June 14, 1949. E. T. TODD 2,473,114

HARNESS

Filed Feb. 20, 1946

2 Sheets-Sheet 1

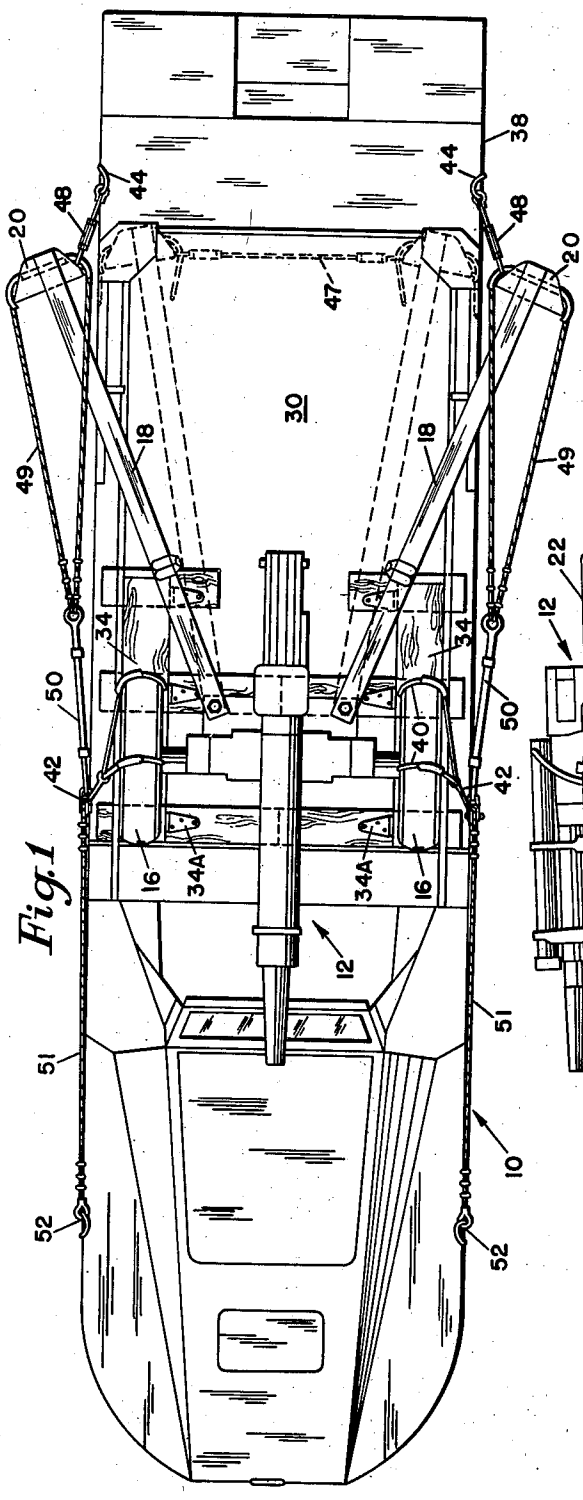


Fig. 1

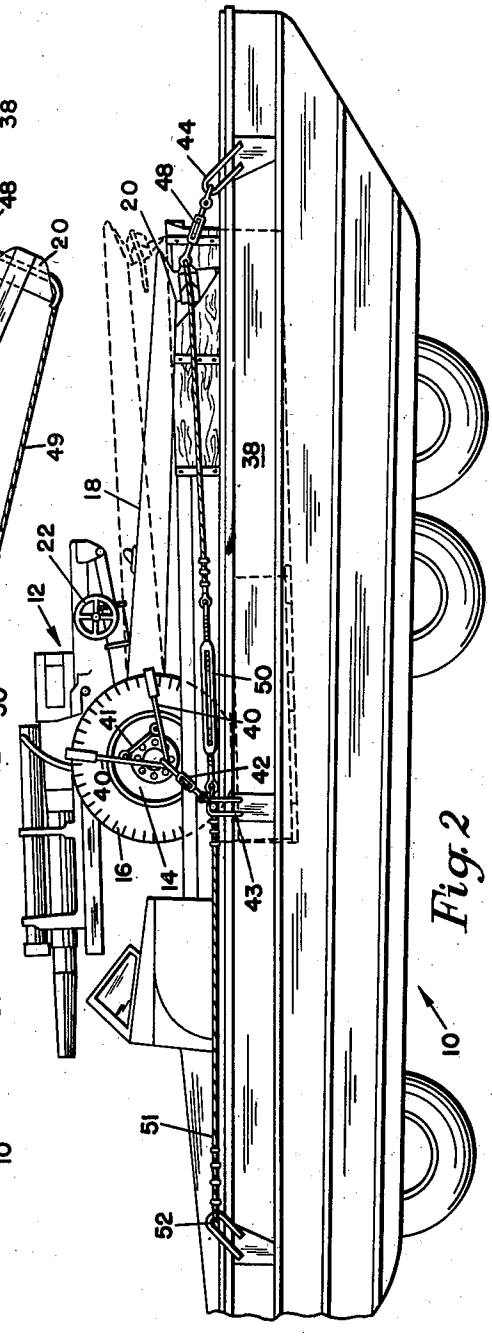


Fig. 2

INVENTOR.
EDWIN T. TODD

BY

J. H. Church & H. C. Thibodeau

ATTORNEYS

June 14, 1949. E. T. TODD 2,473,114

HARNESS

Filed Feb. 20, 1946 2 Sheets-Sheet 2

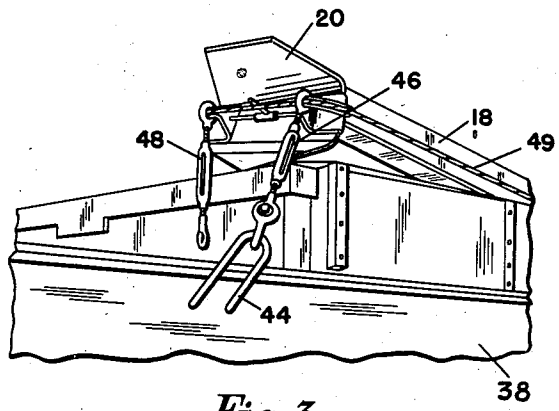


Fig. 3

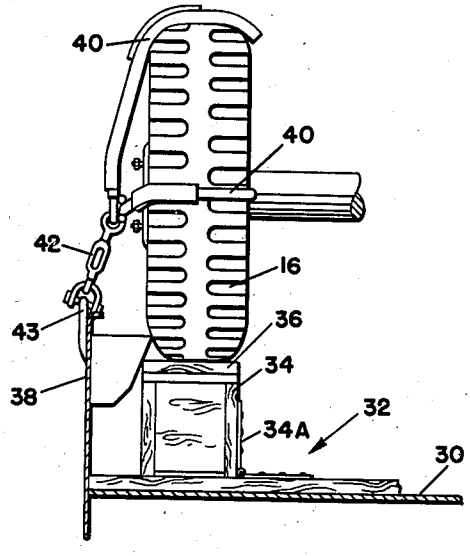


Fig. 4

INVENTOR.
EDWIN T. TODD

BY

J. H. Church & H. C. Thibodeau

ATTORNEYS

Patented June 14, 1949

2,473,114

UNITED STATES PATENT OFFICE

2,473,114

HARNESS

Edwin Thayer Todd, Pontiac, Mich., assignor to the United States of America as represented by the Secretary of War

Application February 20, 1946, Serial No. 649,066

4 Claims. (Cl. 248—119)

1

This invention relates to a hold down installation for supporting a gun on a vehicle. More particularly it relates to a supporting harness for mounting a field howitzer on an amphibian vehicle of the type known as the DUKW. (Truck, 2½ ton 6 x 6, amphibious.)

In combat activities, especially over water, it is essential that the guns be transported in a secure manner and yet be readily removed or loaded as desired. In accordance with my invention, I not only accomplish these objects, but I also provide for firing the gun when in its carry position.

Further objects and advantages of my invention will appear from the following description thereof, taken in connection with the drawings appended hereto, and in which:

Figure 1 is a top plan view of an amphibious vehicle with a gun in temporary carry position thereon.

Figure 2 is a side elevation of the vehicle shown in Figure 1;

Figure 3 is a perspective view of the end of a trail showing the securing means; and

Figure 4 is a partial end elevation of the wheel supporting device.

In accordance with a preferred form of embodiment of my invention, I have shown an amphibious vehicle 10 generally known as the DUKW on which I have provided means for mounting a gun generally indicated at 12. This may be a field piece such as a 105 mm. howitzer which is to be carried between shore stations or between ship and shore. While my harness is primarily adapted for temporary transport of such a gun, due to its size, extreme care must be used even in its temporary mounting.

A field piece of this type is generally mounted on wheels 14 and for rapid road transportation, these wheels have tires 16 of the pneumatic type. The piece also has the well known trails 18 the outer ends of which are formed into spade portions 20. The piece also has the customary elevating wheel 22, recoil slide, sights and other mechanism common to this type of gun.

I have found that the amphibian vehicle of the type of the DUKW is adequate to carry this gun and some ammunition. Certain alterations must be made however if the gun is to be carried in fully assembled position. This is, of course, the most effective way of carrying a piece of this type where time is critical and opportunity to dissassemble and reassemble may not be available.

I find it desirable to first mount on the floor 30 of the cargo space generally indicated at 32,

2

a pair of boxes 34 of generally narrow, elongated and rugged construction. These boxes are suitably screwed to the floor by their own cover straps 34a, the covers being used as extra height supports as at 36. In preliminary use, these boxes carry the necessary cables, etc. as will hereinafter be referred to. The tires 16 can then rest on the tops of the boxes 34 in such a manner that the wheels will be vertically clear of but laterally supported by the sides 38 of the cargo space.

I then provide grappling irons 40 to be secured over the top and rear portion of the tires, the respective parts being anchored together by the spacer 41. The grappling irons 40 are anchored by a turnbuckle 42 to the central lifting eye 43 on the vehicle.

The trails 18 are next secured to the vehicle through the rear lifting eyes 44 and also by suitable turnbuckles 46. As shown in dotted position in Figure 1, the trails are generally inboard and may be transversely held together by the cable 47. This is a suitable normal carry position.

For expected combat however, the trails may be separated and project slightly beyond the sides of the vehicle as shown in solid lines in Figure 1 and Figure 2. In such position, they are held by second turnbuckles 48 and also by stirrup cables 49 which can be suitably anchored to the central lifting eyes 42 and tightened as by turnbuckles 50. In addition, supplementary cables 51 may be used to transmit some of the load to the forward lifting eyes 52. In this spaced position of the trails, the piece can be fired with no objectionable reaction on the vehicle.

It will be appreciated that I have provided a simple but effective expedient for carrying a field piece on an amphibian vehicle and while I have shown a preferred form of embodiment of my invention, I am aware that modifications may be made thereto within the scope and spirit of the description herein and of the claims appended hereinafter.

What I claim is:

1. A supporting harness for the temporary transport mounting in firing position of a wheeled field piece having tires and trails on a vehicle, which comprises height supports securable on said vehicle to support the wheels and tires of said piece thereon in elevated position, wheel anchoring means securable to the top and rear portions of said tires and to said vehicle forwardly of the bottom of said tires, trail securing means for securing the ends of said trails in spread position to said vehicle rearwardly of said trails, and additional trail securing means for

securing the ends of said trails in spread position to said vehicle forwardly of said trails.

2. A supporting harness for the temporary transport mounting in firing position of a wheeled field piece having tires and trails in the cargo space of an amphibian vehicle, which comprises height supports securable on said vehicle to support the wheels and tires of said field piece thereon in elevated position above the bottom of said cargo space, wheel anchoring means securable to the top and rear portions of said tires and to said vehicle forwardly of the bottom of said tires, to anchor said wheels to said vehicle, and trail securing means for securing said trails at the rearward ends thereof in spread position to said vehicle at points thereon rearwardly and forwardly of said trails, said trail securing means including stirrup cables and turnbuckles.

3. The supporting harness of claim 2 in which said height supports include rigid shipping containers for said wheel anchoring means and said trail securing means.

4. In combination with a wheeled field piece

having tires and trails mounted for transport in firing position on a vehicle, a supporting harness comprising height supports secured to said vehicle and supporting the wheels and tires of said field piece in elevated position, wheel anchoring means secured to the top and rear portions of said tires and to said vehicle forwardly of the bottom of said tires thereby anchoring said wheels to said vehicle, and trail securing means securing said trails at the rearward ends thereof in spread position to said vehicle at points thereon rearwardly and forwardly of said rearward ends.

EDWIN THAYER TODD.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,770,798	Nicholson	July 15, 1930
1,829,681	Seeley	Oct. 27, 1931
1,973,624	Hanlon	Sept. 11, 1934