

Aug. 6, 1929.

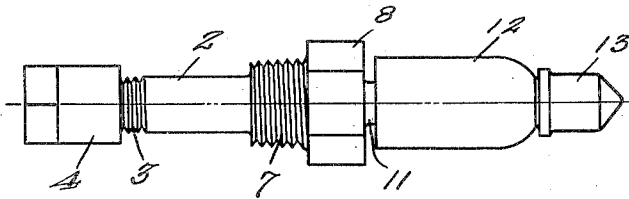
C. WAINWRIGHT

1,723,902

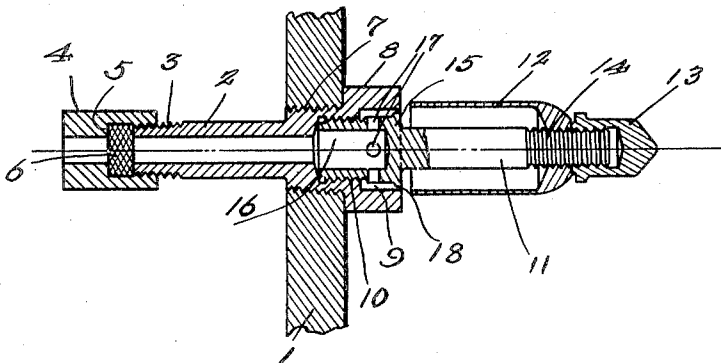
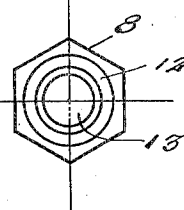
SIGNAL WHISTLE

Filed Aug. 25, 1928

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*

*Charles Wainwright*  
INVENTOR

Witness

*Thomas E. Turpin*

## UNITED STATES PATENT OFFICE.

CHARLES WAINWRIGHT, OF ERIE, PENNSYLVANIA.

## SIGNAL WHISTLE.

Application filed August 25, 1928. Serial No. 302,154.

The object of my present invention is the provision of a simple, durable, easily applied and removable, and reliable whistle, designed more particularly for use in conjunction with inter-coolers of air compressors or after-coolers attached to air compressors or air-receiving tanks attached to compressors, and calculated when the temperature for any reason reaches a predetermined point to sound an alarm and put the engineer on notice to the effect that the apparatus requires correction.

To the attainment of the foregoing, the invention consists in the improvement as hereinafter described and definitely claimed.

In the accompanying drawing forming part hereof:

Figure 1 is a side elevation of my novel alarm whistle.

Figure 2 is a projected view of the same.

Figure 3 is a view showing the whistle in longitudinal diametrical section as properly arranged relatively to a wall of the apparatus that is equipped with the whistle.

Similar numerals of reference designate corresponding parts in all of the views of the drawing.

The wall 1 may of course be part of any apparatus to which the novel whistle is applicable.

Among other elements the whistle comprises a tubular body 2, threaded at its inner end, as indicated by 3, and connected at such end to a tubular holder 4 in which is a seat or abutment 5 for a fusible plug 6, the said plug 6 being interposed between the inner end of the body 2 and the abutment 5 and being thereby securely held in position so as to normally segregate the bores of the body 2 and plug holder 4. At an intermediate point of its length the body 2 is enlarged and threaded as indicated by 7, this threaded portion 7 being tapered inwardly so as to assure the body being held fast and tight in a correspondingly threaded opening in the wall 1.

The outer end portion 8 of the body 2 is further enlarged, and in said end portion 8 is provided a chamber or recess 9 from which extends inwardly a threaded bore 10. In addition to the elements enumerated the alarm whistle includes a stem 11, a bell 12, and a retaining nut 13. The stem 11 has its outer end portion threaded as indicated

by 14, and on its inner end portion said stem is provided with an enlargement 15 in which is a bore 16 in alinement with the bore in the body 2, and from which bore 16 extend radial apertures 17. These latter are in communication with the chamber or recess 9, and an eduction space 18 is afforded between the stem portion 15 and the wall of the chamber 9 for the emission of fluid under pressure to operate against the bell 12.

In the practical use of the alarm whistle it will be manifest that when the temperature in the device to which the whistle is applied reaches a predetermined point the plug 6 will be fused so as to allow the pressure to escape to the eduction space or opening 18 where it will be discharged against the bell 12 and thereby make a very loud and shrill whistle calculated to adequately warn the engineer of the apparatus that something is wrong and requires prompt correction.

As appears in Figure 1 the body portion 8 is by preference of angular form in cross section and from this it follows that the body 2 may be expeditiously and easily removed from the wall 1, whereupon the holder 4 may be detached from the body 2 for the ready removal of the remnants of the fused plug and the placing of a fresh plug in the holder 4, whereupon the device may as readily be replaced in working position.

The practical merit of my novel device will be better appreciated when it is stated that in the event of a discharge valve in the discharge chamber of a cylinder breaking a rise in the temperature of the discharge air will be brought about and the temperature might be raised to a danger point and ignite or flash the lubricating oil of the cylinder. With the use of my novel device ample warning will be given to an attendant in charge of an air compressor before the excessively high temperature of the air is reached so that the said attendant can take the proper steps to avert an accident.

The wall 1 in the present embodiment of the invention represents a wall of the discharge chamber of an air compressor or an air receiver or a conduit between the receiver and the discharge chamber of the cylinder or an after-cooler used in connection with the discharge chamber of the cylinder.

Having described the invention what is claimed is:

1. In an alarm whistle, a tubular body having an inner end exteriorly threaded portion, an intermediate exteriorly threaded and inwardly tapered portion and an outer enlarged portion, and also having a recess in the outer end portion and a threaded bore extending inwardly therefrom, a tubular holder threaded on the inner end portion of the body and having an intermediate interior abutment, and a fusible plug arranged in the holder between the inner end of the body and the holder abutment.

2. In an alarm whistle, a tubular body having an inner end exteriorly threaded portion, an intermediate exteriorly threaded and inwardly tapered portion and an outer enlarged end portion, and also having a recess in the outer end portion and a threaded bore extending inwardly therefrom, a tubular holder threaded on the inner end portion of the body and having an intermediate interior abutment, and a fusible plug arranged in the holder between the inner end of the body and the holder abutment, in combination with a

stem having an inner enlarged exteriorly threaded portion socketed in the threaded bore and resting in the recess in said outer end portion of the body and having a bore open at its inner end and also having a lateral vent leading from said bore to said recess.

3. In an alarm whistle, a tubular body having a concentrically arranged recess at one end, a stem secured within the body and disposed axially from and within the recess and spaced from the walls of the latter to provide an eduction space, said stem having a socket at its inner end which provides a continuation of the bore of the tubular body and having openings providing communication between the socket and eduction space, a bell mounted upon the outer end of the stem with the open end of the bell spaced from the body and in axial alignment with the socket, and a fusible plug to control the passage of fluid through the tubular body.

In testimony whereof I affix my signature.

CHARLES WAINWRIGHT.