

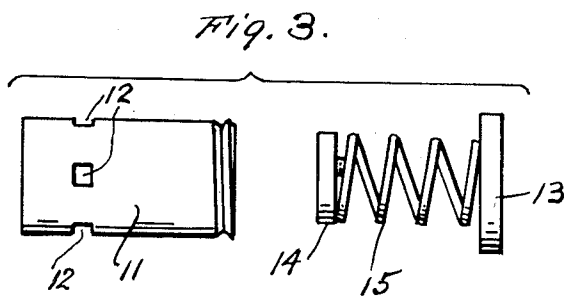
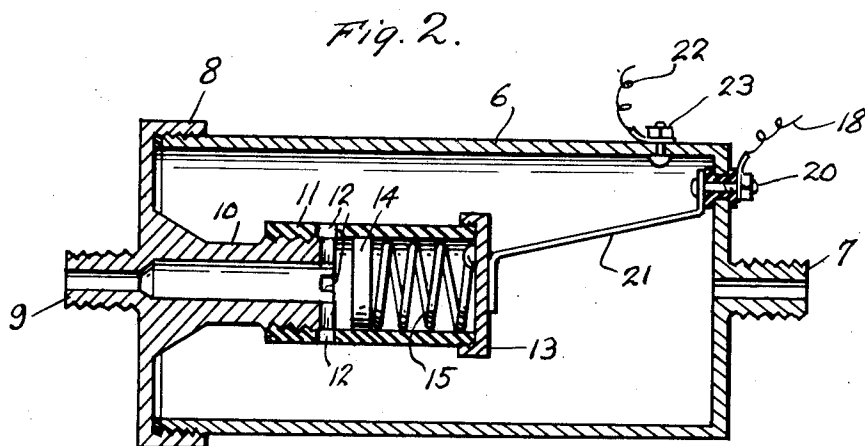
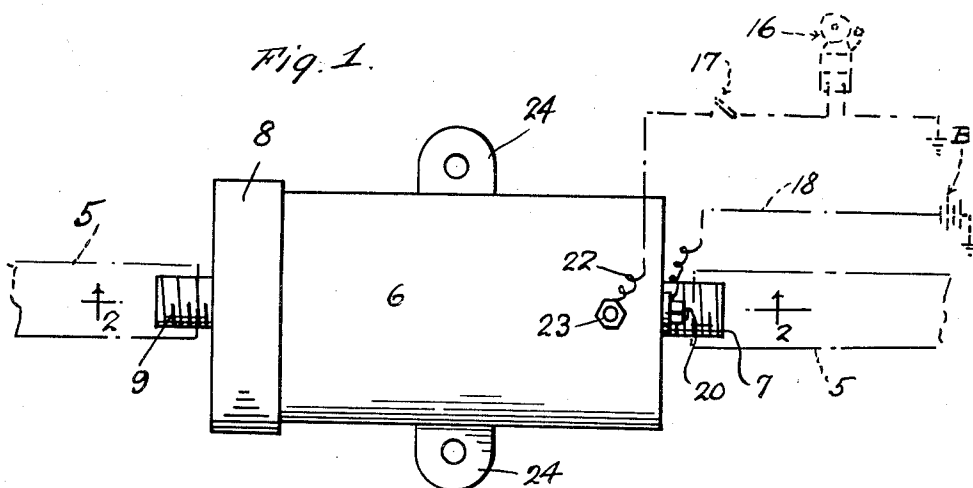
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LOW AIR PRESSURE WARNING DEVICE

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LOW AIR PRESSURE WARNING DEVICE

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2 Claims. (Cl. 200—82)

This invention is a device for completing a circuit through an electrical signal of either the visual or audible type whereby to indicate low pressure in a pressure line of any suitable character.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawing wherein:

Figure 1 is an elevational view illustrating the application of the invention to a pressure line.

Figure 2 is an enlarged sectional view through the device taken substantially on the line 2—2 of Figure 1.

Figure 3 is an exploded view of a cylinder and spring contact member hereinafter more fully referred to.

Referring to the drawing by reference numerals it will be seen that 5 indicates generally a pressure line through which water, air or the like is forced under pressure.

In accordance with the present invention there is interposed in the line 5 a casing 6 preferably of cylindrical form and provided at one end with a nipple 7 adapted to thread into a section of the line 5, and at a relatively opposite end with a screw cap 8 provided with a nipple 9 adapted to be threaded into a second section of the line 5 as suggested in Figure 1.

In the preferred embodiment thereof cap 8 has formed integral therewith and projecting inwardly therefrom a nipple 10 that has a threaded extremity on to which is screw-threaded one end of a cylinder 11 of bakelite, hard rubber or any other suitable non-conductive material.

At the connected ends thereof nipple 10 and casing 11 are provided with registering ports 12 as shown in Figure 2 so as to permit at all times a flow of fluid through the line to the end that the air gauge (not shown) with which such line is usually provided will register pressure at all times even though the pressure be below a predetermined amount, that is to say even though the pressure has fallen to such an extent as will, in a manner hereinafter more fully set out, permit a closing of the circuit through the electrically operable signal device.

A contact disk 14 of conductive material has a sliding fit within the cylinder 11 and is normally urged into engagement with the inner end of the nipple 10 which is also of conductive material through the medium of a suitably provided and arranged coil spring 15.

Preferably spring 15 has its respective opposite ends anchored in any suitable manner to

the contact disk 14 and caps 13 so that these parts may be handled as a unit.

The nipple 10 together with the casing and associated parts is arranged in an electrical circuit involving an electrically operable signal 16 as suggested in Figure 1 which may be in the form of a bell, a light, or both and which circuit is controlled by a main switch 17, preferably.

As shown in Figure 1 the cap 13, contact disk 14 and spring 15 which are of conductive material are electrically connected with one side of the battery B or other suitable source of electrical supply through the medium of a wire 18 that is connected at one end with a terminal bolt 20 provided on and insulated from the closed end of the casing 6. Secured to the bolt 20 is a conductor member 21 of metal or other suitable material which at one end bears against the cap 13 as clearly shown in Figure 2.

One side of the signal 16 is grounded while the other side is connected with the switch 17 one side of which is also electrically connected through the medium of a wire 22 and terminal bolt 23 with the casing 6.

From the above it will be seen that when there is a predetermined pressure in the line 5 contact disk 14 will be normally held out of engagement with the nipple 10 and against the action of spring 15. However, upon a fall of pressure spring 15 will force contact member 14 into engagement with the threaded end of the nipple 10 thus completing the circuit through the attachment (switch 17 being closed) and the electrically operable signal element 16 whereby the latter is actuated for giving a signal to the end that one may be apprised of the fact that there has been a fall of pressure in the line 5.

As shown in Figure 1 casing 6 may be suitably provided as at 24 whereby the same may be suitably anchored in position or attached to a support as found desirable.

It is thought that a clear understanding of the construction, utility and advantages of a device of this character will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

1. A signal circuit closure for disposition with a pressure line for closing a circuit upon a fall of pressure in said line, and comprising a casing adapted to be disposed within the line, said casing being of conductive material and adapted to be electrically connected to one side of the signal circuit, said casing having a nipple extending inwardly thereof, a cylinder of non-conduc-

tive material connected with the inner end of said nipple, a contact member having a sliding fit within said cylinder, spring means engaged with said contact member and tending to normally urge the
5 same into engagement with said nipple for completing the signal circuit, and means for placing said contact member in electrical connection with one side of the source of electrical energy.

2. In a device of the character described a casing provided at one end with an inlet nipple, and
10 at its relatively opposite end with an outlet nipple, said casing having internally thereof a nipple extending inwardly from and in alignment with said inlet nipple, said casing and internal nipple
15 being formed of conductive material, a cylinder of non-conductive material threadedly engaged

with one end of the internal nipple, a contact member having a sliding fit within said casing and adapted to move into engagement with said internal nipple for completing an electrical circuit, a cap of conductive material engaged with
5 the free end of said cylinder, a spring of conductive material connected at one end of said contact member and at a relatively opposite end with the first-named cap, a conductor member having
10 an end engaged with the last-named cap, and a terminal bolt securing the relatively opposite end of the conductor member to one end of said casing, said terminal bolt being insulated from said casing.

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