

No. 615,228.

W. T. PURCHASE.
FOG SIGNAL.

Patented Nov. 29, 1898.

(Application filed July 9, 1898.)

(No Model.)

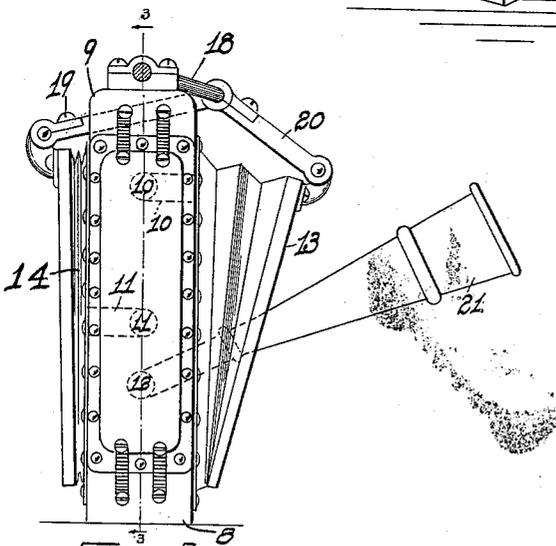
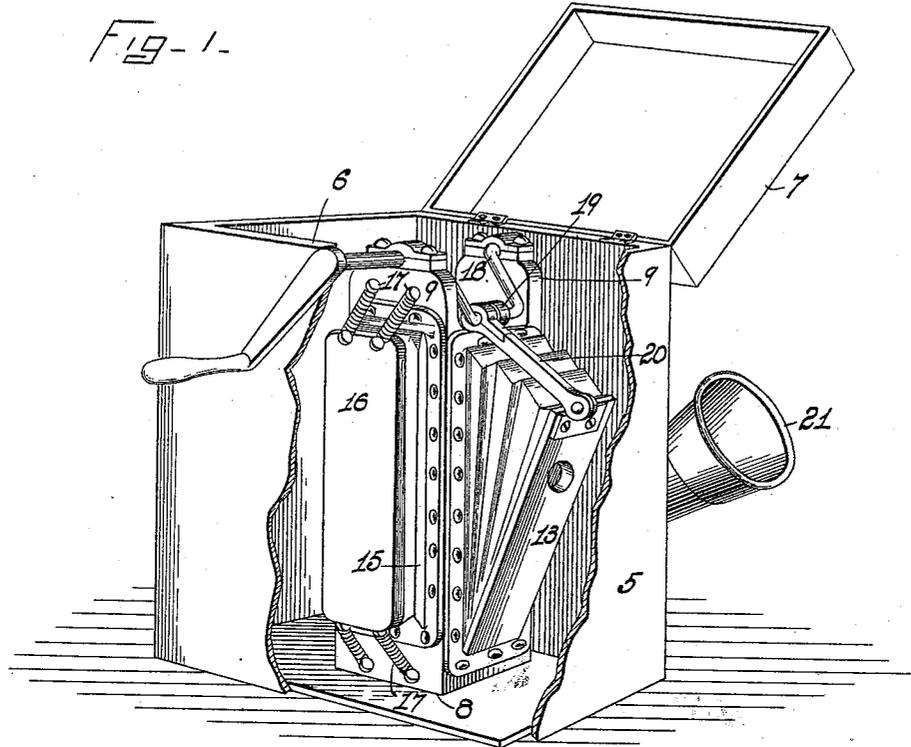


Fig-2-

WITNESSES.

Chas. A. Varnum.

Fred. B. Browning.

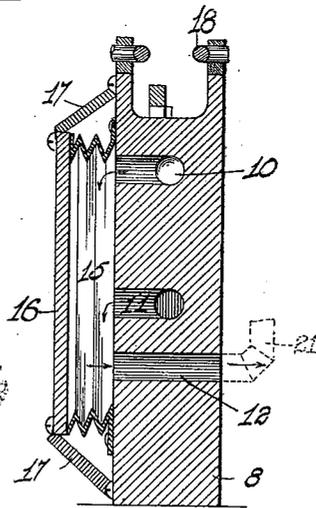


Fig-3.

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UNITED STATES PATENT OFFICE.

WILLIAM T. PURCHASE, OF BOSTON, MASSACHUSETTS.

FOG-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 615,228, dated November 29, 1898.

Application filed July 9, 1898. Serial No. 685,527. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. PURCHASE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fog-Signals; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in fog-signals, and particularly in the means for supporting the operating mechanism.

The object of the invention is to improve the construction of the mechanism whereby the air is collected and is forced through the horn under pressure.

Another object is to provide a substantial support for the bellows and for the mechanism whereby the bellows are operated.

The invention consists of the central standard having the air-channels together with the bellows and air-chamber mounted thereon.

The invention also consists in the central standard having an air-channel connecting each side with the front and a channel from the front to the back, bellows at the sides of the standard, a pressure-chamber at the front thereof and covering the three channels, and a fog-horn connected with the last or outlet channel, together with the operating mechanism for the bellows mounted at the upper portion of the standard.

The invention also consists in such other novel features of construction and combination of parts as shall hereinafter be more fully described, and pointed out in the claims.

Figure 1 represents a perspective view of the improved fog-signal with incased operating mechanism, portions of the case being broken away. Fig. 2 represents a front view of the mechanism removed from the case. Fig. 3 represents a rear elevation, part of the standard being broken away to show the channels.

Similar numbers of reference designate corresponding parts throughout.

In carrying my invention into practice it has been my object to so construct the operating mechanism that the bellows should be substantially supported and to further improve the construction of the mechanism.

In the drawings, 5 indicates a box or protective casing. The upper part of the box front has an opening 6 for the passage of the operating-shaft, and the back of the box has an opening through which the horn connection may enter the air-supply channel in the standard. The box may also have a hinged cover 7. Within the box is firmly secured the standard 8, which has the extension 9 at its upper end. In the body of the standard are formed the channels 10 and 11, each of which connects one side of the standard with the front thereof. At the lower portion the supply-channel 12 extends through the standard from front to back. To the sides of the standard, over the ends of the respective channels 10 and 11, are secured the bellows 13 and 14, which are of the usual construction, having inlet-valves and being hinged at their lower ends to the standard, so that they may be operated from the top. To the front of the standard, over the ends of the channels 10, 11, and 12, is secured the expandible air-chamber 15, having bellows sides and a rigid front 16, on which a continuous pressure is exerted by the springs 17 17, secured to said front and to the standard, to act against the air forced into said chamber.

In the extensions 9 9 is journaled the crank-shaft 18, this shaft being in line with the opening 6 in the front of the box and being operated by a crank-handle inserted through said opening and engaged with the crank-shaft. On the crank of the shaft are pivoted the pitman-rods 19 and 20, which are pivoted at their opposite ends to bearings on the rigid flaps of the bellows 13 and 14 and serve to operate these flaps alternately when the shaft is rotated.

The horn 21 has a curved connection in the nature of a neck, which may be engaged in the supply-channel 12, or the horn may be removed and placed within the box when not in use.

When the crank-shaft is rotated, the bellows 13 and 14 are alternately operated by the respective pitman-rods, thus collecting air and forcing the same through the channels 10 and 11 into the chamber 15 and expanding the same against the action of the springs 17 17, owing to the fact that the air is forced into this chamber more rapidly than it can

escape through the channel 12, the intermittent action of the bellows on the air being converted into a continuous pressure by the use of the chamber 15, so that a continuous supply of air is delivered through the channel 12 to the horn.

By the use of the substantial central standard, solid except for the air-passages, the operating mechanism becomes more durable in its action, no leakage of air can occur by reason of the warping or wrenching of the standard, as when the standard is constructed of several parts, and the bellows can be readily and securely mounted, while the cost of the apparatus is greatly reduced.

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

1. In a fog-signal, the combination with a central standard formed of a solid block adapted to serve as a support for the operating mechanism, a spring-contracted pressure-chamber mounted on one face of the standard, a plurality of bellows also mounted on said standard, air-supply channels formed in the standard connecting the bellows with the

pressure-chamber, and a channel connecting the pressure-chamber with the opposite face of the standard, of mechanism for operating the bellows mounted on the standard.

2. In a fog-signal, a solid standard having air-channels formed therein and adapted to serve as a support and connector for the air collecting and distributing devices and for the operating mechanism therefor.

3. The combination with the box 5, the standard 8, mounted therein and having the extensions 9 9, and the channels 10, 11, and 12, a horn adapted to be connected with the channel 12, the bellows 13 and 14 mounted at the sides of the standard, the chamber 15 mounted at the front of the standard, and the springs 17 17 secured on the chamber, of the crank-shaft 18 journaled in the extensions 9 9, and the pitman-rods 19 and 20 pivoted on the crank of said shaft and on bearings of the bellows-flaps, as described.

WILLIAM T. PURCHASE.

Witnesses:

THOS. W. ANDREW,
H. J. MILLER.