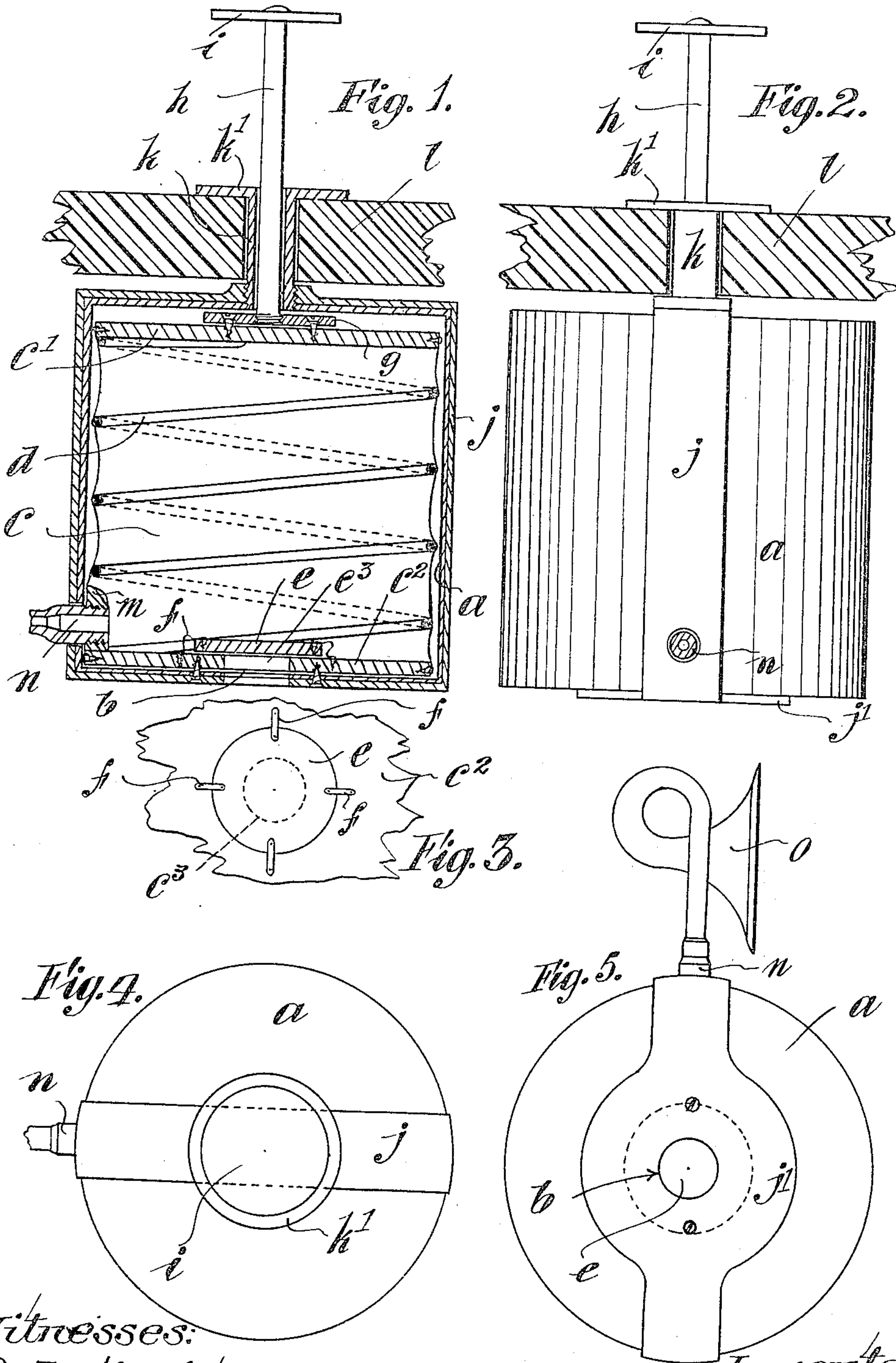


No. 816,430.

PATENTED MAR. 27, 1906.

J. CAIRNS.  
PNEUMATIC ALARM.  
APPLICATION FILED JULY 6, 1905.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN CAIRNS, OF BANGOR, IRELAND.

## PNEUMATIC ALARM.

No. 816,480.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed July 6, 1905. Serial No. 268,311.

*To all whom it may concern:*

Be it known that I, JOHN CAIRNS, mechanic, a subject of the King of Great Britain, residing at Beech Cottage, Bangor, county Down, Ireland, have invented certain new and useful Improvements in or Relating to Pneumatic Alarms for Use on Vehicles, of which the following is a specification.

At present it is usual to fit motor-vehicles and such like with horns or alarms which are manipulated by hand, so that the driver of the vehicle has not his hands free. In the case of ordinary carts and other vehicles for street traffic they have either no alarm or else merely a bell or such like.

The object of my invention is to provide a pneumatic alarm for use on any kind of vehicle and which is operated by the foot, so as to leave the driver's hands free to drive, steer, or apply the brake, as the case may be. The pneumatic alarm may take the form of any suitable and well-known pneumatic means, such as a bellows or the like, which can be readily expanded and collapsed, so as to produce a movement of air, said air movement being caused to sound a horn or whistle or other alarm.

The invention can be carried out in various ways; but I prefer to make it in the manner which I will now proceed to describe with reference to the drawings annexed, which show, by way of example, a simple form of apparatus specially suitable for motor-cars and horse-vehicles.

On the drawings, Figure 1 is a vertical section through the apparatus. Fig. 2 is a side elevation of the apparatus. Fig. 3 is a plan view of the valve *e*. Fig. 4 is a plan of the apparatus. Fig. 5 is an inverted plan of the apparatus.

On the drawings the same reference-letters wherever repeated indicate the same parts.

The pneumatic alarm consists of a hollow cylindrical box *a*, made of metal or other suitable material and having a hole *b* at its under side. Arranged within this box is a leather or other bellows or its equivalent *c*, which is normally kept expanded by means of a spiral spring or its equivalent *d*.

*c'* is the top board of the bellows, and *c''* the bottom board, which latter has a hole *c'''* in it covered by a valve or disk *e*, which is or may be secured to the bottom *c''* by means of strips of leather or such like *f*. Screwed or

otherwise secured to the top board *c'* is a plate *g*, in which a rod *h* is screwed, said rod having at its upper end a disk or plate *i*.

The box or cylinder *a* is held in position by means of a metal or other holder or attachment *j j'*, which passes around the cylinder and is secured thereto at the bottom by means of screws or the like. Screwed into the cross-piece of this holder is a guide-tube *k*, having its upper end flanged at *k'*, so as to rest on the foot-board *l* or the floor of the vehicle.

Secured to the bottom of the bellows is a lug *m*, which has a tapped hole in it for the reception of a nozzle *n*, said nozzle having fitted into it a sounding-horn *o* or a whistle or such like, so as to sound an alarm.

The valve *e*, owing to the leather strips connecting it with the bottom being quite loose, has perfectly free movement. When the holder *j* is screwed onto the bottom of the guide-tube *k*, the cylinder is held firmly in position. The foot-pin or so-called "lever" *h* can be screwed into and out of the plate *g* as desired. Now as the bellows or equivalent is normally kept extended by means of the spring *d* then it is perfectly evident that if the driver presses his foot upon the plate *i* and suddenly collapses the bellows air will rush through the nozzle *n* and sound the horn *o*. After the alarm has been sounded and the pressure is taken off the plate *i* the spring will automatically expand the bellows and draw air into the interior thereof through the valve *e* and air-holes *b c'''*.

The apparatus is very simple and is thoroughly efficient.

The invention can be used on motor-boats.

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

1. In a pneumatic alarm for vehicles, a rigid casing, a bellows therein, a holder for said casing extended across the top and bottom and opposite sides thereof, a guide-tube secured in said holder and in said casing and having a flange, and a rod passed through said tube and connected with the bellows.

2. In a pneumatic alarm for vehicles, a rigid casing having a hole in its bottom, a bellows in said casing having coincident hole, a loosely-mounted valve in said bellows controlling the opening therein, a holder passed beneath the casing and secured to the bottom

thereof and extended upon opposite sides  
and across the top of the casing with an open-  
ing coincident with the opening in the bot-  
tom of the casing, a guide secured in the top  
5 cross-piece of said holder and into the casing  
and a rod passed through the top of the holder  
and connected with the bellows.

In testimony whereof I affix my signature  
in presence of two witnesses.

JOHN CAIRNS.

Witnesses:

JAMES BEST,  
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