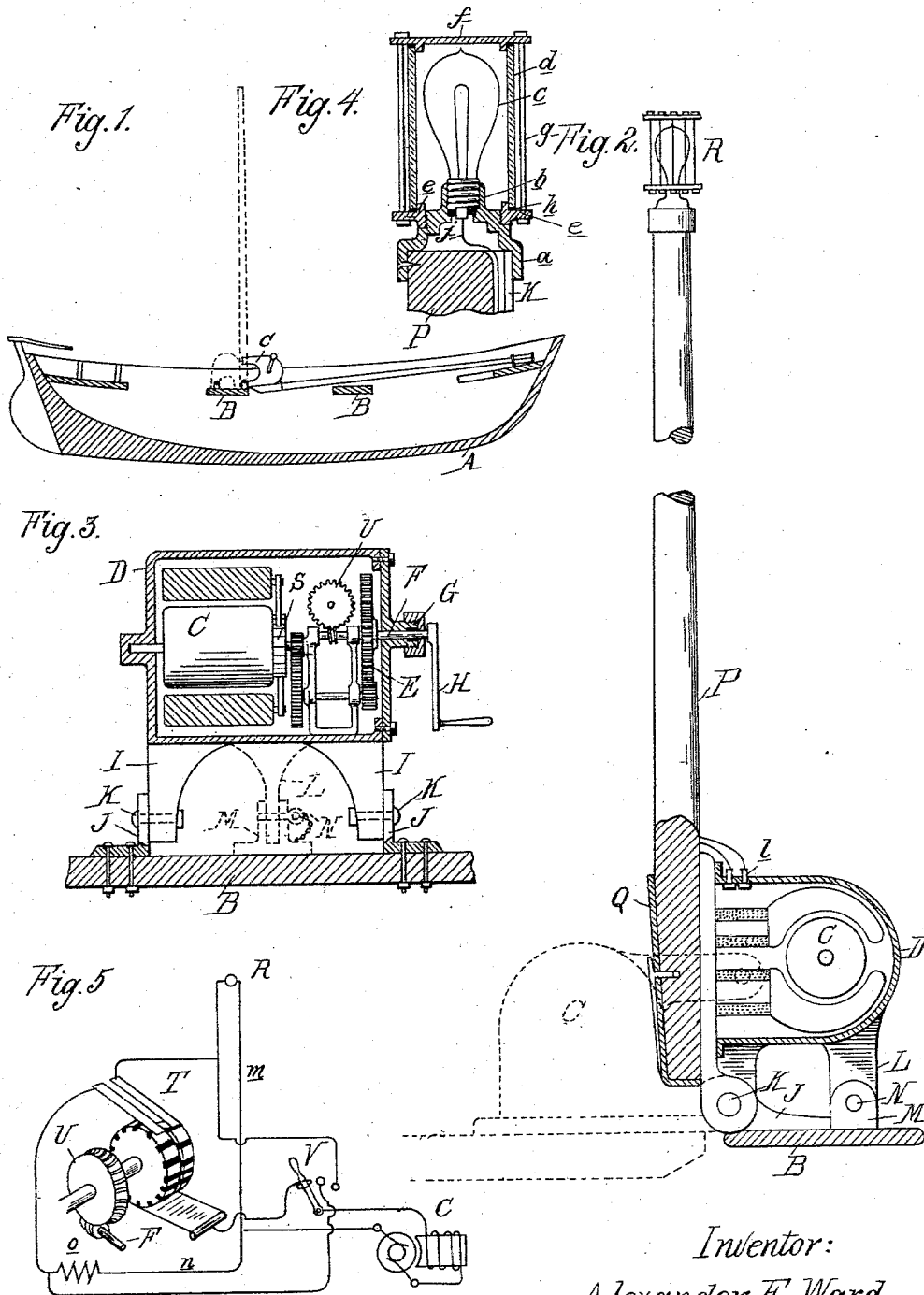


(No Model.)

A. F. WARD.
ELECTRIC SIGNAL LAMP.

No. 556,946.

Patented Mar. 24, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALEXANDER FIELD WARD, OF MEMPHIS, TENNESSEE, ASSIGNOR OF TWO-THIRDS TO THOMAS S. CHRISTIE AND JOHN G. DIETZ, OF DETROIT, MICHIGAN.

ELECTRIC SIGNAL-LAMP.

SPECIFICATION forming part of Letters Patent No. 556,946, dated March 24, 1896.

Application filed June 21, 1895. Serial No. 553,506. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER FIELD WARD, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Electric Signal-Lamps, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to a signal device especially designed to be attached to small boats, such as the life-boat carried by larger craft, and adapted to be used as a signal of distress in case of accident or to communicate intelligence of any kind to a distant point.

The invention is embodied in the construction and arrangement of parts hereinafter described, and definitely pointed out in the claims.

In the drawings, Figure 1 is a longitudinal section through a boat to which my signal is attached. Fig. 2 is an enlarged sectional elevation of the signal device, showing the mast raised. Fig. 3 is a vertical central section through the dynamo and its protective casing. Fig. 4 is a vertical central section through the signal-lantern. Fig. 5 is a diagram of the electric connections.

A is a boat, and B are the seats, to one of which is preferably attached my signal device of the following construction.

C is a dynamo of any construction suitable for the generation of currents of comparatively low voltage. This dynamo is inclosed within a casing D and is provided with a drive mechanism comprising the multiplying gears E, also inclosed within the casing D, the crank-shaft F passing out from the casing through the stuffing-box G, and the hand-crank H.

I are supporting-standards for the casing D, hinged at their lower ends near the edge of one of the seats, preferably by means of the ears J bolted to the seat and the pivot-bolts K.

L is a third leg or standard secured to the casing and adapted to be detachably secured to the ears M on the seat by means of the locking-pin N.

P is a mast which is secured to the casing D, preferably fitting into a socket Q thereon. To the upper end of this mast is secured the lantern R comprising the following parts:

a is a cap secured to the top of the mast, forming the base of the lantern and provided with a socket b adapted to receive the incandescent lamp c.

d is a glass cylinder or transparent casing inclosing the lamp, which is clamped between the flange e on the base and a cap f by the guard-rods g arranged around the cylinder. h are gaskets between the glass and the metal.

j are conductor-wires connecting with the contacts on the lamp-socket and passing down in a groove k in the mast to the binding-posts l on the casing D.

The field-magnets of the dynamo are energized either by the use of a small battery kept at any convenient place on the boat or by a portion of the generated current which may be straightened on a commutator S.

T is another commutator or switch device, to which a slow motion is imparted from the crank-shaft through the worm-gear connection U. This switch shunts the current alternately through two branch circuits m and n, the former including the signal-lamp R and the latter a concealed lamp of equal resistance o, the object being to flash the light without interrupting the dynamo-current. By a suitable arrangement of the contacts on this commutator a predetermined danger-signal composed of long and short flashes may be made automatically whenever the crank is turned.

V is a switch by which the commutator T may be cut out and the current sent continuously through either one of the branch circuits m and n.

The signal device thus constructed and secured to the boat as described is normally in the position shown in Fig. 1, with the mast turned down and resting on the top of the seats out of the way of the oars. Whenever it is necessary to use the signal, the mast may be raised, turning the dynamo in its upright position, which may then be firmly locked to the seat by the pin N and the crank turned by the operator.

It will be observed that all the generator mechanism is inclosed in a waterproof casing, which prevents any danger of the device becoming wet and therefore inoperative in rough weather.

When it is desired to use the signal for flashing intelligence of any kind other than the danger-signal, the switch V may be used as a telegraph-key, by means of which any message may be conveyed. If a constant light is wanted the switch V may be set to send the current through the one branch only.

What I claim as my invention is—

1. A signal device comprising a dynamo, a hand-driven mechanism therefor, and an inclosing protective casing, in combination with a folding mast carried by said dynamo-casing and a signal-lamp at the upper end of said mast.

2. A signal device for boats, comprising a dynamo, a hand-driven mechanism therefor, and an inclosing supporting and protective casing for said dynamo and driving mechanism, hinged to the seat or other stationary support, and adapted to be turned on its side when not in use, a mast secured to said casing, a signal-lamp at the upper end of said mast, and means for locking said mast and casing in an upright position.

3. In a signal device, the combination with the dynamo, of a signal-lamp and a balancing resistance included in separate branches of the main circuit, an automatic switching de-

vice in mechanical connection with the dynamo adapted to send the current alternately through said branch circuits to produce a succession of flashes of varying length substantially as described.

4. In a signal device, the combination with the dynamo of a signal-lamp and a balancing resistance included in separate branches of the main circuit, an automatic switching device in mechanical connection with the dynamo adapted to send the current alternately through said branches to produce a succession of flashes of varying length, and a hand-switch adapted to cut in or out the automatic switch and to send the current constantly through either of the branches substantially as described.

5. In a signal device for boats, the combination with the folding mast, of a signal-lantern secured at the upper end of said mast, comprising the cap *a* forming the base of the lantern and having the socket *b*, the transparent casing *d*, the removable cap *f* and the guard-rods *g* serving to clamp the casing between the caps *a* and *f*, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER FIELD WARD.

Witnesses:

J. W. DURHAM,
CHUM JONES.