(No Model.)

A. PETERSON.

APPARATUS FOR INDICATING THE POSITION OF TOWS.

No. 493,113. Patented Mar. 7, 1893.

Fig. 1.

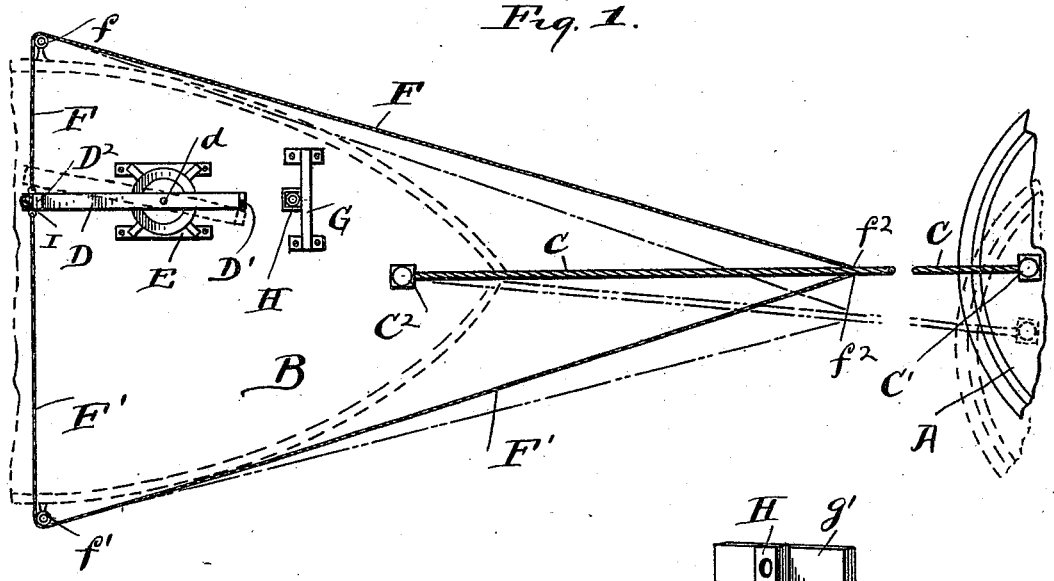
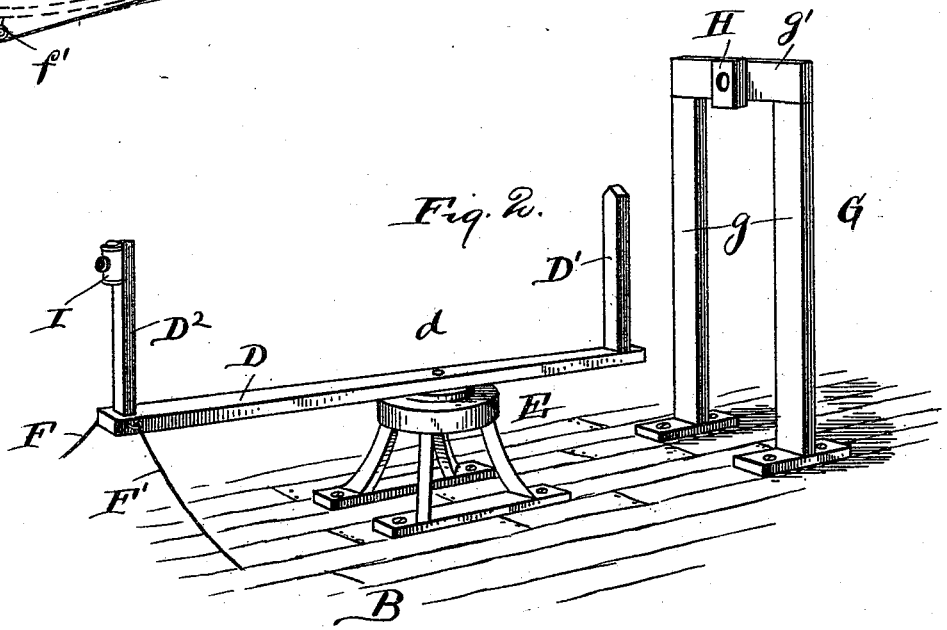


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

ANDEREW PETERSON, OF CLEVELAND, OHIO.

APPARATUS FOR INDICATING THE POSITION OF TOWS.

SPECIFICATION forming part of Letters Patent No. 493,113, dated March 7, 1893.

Application filed October 1, 1892. Serial No. 447,508. (No model.)

To all whom it may concern:

Be it known that I, ANDEREW PETERSON, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Apparatus for Indicating the Position of a Towed Boat or Vessel Relative to the Tug or Tow Boat; 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 pertains to make and use the same.

My invention relates to improvements in apparatus for indicating the position of a towed boat or vessel relative to the tug or tow-boat. The importance, in towing boats or vessels, of keeping the towed-boat and tow-rope directly in line with the tug or tow-boat, and the care exercised in maintaining them in line and the difficulty heretofore attending it, is well known in the nautical world. I have, therefore, devised the apparatus illustrated in the accompanying drawings, wherein

Figure 1 is a top plan, showing the tug or tow boat, the boat or vessel being towed and my improved apparatus. Fig. 2 is a view in perspective of a portion of the same.

Referring to the drawings, A represents the tug or tow-boat; B the boat or vessel being towed, and C the tow-rope or tow-line secured to the tug or tow-boat, as at C′, and to the boat or vessel being towed, as at C^2.

D represents a horizontally vibrating or swinging-arm or indicator pivoted preferably at or near its central portion as at *d*, to a stand or any suitable support, E, preferably removably secured to the deck of the boat or vessel being towed, preferably at or near the bow and at one side of the deck, as shown, within sight of the steersman, and arm or indicator D extends lengthwise of the boat or vessel. At the rear of the axis of indicator D, preferably at or near the rear extremity of the indicator, are secured ropes or lines, F F′, whence said ropes or lines extend to opposite sides of the boat or vessel, respectively, where they lead over guide-sheaves or pulleys, *f f′*, secured to the respective side of the boat or vessel, respectively, and thence ropes or lines F F′ lead forward to and are secured to the tow-rope or tow-line, as at f^2, preferably near the boat being towed. The arrangement of parts is such that when the boat or vessel being towed and tow-rope are in line with the tug or tow-boat, indicator D will extend in a line parallel with the line of the boats and tow-rope. It will, therefore, be observed that the moment the tug or tow-boat, the boat or vessel being towed, and the tow-rope get out of line, indicator D will simultaneously be swung out of line with the length of the towed boat or vessel in the one direction or the other according to the direction of the deviation of the course of the boat or vessel being towed from the course of the tug or tow-boat. For instance, when the boat or vessel being towed assumes a course to the left of the course of the tug or tow-boat, indicator D by means of the point of attachment of rope E to the tow-line assuming a position to the right of the point of attachment of the tow-line to the boat or vessel being towed, will simultaneously be swung to the left, as shown in dotted lines Fig. 1, indicating at once how the boat or vessel being towed should be steered to bring it and the tow-line directly in line with the tug or tow-boat. Hence, it will be observed that by my improved apparatus, notwithstanding the condition of the weather, the steersman, at any and all times, is enabled to know exactly the position of the boat or vessel being towed relative to that of the tug or tow-boat, and with proper care on the part of the steersman he can keep the boat or vessel being towed properly steered.

My improved apparatus will be found useful at any and all times, and to enable the steersman to readily ascertain the position of arm or indicator D from his position at the helm of the boat or vessel, said arm or indicator, at or near its forward end, has an upwardly-projecting arm or member, D′, and directly forward of the indicator, preferably about two or three feet removed from the latter, and preferably removably secured to the deck of the boat or vessel, is located an upright frame G composed preferably of two uprights *g* at opposite sides of the axis of indicator D, and connected at the top by a cross-piece, *g′*, the arrangement of parts being such that when the tug or tow-boat and boat or vessel being towed are in line arm D′ of indicator D will center or range midway be-

tween upright members *g* of frame G. While, by the means just described the steersman, in day time, can readily observe the position of arm D relative to frame G and thereby know the position of the towed boat or vessel relative to that of the tug or tow-boat, it would be of little or no assistance in the dark of night, and a lantern H, is therefore secured to the central portion of cross-piece *g'* of frame G, and a lantern, I, is secured to an upwardly-extending arm D^2 at or near the rear end of indicator D. When lantern I ranges with lantern H, of course the steersman knows that the boats are in line and that the towed boat or vessel is properly steered, and as soon as the boats and tow-line get out of line, and lantern I appears at the one or the other side of lantern H, of course he at once knows the position assumed by indicator D and thereby knows how to steer the boat or vessel being towed to bring the same in line with the tug or tow-boat.

Referring to ropes or lines F F', I would remark that, in the instance shown, the length of rope or line utilized is less in the case of rope or line F, but, of course, said rope or line should be long enough so that in the event of a removal of indicator D and frame G to the opposite side of the boat or vessel, said rope or line may be lengthened as required, in which case, of course, the utilized portion of the other rope or line F' would be shortened.

What I claim is—

1. The combination with a tow rope or tow line, of an indicator located on the vessel and operatively connected with the tow line said indicator having a lantern or light thereon and a frame also located on the vessel in proximity to the indicator, said frame provided with a light or lantern, substantially as set forth.

2. The combination with a tow-rope or tow-line, of a horizontally swinging indicator mounted on and extending lengthwise of the boat or vessel being towed, ropes or lines connecting said indicator with the tow-line substantially as indicated, guiding-devices for said connecting-ropes or lines, a frame or object, located directly forward of the indicator, the latter having an upwardly-extending arm or member adapted to range with said frame or object when said boat or vessel and tow-line are directly in line, substantially as and for the purpose set forth.

3. The combination with a tow-rope or tow-line, of a horizontally-swinging indicator mounted on and extending lengthwise of the boat or vessel being towed, ropes or lines connecting said indicator with the tow-line, substantially as indicated, guiding devices for said connecting-ropes or lines, an upright frame or object, located directly forward of the indicator, a light or lantern supported by said frame or object, and a light or lantern supported by the indicator and adapted to range with the light or lantern on the frame or object aforesaid when said boat or vessel and tow-line are directly in line, substantially as and for the purpose set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 21st day of July, 1892.

ANDEREW PETERSON.

Witnesses:
C. H. DORER,
WARD HOOVER.