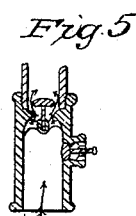
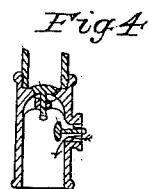
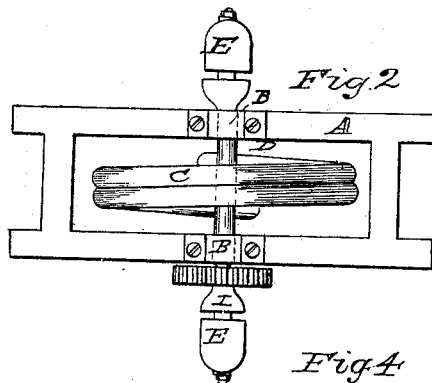
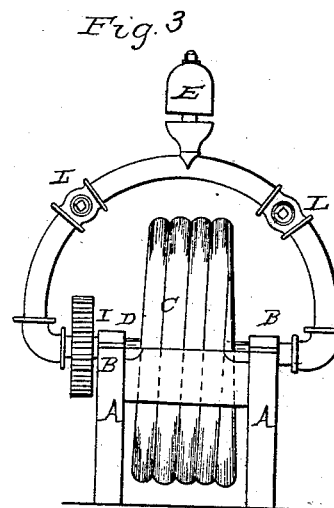
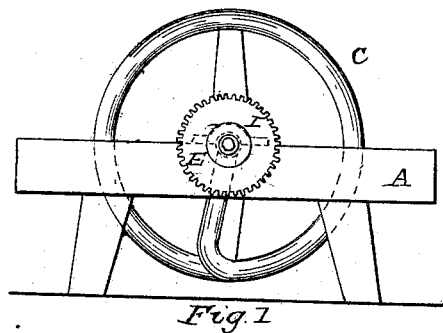


G. HULL.  
Fog Alarm.

No. 50,004.

Patented Sept. 19, 1865.



Witnesses  
Mary A. Kane  
 Rufus Sanford

Inventor  
George Hull  
By his atty.  
John E. Carle

# UNITED STATES PATENT OFFICE.

GEORGE HULL, OF WALLINGFORD, CONNECTICUT.

## IMPROVEMENT IN FOG-ALARMS.

Specification forming part of Letters Patent No. 50,004, dated September 19, 1865.

*To all whom it may concern:*

Be it known that I, GEO. HULL, of Wallingford, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Fog-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the same, when taken in connection with the accompanying drawings and the letters of reference marked thereon, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a plan or top view; Fig. 3, an end view requiring but one whistle, and in Figs. 4 and 5 air-valves for the construction of Fig. 3.

My invention relates to an improvement in apparatus for sounding an alarm on board vessels or other places when necessary during the prevalence of a fog, or at other times where such alarm is necessary, and is designed to sound a prolonged alarm instead of the short alarms given by other known apparatus; and my invention consists in a coil of tubing the two ends of which terminate so as to communicate with one or more whistles or similar contrivance, within which coil of tubing is placed the requisite quantity of water or fluid and the said coil caused to revolve; the water or fluid within the tubing remains in the lower part of the coil, forcing the air therein before it and out through a whistle to sound an alarm, continuing the sound until the fluid has traversed the entire length of the coil; then reversing the revolution of the coil the fluid returns, forcing the air which has been received into the tube during the first revolutions out through the same or another whistle to continue the alarm.

To enable others skilled the art to construct and use my invention, I will proceed to fully describe the same as illustrated in the accompanying drawings.

A is a frame upon which, in proper bearings, B, a coil of tubing, C, is hung so as to revolve freely thereon. The coil C consists of a metallic tube of, say, three or four inches in diameter, formed into a coil, say, three feet in diameter. The longer the coil the more fully is the object of my invention accomplished. It should be twice

round at least, as shown in Fig. 2. The two ends of the said tubing are turned so as to enter or open into the hollow shaft D. E E' are two ordinary steam-whistles, constructed so that a very light blast will sound them, one placed upon either end of the said hollow shaft D, as seen in Fig. 2. A gear, I, is placed upon the said shaft, through which power is applied to revolve the coil C.

One section of the coil should be filled with water or other fluid about as denoted in blue, Fig. 1. The power being applied to cause the coil to revolve, the water will remain in the lowest portion of the coil and force the air within the tube out through the whistle E', sounding an alarm; and when the coil has been revolved until the water has reached the other end of the coil, then reverse the power to cause the coil to return, when the air in the rear of the water, which has been drawn in through the whistle E, will be forced back to sound the whistle E through which it entered, and more air will be drawn in through the other whistle, E', to refill the coil.

A better construction is shown in Fig. 3, where one whistle only is used, the two ends of the shaft being united. In this construction it is necessary to use air-valves L, which are shown enlarged in Figs. 4 and 5, constructed so as to receive the air, as denoted by the arrow in Fig. 4, and also to permit the air to pass through to the whistle without escaping, as denoted by the arrow in Fig. 5.

I do not broadly claim sounding an alarm by the employment of water or other fluid to force air through whistles to sound an alarm; but,

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

The combination of a coil of tubing, C, and one or more whistles, E, when constructed and arranged in the manner described, so as to sound a prolonged alarm, for the purpose specified.

GEORGE HULL.

Witnesses:

JOHN E. EARLE,  
MARY A. HINE.