing A². On the back of the bearing A², near the lower end thereof, is arranged a guide C for the belly-band or other strap of the harness. A tongue D is hung at its upper end on a pivot E, carried by lugs A⁴, attached to or formed on the front face of the shank A at the upper end thereof, and the lower end of said tongue D extends to the beginning of the bearing A² and is provided at its lower end with a cross-piece D', adapted to extend from the front member A³ of the bearing through the back thereof to close the bearing after the shaft is

in position and prevent the shaft from accidentally leaving the bearing. The under side of the cross-piece D' is preferably recessed to receive a lining D², of leather or other material, to prevent marring of the shaft, and the bottom of the bearing A² may likewise be covered, if desired.

A spring F, secured to the upper end of the tongue D, presses with its free end against the front face of the shank A, so as to hold the spring-tongue D normally in an outermost position, as shown in Figs. 1 and 2, the lower end of the tongue abutting against a lug A⁵ on the inside of the member A³, the rear end of the cross-piece D' extending through a slot A⁶ in the back member of the bearing and the extreme outer rear end of said cross-piece carrying a pin D³, engaging at the under sides of lugs A⁷, formed or secured on the back of the shank A.

Now it will be seen that the lugs A⁵ and A⁷ form abutments for the tongue D and the cross-piece D', so that any upward pressure on the shaft against the cross-piece is taken up by said lugs, and consequently the pivot-pin E is relieved of undue strain, and the tongue D is not liable to accidentally open when the shaft exerts the upward pressure mentioned. The lugs A⁷ are slightly beveled, as at A⁸, to permit the pin D³ to slide along the bevel A⁸ and snap under the curved bottoms of the lugs A⁷, it being understood that the resiliency of the cross-piece D' permits such movement.

The shaft-tug described is very simple and durable in construction, can be cheaply manufactured, is not liable to get out of order, and permits a ready insertion of the shaft by bearing with the shaft on the tongue D, so that the latter swings rearward against the tension of its spring F until the shaft has entered the bearing A² and moved out of engagement with the tongue, so that the latter swings forward into a closing position by the action of its spring F. Thus the operator need not handle the tug in any way whatever in order to engage the shaft with the tug.

The cross-piece D' of the tongue D is curved upwardly to give sufficient room for the shaft to play in and to allow an easy disconnection of the tug from the shaft in unhitching.

This is done in the ordinary manner by loosening the traces and unbuckling the belly-band and then walking the animal out of the shafts, the closed bearing then sliding along 5 and off the shaft. By having the opening in the closed bearing approximately oval or elongated vertically the shafts disengage readily from the bearing without the tug hanging back or dragging, as is so frequently the case 10 in tugs heretofore constructed. It is not absolutely necessary, however, to unbuckle the belly-band for the purpose mentioned.

Having thus fully described my invention, I claim as new and desire to secure by Letters 15 Patent—

1. A shaft-tug, comprising a shank having a shaft-bearing on its lower end, a spring-pressed tongue pivoted on the shank and having a cross-piece extending from one member 20 of the bearing to and through the other, and means carried by the members of the bearing for engaging the tongue at the cross-piece and holding the tongue against upward movement when pressure is exerted thereupon by 25 the shaft, and to relieve the pivot of the tongue of undue strain, substantially as shown and described.

2. A shaft-tug, comprising a shank having an approximately-oval shaft-bearing, lugs on

the back of the shank on opposite sides of an 30 opening in the rear member of the bearing, and a spring-pressed tongue pivoted on the upper end of the shank, and formed at its lower end with a cross-piece extending from one member of the bearing through said open- 35 ing, to engage with its rear, free end the said lugs, as set forth.

3. A shaft-tug, comprising a shank having an approximately-oval shaft-bearing, lugs on the back of the shank on opposite sides of an 40 opening in the rear member of the bearing, a spring-pressed tongue pivoted on the upper end of the shank, and formed at its lower end with a cross-piece extending from one member of the bearing through said opening, to 45 engage with its rear, free end the said lugs, and a lug on the front member of the bearing for engaging the forward, lower end of said tongue, substantially as shown and de- 50 scribed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES O'CONNELL.

Witnesses:

J. H. WOOD,
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