

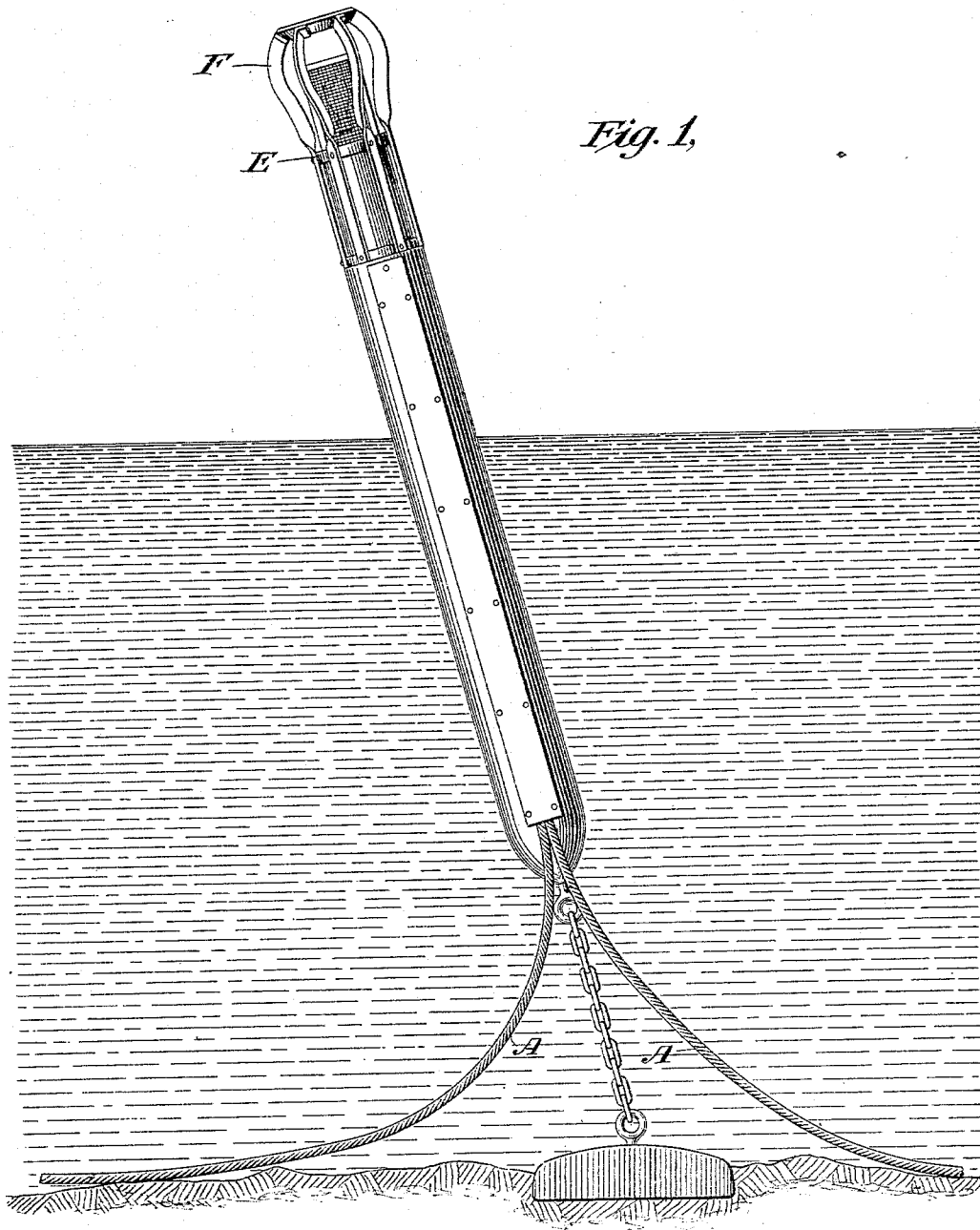
(No Model.)

2 Sheets—Sheet 1.

I. W. HENRY.
ELECTRICALLY LIGHTED BUOY.

No. 533,459.

Patented Feb. 5, 1895.



Witnesses
C. E. Ashley
H. W. Lloyd

Inventor
I. W. Henry
By his Attorneys
Poppe, Keat & Rogers

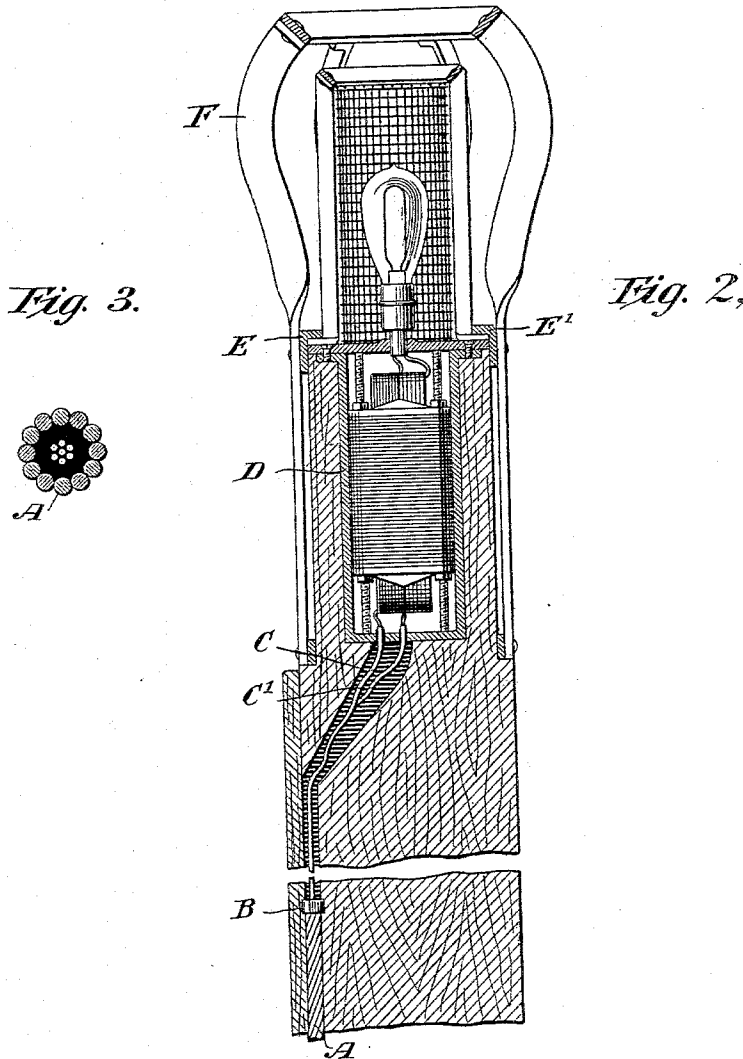
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UNITED STATES PATENT OFFICE.

IRA W. HENRY, OF NEW YORK, N. Y.

ELECTRICALLY-LIGHTED BUOY.

SPECIFICATION forming part of Letters Patent No. 533,459, dated February 5, 1895.

Application filed May 29, 1893. Serial No. 475,828. (No model.)

To all whom it may concern:

Be it known that I, IRA W. HENRY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electrically-Lighted Buoys, of which the following is a specification.

This invention relates to electrically lighted buoys, its object being to operate an electric lamp mounted on a buoy by means of an alternating current.

In the electrically lighted buoys heretofore constructed the lamps have been fed by direct current. In many cases the employment of a direct current system of supply is prohibited by reason of the large amount of copper needed for supply conductors to prevent a great drop in voltage. Cases of this kind arise where the buoys are a considerable distance from shore, or where a number of buoys distributed over a considerable area must for reasons of economy be operated by the same source of current.

My invention consists in supplying a buoy or buoys located at a considerable distance from a source of supply, or supplying a series of buoys from a single generating station with alternating current, and constructing such buoy so that the transformer employed to lower the potential for feeding the lamps will be proof against the effects of the water or elements, and may be relied upon at all times to safely perform its function of conversion.

In carrying out my invention I mount upon a suitable part of the buoy a transformer, and inclose this transformer in a case which renders all of its electric portions thoroughly water-proof, and I mount upon the buoy an electric lamp or series of lamps, preferably of the incandescent type, electrically connected with the low potential circuit of the transformer by water-proof leads or conductors.

The several features of novelty will be hereinafter more particularly described and will be definitely indicated in the claims appended to this specification.

In the accompanying drawings which illustrate this invention, Figure 1 is a side elevation of a buoy embodying my improvements.

Fig. 2 is a central longitudinal sectional view; and Fig. 3 is a cross-section of the supply conductor for the alternating current.

The supply station for the alternating current may be located at any suitable point where attendance is easily rendered, and is provided with an alternating current generator of any suitable type delivering a high potential current suitable for transmission over the circuit containing the buoy or buoys. From such a generator proceeds an armored cable A formed preferably of a number of strands of wire heavily insulated and provided with a protective armor outside the insulation. A cross-section of such construction is indicated in Fig. 3. At each buoy the two sides of the cable circuit are led along a groove formed in the side of the log forming the body of the buoy and stripped for a short distance in order to make the connections as indicated at B, Fig. 2, with the leads C, C' leading to the primary circuit of the transformer. Over the groove in which the cable is laid is placed a protective strip fastened with screws or nails or in any other suitable manner, forming a water-proof inclosure housing the joint B. The armor is laid back upon the extremities of the cable and clamped with a ring, as indicated at B, and a soldered or other suitable connection made between the supply conductor and the leads C, C'. The transformer is preferably housed in a socket formed in the upper extremity of the buoy, and there will preferably be placed between the wall of the buoy forming the socket and the transformer a closed casing D, through which the leads from the primary and secondary circuit will be led through a suitable packing.

In order to provide facility for removing the transformer it is held in place by lugs E, E' mounted on the frame of the protective guard F which surrounds the lamp and protects the latter from the blows of floating matter. By removing the bolts or screws which fasten this guard to the top of the buoy the transformer may when necessity arises be removed.

The top of the inclosing casing D is pro-

vided with a removable plate, which permits an examination of the transformer without withdrawing it from the socket.

5 The socket or sockets of the lamps may be mounted in the top plate, and the connections with the secondary of the transformer be made before the transformer is put in place.

10 Surrounding the lamp will preferably be provided a wire case to prevent the lamp from damage by small floating objects in times of storm when the top of the buoy may become submerged.

15 Any desired number of the buoys may be supplied in series in this manner, and the lighting of a considerable number, although widely distributed, effected by the same source of current.

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

1. The combination of a buoy, a transformer housed water-tight in a socket formed in the buoy, and a lamp or lamps electrically con-

nected with the low tension winding of the transformer. 25

2. A buoy having mounted thereon an electric lamp or lamps and provided with a socket in its end for a transformer, and a removable top plate or cap for the transformer, rendering the electrical portions thereof thoroughly 30 water-proof.

3. A buoy having mounted thereon an electric lamp or lamps, and a water-proof transformer for delivering to said lamp or lamps a low potential current from an alternating 35 circuit, the leads to said circuit being housed in a groove or recess formed in the buoy and provided with a water-proof cover.

In testimony whereof I have hereunto subscribed my name this 20th day of May, A. D. 40 1893.

IRA W. HENRY.

Witnesses:

WILLIE W. MARKS,

WILLIAM H. WOODHULL.