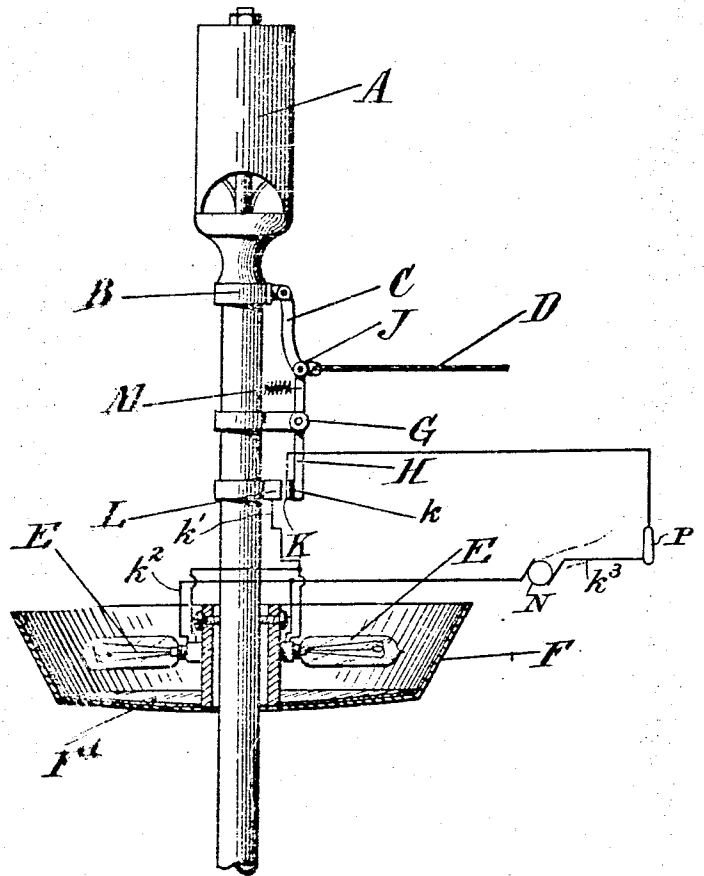


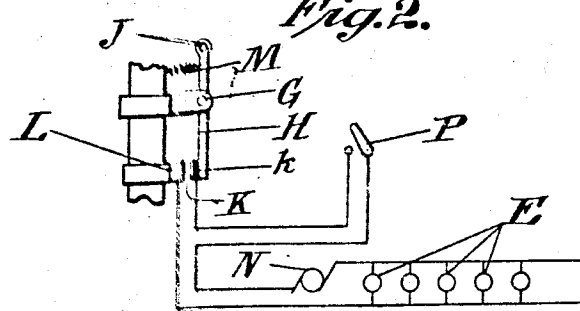
945,311.

Patented Jan. 4, 1910.

*Fig. 1.*



*Fig. 2.*



Attest:  
*Wm. H. Smith*  
*Geo. F. Wheelock*

Inventor:  
 Valentine Fendrich  
 by Donald Campbell, Atty

# UNITED STATES PATENT OFFICE.

VALENTINE FENDRICH, OF BROOKLYN, NEW YORK.

BOAT-WHISTLE.

945,311.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed May 18, 1906. Serial No. 433,425.

*To all whom it may concern:*

Be it known that I, VALENTINE FENDRICH, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Boat-Whistles, of which the following is a specification.

My invention relates to nautical signaling apparatus and improvements therein, of which apparatus the most ordinary illustration is the steamboat whistle in which a sound signal is produced by steam. A river ferryboat is an example of a steamboat in which this species of signal is frequently used; and as is well known, the whistle is not merely for the purpose of announcing that a vessel is present or approaching, nor the presence of danger, but is to convey intelligence as to the course which one vessel will pursue relatively to another or others. Thus one blast or two blasts of the whistle may be blown to indicate whether the signaling vessel is to pass to the port or starboard of an approaching vessel. It is thus extremely important that such signals should invariably be correctly interpreted, and often confusion results if there be even a slight darkness or mist, and this is more truly the case if the weather be foggy or stormy, especially where a number of vessels happen to be near together. It then becomes highly necessary that a pilot can distinguish as between the other vessels, from which one the signaling comes, and also whether the signal given by a certain vessel is of one blast or two.

Apparatuses have been devised which in reality consist of two independent signals, namely, the whistle and an independent visual signal such as a special arrangement of lights located perhaps in a different part of the vessel; but such arrangements as these impose twice the attention upon a pilot, besides requiring some arbitrary or fanciful arrangement of the lights constituting the visual signal, so that the same can by no possibility be confused with the many ships' lanterns and other lights which will be in view.

I have in my invention departed from prior apparatus by having only one signal, but one which is both seen and heard, it being a signal which requires a blast of steam or vapor which not only sounds the whistle, but is to be illuminated as hereinafter described. The escaping steam thus affords a

signal both audible and visible, and its visible form being that of a jet of steam, is distinctive in character and not to be mistaken by the pilot of another vessel.

To the above ends my invention contemplates in connection with a steam-blown whistle, of a means of lighting so located as to illuminate the jet of steam or other vapor employed to sound the whistle; also to such means of lighting when inclosed or boxed in in a manner to render the lights themselves invisible except from above; also to such means of lighting when provided with apparatus for causing it to intermittently become luminous.

The form of invention which I will hereinafter describe will be one in which the intermittent lighting is caused to take place automatically at the time that the whistle is blown, and preferably by means of the same mechanism which blows the whistle.

I will first describe a form of whistle embodying the principles of my invention and then point out the novel features in the claims.

In the accompanying drawing which forms a part of this specification, Figure 1 is a vertical elevation partly in section of one form of apparatus embodying my invention. Fig. 2 is a diagrammatical view of the electric connections.

A represents a whistle such as a steamboat whistle which may be of any desired form and the details of which form no part of my invention.

B represents the whistle valve, the details of which likewise are of no special importance; and C represents a whistle lever which coöperates with the valve B in a well known way so as to open the latter when the lever is pulled.

D represents the whistle cord which usually passes to the pilot-house.

The construction of the parts already described is such that when the cord D is pulled, the valve B is opened and the whistle is blown by the escape usually of steam which passes out through the whistle apertures and rises, forming a sort of jet or column of steam which is susceptible of being illuminated.

For a source of light for illuminating the jet or column of steam, I prefer electric bulbs such as those shown at E, although other sources of light may be employed. I do not limit myself to the precise location

shown, it only being necessary that these lights shall be so located that when they are luminous and when the whistle is blown the lights will illuminate the jet of steam. I preferably, however, locate these lights directly beneath the whistle and for convenience in a form of a circle or part circle surrounding or near the steam pipe which leads to the whistle. The number of the lights E is not material so long as the number is sufficient to properly illuminate the steam. In order that these lights which are necessarily in an elevated position may not be visible except from above, that is in order that they may not be seen from other pilot-houses or cast light upon the deck of the vessel carrying the apparatus, I prefer to inclose the said lights. For this purpose a box-like structure such as F may be employed, which box may be covered with glass if desired and preferably has a bottom composed of a reflecting surface such as a glass mirror or polished metallic surface F', and this surface may be concaved if desired to better direct the light rays toward the steam jet.

My preferred use of my invention contemplates that the whistle and surrounding parts shall be in darkness before the whistle is blown and simultaneously with the blowing of the whistle the illumination shall begin. This is of value because a contrast between the absolute darkness and the brilliantly lighted jet of steam will better attract the attention of other pilots who when a whistle is blown will look for the illuminated jet to identify the vessel blowing it.

Intermittent means for causing the lights to become luminous and dark alternately may be employed for this purpose and is preferably automatic. When electric lights are employed this may be accomplished as follows:

G represents a stationary pivot and H a lever which may turn about said pivot. The upper end of said lever H is at J connected directly or indirectly to the whistle lever C or to the whistle cord D so that when the cord is pulled and the whistle is blown the lever H will also be rotated. At the lower end of lever H is an electric contact K and cooperating with this is a stationary contact L, located in the path of movement of the contact K so that the two will meet when the whistle is blown and separate when the whistle cord is released and the sound ceases. A tension spring M will serve to restore the parts to the position shown in the drawing.

Electrical connections of any suitable description may be employed in an obvious way so that the contact between K and L will throw the lamps E in circuit and cause them to light up when the whistle is blown. Such an arrangement is shown diagram-

matically in Fig. 2, in which N represents a dynamo or other generator, and P represents a controlling switch located preferably in the pilot-house whereby the lamps can be shut off altogether during the daytime, and the other letters of reference correspond with Fig. 1.

According to the diagram of Fig. 2, the proper circuits are indicated in Fig. 1, in which as before N represents the generator.  $L^1$  represents an electrical connection or wire extending from the generator to the contact K. Said contact is insulated from the lever H by means of an insulating block L'. Circuits  $L^2$  extend from the contact L to the lamps, and circuits  $L^3$  extend from the generator to the lamps, the lamps being shown connected in parallel. Now with the switch P closed, if the contacts L and K are made to touch, there will obviously be current passing from the generator to the lamps to illuminate them, while the breaking of contact L, K will cut off the current therefrom.

What I claim and desire to secure by Letters Patent is:

1. In a nautical signaling apparatus, a sound-producing device consisting of a whistle blown by vapor, a vapor controlling device or valve, and means accessible to the pilot for opening and closing said valve; in combination with a source of light having an inclosing wall for cutting off its horizontal rays, said source of light arranged to illuminate the jets of vapor from said whistle when blown, and to thereby automatically supplement the sound signal by brilliantly showing up the vapor jets, thus giving a clear visual indication of the whereabouts and identity of the signaling vessel, means for controlling the source of light, and connections whereby said light controlling means is operated automatically by said valve opening and closing means so that the illumination takes place whenever and only when the sound signal is blowing.

2. A nautical steam whistle having a valve device for effecting its operation, and a whistle cord for opening and closing said valve, in combination with a number of incandescent electric lights beneath the whistle, means inclosing said lights for directing the rays upward and cutting off the horizontal rays, electrical connections for said lights, and a device operated automatically by said valve opening and closing means for controlling said electrical connections, whereby the lights are lighted when and only when the whistle is blown.

In witness whereof I hereunto set my hand, this 15th day of May, 1908.

VALENTINE FENDRICH.

Witnesses:

ELIZABETH B. KING,  
GEO. L. WHELOCK.