

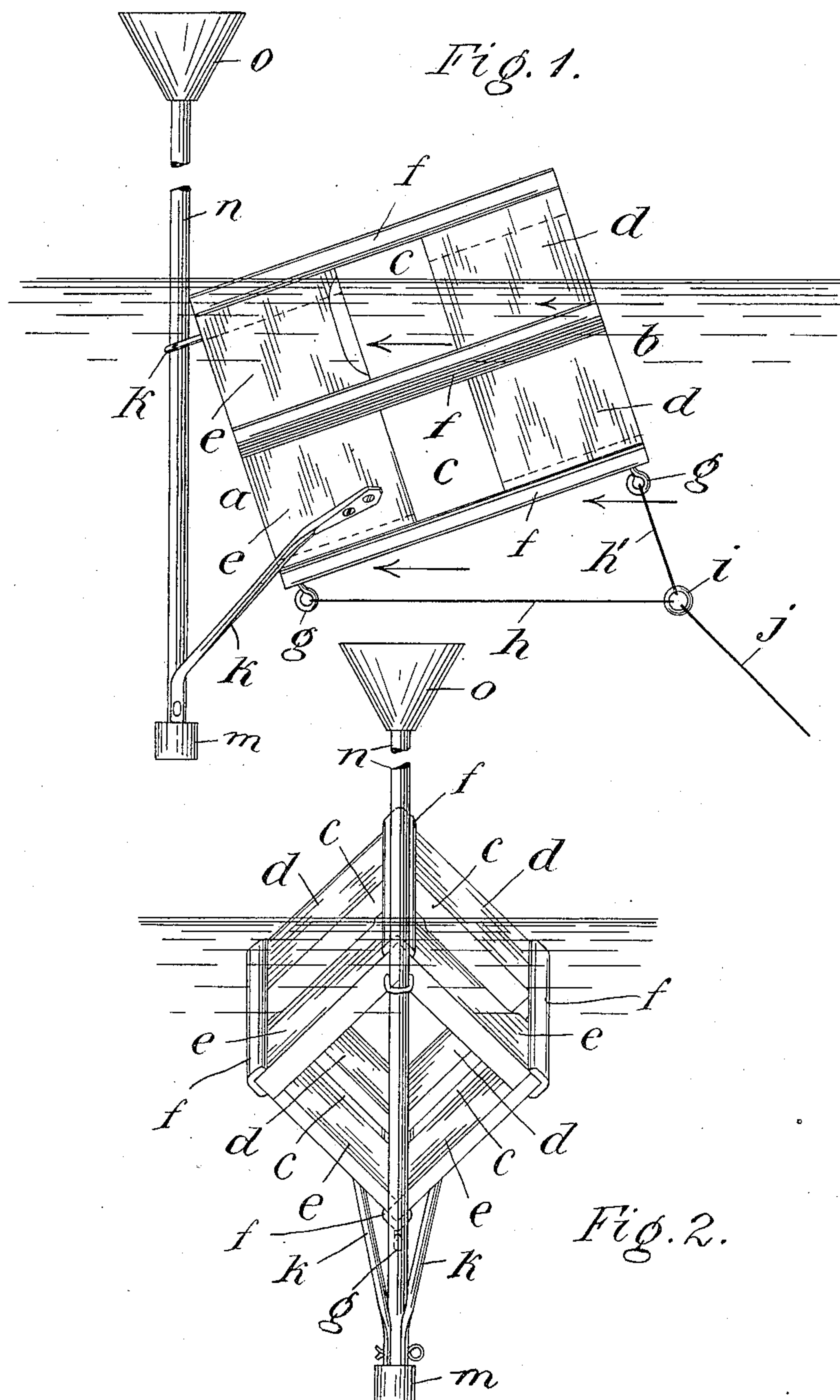
No. 897,101.

PATENTED AUG. 25, 1908.

F. H. C. HEYN.

BUOY.

APPLICATION FILED MAR. 28, 1908.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

FRIEDRICH HERMANN CARL HEYN, OF HAMBURG, GERMANY.

## BUOY.

No. 897,101.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed March 28, 1908. Serial No. 423,847.

*To all whom it may concern:*

Be it known that I, FRIEDRICH HERMANN CARL HEYN, gentleman, German subject, residing at No. 14 Averhoffstrasse, Hamburg, Germany, have invented new and useful Improvements in Buoys, of which the following is a specification.

The subject of my invention is an improved buoy, having the form of a box, open at both ends, and to which the anchor is secured in such manner that the current of water acts upon the inner and outer walls of the box which are presented to it and permanently maintains the buoy in a definite position with respect to the level of the water. The new buoy, by reason of this peculiar construction, possesses divers advantages over prior structures.

Firstly, so-called "diving" of the buoy is absolutely prevented, the proper position being permanently insured by the action of the water-current itself. This action will not be disturbed even though the walls of the buoy should become damaged.

Secondly, the new buoy, unlike those at present in use, can be made of wood instead of iron, whereby the costs of construction are essentially reduced.

Finally, lateral tilting of the buoy can be most effectually prevented by a simple method of equalization of the weight.

One form of construction of the invention is illustrated in the accompanying drawing, in which—

Figure 1 is a side elevation and Fig. 2 an end elevation.

The buoy consists of a box-shaped and preferably rectangular body, having open ends *a b* and lateral apertures *c*. In the particular constructional form shown, the body comprises two assemblages of boards *d* and *e*, whose individual members are fastened at right angles to each other, the two rectangular assemblages, again, being connected by bars *f*, which also may be of wood, the said openings *c* being constituted by the gaps left between them.

In order that the buoy may be so held that the current of water can act upon the inner and outer surfaces of the walls *d, e*, presented to it, the anchor (not shown in the drawing) is fastened to the buoy in a peculiar manner.

One of the bars *f* is furnished with two eyes *g, g* to receive the ropes *h, h*<sup>1</sup>, to which the anchor-cable *j* is attached by means of rings *i*. The lengths of the two ropes *h, h*<sup>1</sup>

are such that on the anchor, with the buoy, being cast, the latter assumes the position illustrated in Fig. 1, in which the current of water, as indicated by the arrows, is enabled to act upon the inner and outer box-walls presented to it, whereby the buoy is permanently maintained in the position shown.

To prevent lateral tilting of the buoy there is secured to its lowest part a counterpoise, which in the particular constructive form illustrated consists of two metal arms *k, k* and a weight *m*. In order the further to promote stability of the buoy in floating, those boards which face toward the surface of the water may be made of greater thickness than the oppositely lying boards, as shown in Fig. 2.

To mark the buoy any suitable sign may be employed. For instance a post *n*, furnished with a cone *o*, may be supported by the arms *k, k* and eye *k*<sup>1</sup>, in such manner that on the water-current acting, the post occupies a substantially erect position relatively to the surface of the water.

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

1. A buoy, comprising, a box-shaped body open at both ends and having lateral apertures, and means for attaching an anchor thereto, in such manner that the buoy occupies an inclined position, the water-current, acting against the inner and outer buoy-walls presented to it, serving to maintain the buoy permanently in a definite position relatively to the surface of the water, substantially as described.

2. A buoy, comprising, a box-shaped body open at both ends and having lateral apertures, and a counterpoise secured to the body at that part which lies deepest in the water, and means for attaching an anchor thereto, in such manner that the buoy occupies an inclined position, the water-current acting against the inner and outer buoy-walls presented to it, serving to maintain the buoy permanently in a definite position relatively to the surface of the water, substantially as described.

3. A buoy, comprising, a box-shaped body open at both ends and having lateral apertures, those walls which are presented to the surface of the water being thicker than the opposite walls, and means for attaching an anchor thereto, in such manner that the buoy occupies an inclined position, the

water-current, acting against the inner and outer buoy-walls presented to it, serving to maintain the buoy permanently in a definite position relatively to the surface of the water, 5 substantially as described.

4. A buoy, comprising, a box-shaped body open at both ends and having lateral apertures, a sign-post secured to the rear-end of the body and occupying a substantially erect 10 position relatively to the surface of the water when the buoy is floating, and means for attaching an anchor to the buoy, in such manner that the buoy occupies an inclined posi-

tion, the water-current, acting against the inner and outer buoy-walls presented to it, 15 serving to maintain the buoy permanently in a definite position relatively to the surface of the water, substantially as described.

In witness whereof I have hereunto signed my name this 11th day of March 1908, in 20 the presence of two subscribing witnesses.

FRIEDRICH HERMANN CARL HEYN.

Witnesses:

WERNER BRUHAS,  
ALFRED MEYER.