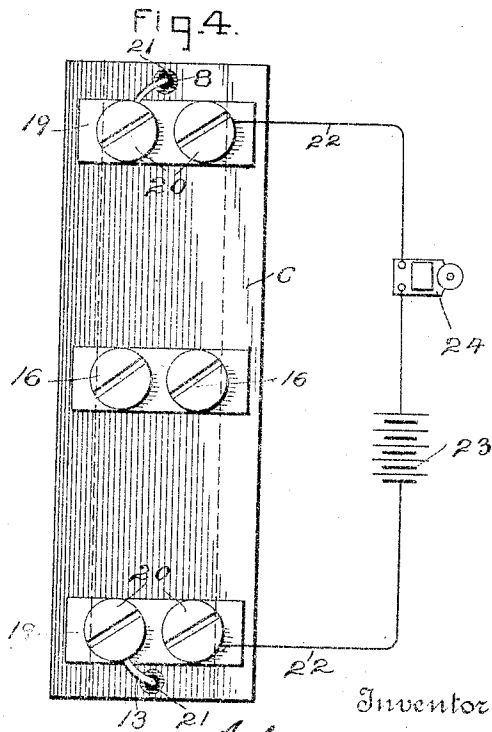
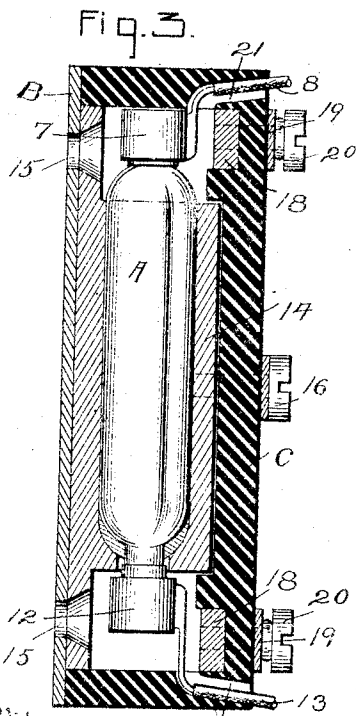
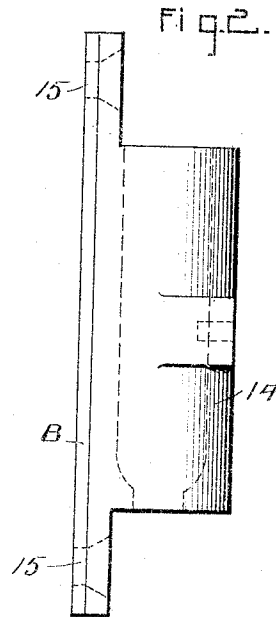
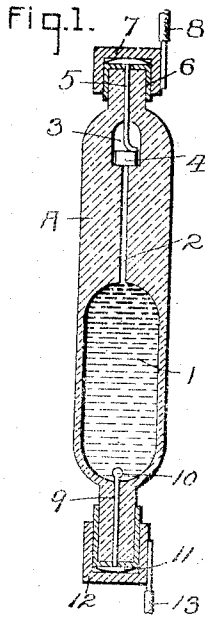


A. H. DE LAGE.
ALARM FOR BEARINGS.
APPLICATION FILED JUNE 14, 1910.

988,176.

Patented Mar. 28, 1911.



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UNITED STATES PATENT OFFICE.

ARTHUR HENRY DE LAGE, OF ALPENA, MICHIGAN.

ALARM FOR BEARINGS.

988,176.

Specification of Letters Patent.

Patented Mar. 28, 1911.

Application filed June 14, 1910. Serial No. 566,774.

To all whom it may concern:

Be it known that I, ARTHUR HENRY DE LAGE, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented certain new and useful Improvements in Alarms for Bearings.

My invention relates to an improvement in alarms for hot bearings, and the object is to provide means whereby an alarm will be sounded or given when the bearing of an axle becomes overheated, or heated to such a degree that there is danger of hot-box.

The invention consists in certain novel features of construction and combinations of parts which will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings:—Figure 1 is a vertical sectional view of the mercury tube; Fig. 2 is a view in side elevation of the casing; Fig. 3 is a longitudinal sectional view; and Fig. 4 is a top plan view.

A represents the mercury tube, which is provided with mercury 1. One end of the tube is provided with a narrow passage or neck 2, and at the end of the passage or neck 2, the passage is enlarged, as at 3, for the reception of a disk, preferably of German silver, 4, which is provided with an opening through the center, through which the mercury can pass as it expands by the heat. The disk 4 acts as a contact, and connected to it is a platinum wire 5, which leads to a brass ferrule 6. Mounted upon the ferrule, and tightly fitted or screwed thereto, is a brass cap 7, to which is connected the copper wire 8. A platinum wire 9 extends through the opposite end of the tube A, and is provided with a ball 10 of German silver, which is adapted to make contact with the mercury. The wire 9 is connected to a brass ferrule 11, which is mounted on the end of the tube, and tightly fitted or screwed to the ferrule is a brass cap 12, to which is connected the copper wire 13.

B represents the base of the housing or casing for the tube, which is provided with a central body 14 having a longitudinal opening formed therethrough, in which the tube A is received, the tube being preferably cushioned in the body to prevent breakage from the jar of the machinery. Openings 15 are formed in the base B whereby the base can be connected to the bearing in any suitable manner. Mounted upon the base

is an insulating fiber cover C, which extends across the ends of the base and along the sides thereof. The cover is connected to the body 14 by screws 16, which pass through the cover into the body. At each end and on the under side of the cover, grooves 17 are formed, in which the contact plates 18 are mounted. Contact plates 19 are received upon the upper surface of the cover, and passing through the plates 18 and 19 are the binding posts 20. The wires 8 and 13 pass through openings or passages 21, in the ends of the cover C and are connected to a binding post 20 at each end of the cover. The other binding posts 20 are connected to the bell and battery wire 22, the wire 22 being connected to a battery 23 and to the bell 24, whereby the bell will be sounded as the mercury rises in the tube and makes contact with the disk 4, whereby an electric circuit is produced through the wires 8 and 13 to the binding posts 20, through the plates 19 to the opposite binding posts, and thence through the wire 22 to the battery and bell.

From the foregoing it will be seen that I have provided a very simple device which can be connected to any bearing for the sounding or giving of an alarm in case the bearing becomes overheated.

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

1. An alarm for hot bearings comprising a mercury tube having a neck, stationary contacts in the neck and tube, ferrules mounted on the tube, wires connecting the contacts and ferrules, caps connected to the ferrules, and wires connected to the caps.

2. In an alarm for bearings, the combination with a base having a hollow body thereon, of a mercury tube mounted in the hollow body, contacts in the tube, an insulated cover mounted on the base having openings in the ends thereof, said cover protecting the ends of the tube and holding the tube in the hollow body, wires connected to the contacts passed through the openings in the ends of the cover, binding posts on the cover to which the wires are connected, and an alarm circuit connected to the binding posts whereby the alarm will be sounded when the mercury makes contact with the contacts.

3. In an alarm for bearings, the combination with a base having a body extending upwardly therefrom, said body provided

with a longitudinal opening, one end of which is constricted, of a mercury tube provided with a neck which neck is received in the constricted portion of the longitudinal opening contacts in the tube and neck, ferrules mounted on the body, wires connecting the ferrules and contacts, caps connected to the ferrules, wires connected to the caps, and a cover received on the body and base

for holding the mercury tube in position in the body. 10

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

ARTHUR HENRY DE LAGE.

Witnesses:

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