J. B. TARR.

PORTABLE FOG-ALARM.

No. 184,737. Patented Nov. 28, 1876.

Fig1.

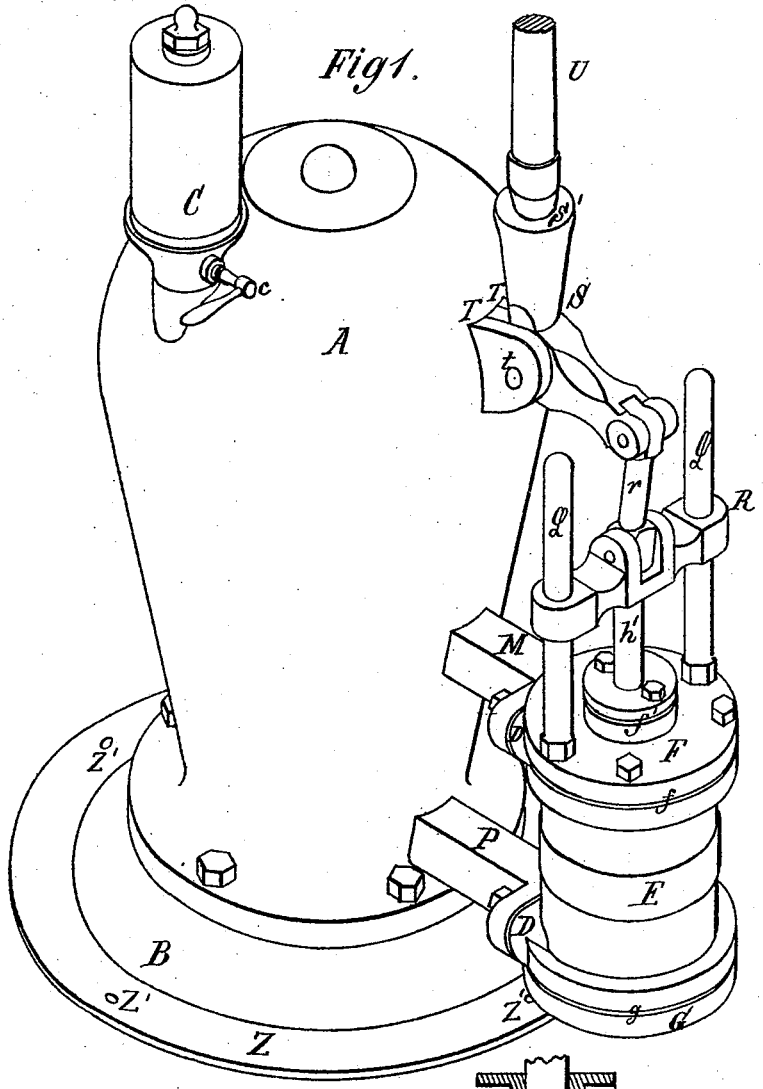
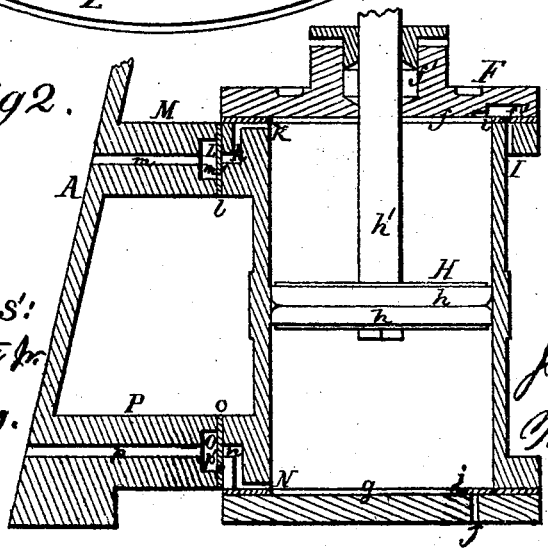


Fig2.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN BLAKE TARR, OF FAIRHAVEN, MASSACHUSETTS.

IMPROVEMENT IN PORTABLE FOG-ALARMS.

Specification forming part of Letters Patent No. **184,737**, dated November 28, 1876; application filed September 6, 1876.

To all whom it may concern:

Be it known that I, JOHN BLAKE TARR, of Fairhaven, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Portable Fog-Horns worked by compressed air, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved fog-horn; and Fig. 2 is a vertical central section through the supply-pump and part of its connections with the reservoir.

The nature of my invention consists in certain constructions, combinations, and arrangements of parts hereafter fully described and specifically claimed, whereby a fog horn or whistle of very simple and compact construction is produced, which may be put in operation at a moment's notice, and may be operated in places too small for machines of that class of construction as heretofore used.

In the drawings, A represents a reservoir of well-known form and construction; B, the removable bottom plate of the same; and C, a whistle or horn of suitable construction attached to the said reservoir. An air-pump is fastened, by means of the lugs or air-ways D, to the lower part of the reservoir A. The said air-pump consists of a cylinder, E, with removable top F, bottom G, and elastic-joint packings *f* and *g*. Within the cylinder E is a piston, H, with cup-shaped leather packing *h*, constructed as usual for such purposes, a piston-rod, *h'*, having a stuffing-box, *f'*, in the lid F. The supply of the cylinder E is induced through a hole, I, passing through the upper rim of the cylinder, which is closed at the top joint by a valve, *i*, forming a part of the packing *f*, and moving within a chamber in the lid F. The chamber extends into the bore of the cylinder E, and thereby connects the hole I with it. The bottom G of the cylinder is provided with a supply-opening, J, which is closed by a valve, *j*, forming a part of the packing *g*. The said induction-ports I and J open downward, to prevent dust or other obstructions from settling therein and interfering with the operation of the valves. The compressed air above the piston H enters a depression, K, on the upper joint of the cylinder, whence it goes into a drilled channel, *k*, in the upper rim of the cylinder, which channel is closed by a valve, L, forming a part of the packing *l* between the cylinder and a lug, M, on the reservoir A. The lug M has a drilled hole, *m*, connecting a valve-chamber, *m'*, on its joint-surface, for the valve L, with the interior of the reservoir.

The compressed air below the piston H enters a depression, N, on the lower joint of the cylinder, whence it passes into a drilled channel, *n*, in the lower rim, which channel is closed by a valve, O, forming part of the packing *o* between the cylinder and a lug, P, on the reservoir A. The lug P has a drilled hole, *p*, connecting a valve-chamber, *p'*, on its joint-surface, for the valve O, with the interior of the reservoir A. The lid F of the cylinder is provided with two upright guide-rods, Q, on which a cross-head, R, of the piston-rod *h'* slides up and down. A small pitman or link, *r*, connects the said cross-head with a bell-crank lever, S, which is fulcrumed by means of a pin, *t*, beween two lugs, T, on the reservoir A. The upper part of the bell-crank lever S is provided with a socket, S', into which a handle, U, for the operation of the machine is inserted. The bell-crank works in line with the piston, to avoid side-pressure and partial giving away to it of the piston. The upright guides Q and cross-head R are there for the same purpose, thus insuring a steady rectilinear movement of the piston-rod *h'* in the stuffing-box, and avoiding side wear in the same, which would cause leakage and interfere with the effective operation of the machine. The horn or whistle C is provided with a cock, *c*, to cut off the air of the reservoir.

From the foregoing description it will be seen that the air-chamber is the only supporting-frame or standard for the pump, the operating-lever, and the alarm-whistle; and that the valves are so located as to close upon the only two joints between the cylinder of the pump and the air chamber or reservoir, and in this position they are held without any separate fastening.

The other parts of the machine are all of the simplest construction, and arranged within the smallest compass, and thus the machine

is adapted for use at the extremities of a vessel or light-house, where machines of the same class but of different construction could not be conveniently placed nor fastened.

By having an upright operating-lever extending mostly above the reservoir, the operator may take his position at any part of the machine, and always close to it, which is not possible for him with machines of different construction.

The bottom plate of the machine not only serves as a support for all of the operating parts, but also has an extended annular rim, *z*, with perforations *z'* through the same, whereby the machine may be screwed or bolted firmly to the deck of a vessel or other locality where it is to be used.

I am aware that an air chamber or reservoir, an alarm-whistle and a pump have been combined in various ways. I am also aware that the alarm-whistle has been mounted on the air-reservoir, and that a single-acting cylinder-pump has been bolted to the bottom of the air-reservoir; but in all the constructions heretofore adopted the air-chamber alone has not afforded a support for the whistle, pump, and operating-lever, and hence auxiliary frames or supports of some sort have been necessary for some of these parts, and the machine could not be made as compact and simple in construction as I have shown.

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

In the fog-horn, which has its alarm-whistle and pump supported by the air reservoir or chamber, the lever for operating the pump, supported by a bearing upon said air reservoir or chamber, substantially as and for the purpose described.

Witness my hand in the matter of my application for a patent for an improved portable fog-horn, this 31st day of August, 1876.

JOHN BLAKE TARR.

Witnesses:
JAMES MARTIN, Jr.,
A. G. HEYLMAN.