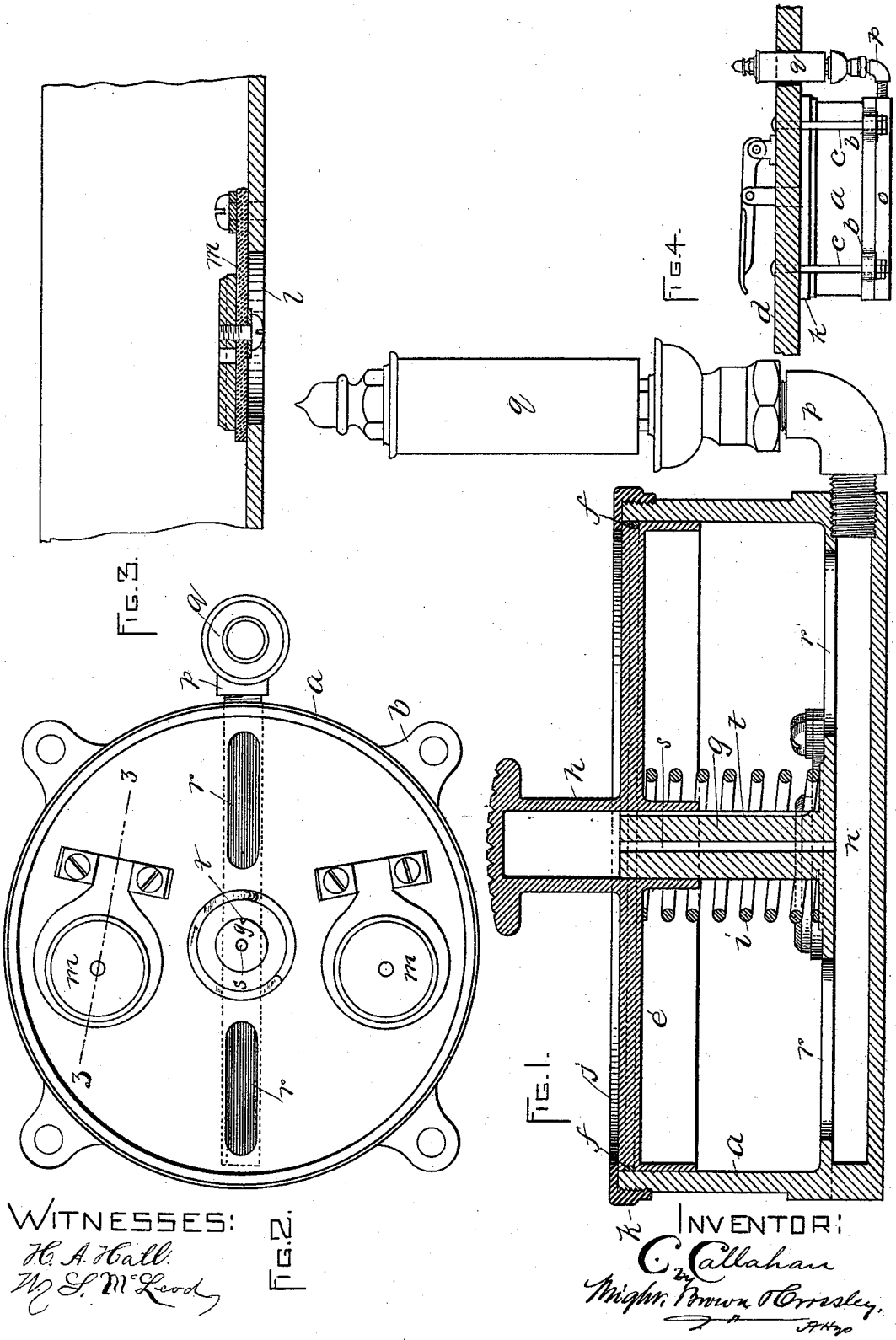
(No Model.)

C. CALLAHAN.

CAR SIGNAL.

No. 494,366. Patented Mar. 28, 1893.



UNITED STATES PATENT OFFICE.

CORNELIUS CALLAHAN, OF CANTON, MASSACHUSETTS.

CAR-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 494,366, dated March 28, 1893.

Application filed October 3, 1892. Serial No. 447,655. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS CALLAHAN, of Canton, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Alarms for Fire Apparatus, Street-Cars, &c., of which the following is a specification.

This invention has relation to means for use on fire apparatus, street cars, &c., for sounding alarms to give notice of the approach of the engine or car, so that the way or track may be made clear.

It has been common heretofore to employ gongs or bells on steam fire apparatus to warn persons of their coming, and these means, in other times served their purpose well enough, but since the advent of electric and cable cars which make use of like means for giving warning to "clear the way," it has become difficult to distinguish the fire-engine alarm gong from the warning gong of the street car.

It is the object of my invention to overcome this difficulty and to provide fire apparatus, or it may be street cars, with means for sounding warning noises by which they may be clearly distinguished from other approaching objects of danger.

To these ends my invention consists of a whistle and means capable of being operated by foot or by hand for forcing air into the whistle in order to sound the same, all as I will now proceed to describe and claim.

Reference is to be had to the annexed drawings and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings—Figure 1 is a vertical central sectional view of the invention, the whistle being shown in elevation. Fig. 2 is a top plan view of the same, the piston being removed. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2, showing the construction and arrangement of the valves which control the ports adapted to admit air to the cylinder or chamber. Fig. 4 is a detail view showing the manner of supporting the device beneath the foot-board or other part of the engine, car or vehicle.

In the drawings *a* designates the cylinder or air chamber which may be of metal and of the form shown, or any other suited to the purpose, and which may be provided with projecting lugs *b* for the reception of bolts *c* by means of which it may be supported beneath a foot-board *d* or otherwise held in place at a convenient point.

e designates a piston which is given a substantially air-tight fit in the cylinder *a*, being provided at its edge, if need be, with a packing *f* held in a groove formed in the periphery of the piston, the latter being at the same time constructed so as to be reciprocated in the cylinder.

g is a standard which may form an integral part of the bottom of the cylinder, and project up from the center of the same into the hollow stem *h* of the piston and assist in guiding the latter in its reciprocatory movements.

A helical spring *i* surrounds the standard *g* and bears at its lower end on the bottom of the cylinder and at its upper end against the lower surface of the piston, and serves to raise the latter after depression, its upward movement being limited by the inwardly-projecting flange *j* of the ring *k* screwed upon the upper end of the cylinder.

l l designate ports by which air may be admitted to the interior of the cylinder, which ports are controlled by clapper valves *m m* which rest at their edges on the bottom of the cylinder.

n designates an air conduit formed in a rib or swell *o* constituting an integral part of the bottom of the cylinder, and *p* is a pipe communicating at one end with the conduit *n* and at the other end with a whistle *q*. The pipe *p* while being represented in the drawings as quite short, may be of any desired length so as that the cylinder and its adjuncts may be located at a point where they may be most conveniently used, and the whistle arranged at a place where it may best be sounded or blown.

r r designate ports communicating between the interior of the cylinder and the air conduit *n* in order that air in the cylinder may be forced through the said conduit and the pipe *p* to blow the whistle.

A hole *s* extends longitudinally through the standard *g* and a channel *t* is formed in the side thereof, so that air may not become

trapped in the hollow stem *h* or a vacuum formed therein and so prevent a free working of the piston.

In use, the device being properly supported, in case it is desired to give an alarm, the driver or other person may place his foot upon the knob *u* on the top of the hollow stem *h*, or upon the end of the lever *v* fulcrumed upon the said hollow stem (see Fig. 4), and so depress the piston, force the air through the conduit *n* and pipe *p* to the whistle, blowing the latter, the spring *i* serving to return the piston to its normal position, and the valves *m* yielding to permit the cylinder to be quickly refilled with air.

It is to be noted that the device may be arranged horizontally, as shown, or in inclined or other desired position.

The whistle can be formed so as to give any desired tone or peculiar sound in order that it may indicate the particular kind of object to which it is attached.

By the invention, it being dependent for use upon the common atmosphere, the whistle may be blown at any time, is not made dependent, as is now the case, upon the presence of steam.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. An alarm for fire apparatus, street cars, &c., comprising in its construction a whistle, an air cylinder or chamber, provided with means for attaching it to an engine or other vehicle, a depressible piston, a foot-rest connected with the piston for depressing the same, conduit between the cylinder and whistle, and a spring for returning the piston to normal position, as set forth.

2. An alarm for fire apparatus, street cars &c., comprising in its construction a whistle, an air cylinder or chamber provided with means for attaching it to an engine or other vehicle, a depressible piston, a foot-rest connected with the piston for depressing the same, a conduit between the cylinder and whistle, a spring for returning the piston to normal position, a flanged ring for limiting the upward movement of the piston, and valve-controlled ports in the bottom of the said cylinder or chamber, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 20th day of September, A. D. 1892.

CORNELIUS CALLAHAN.

Witnesses:

ARTHUR W. CROSSLEY,

M. W. JACKSON.