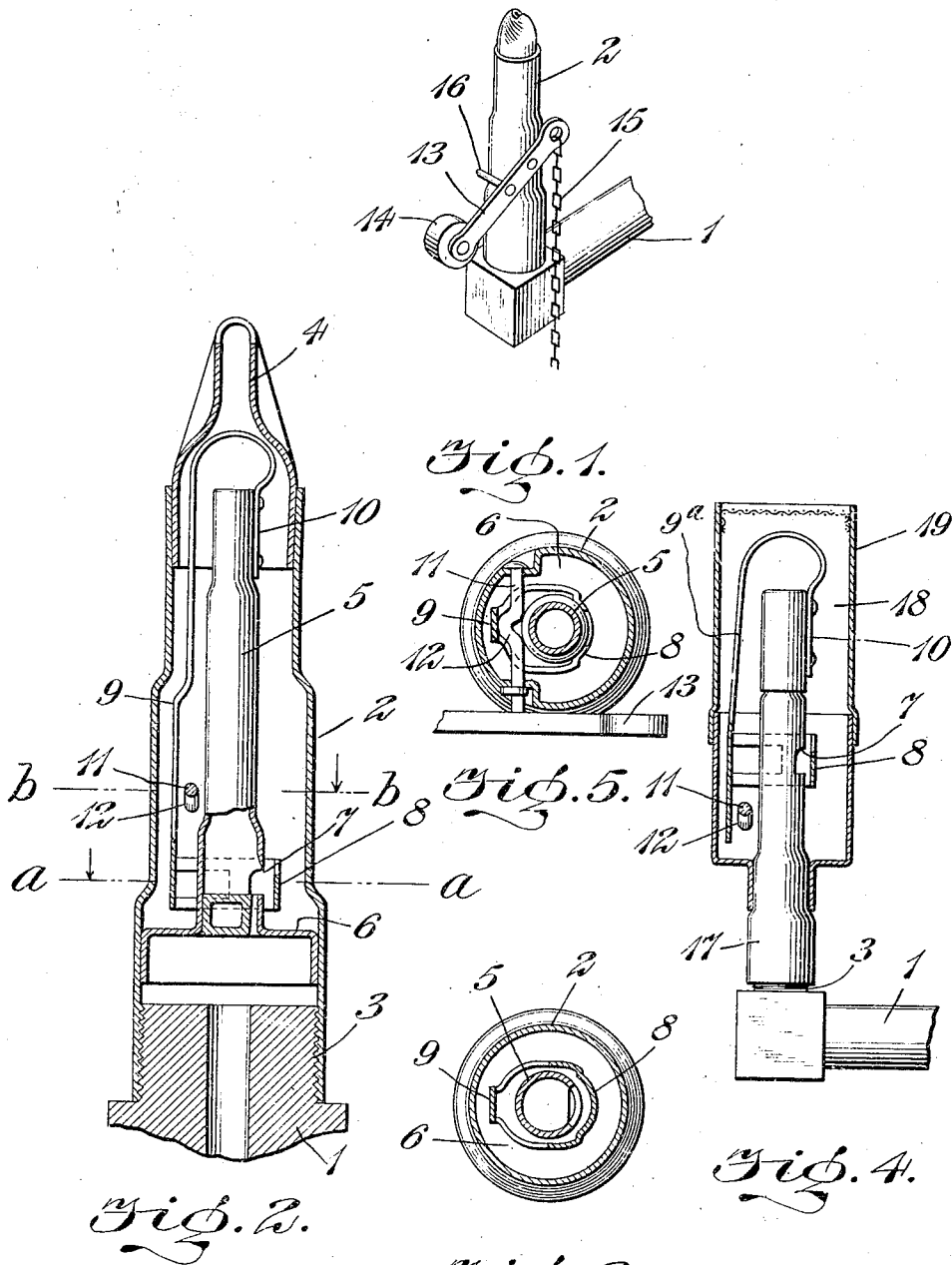


H. EPSTEIN.
 SIGNALING APPARATUS.
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1,060,898.

Patented May 6, 1913.



WITNESSES:
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Fig. 3.

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SIGNALING APPARATUS.

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To all whom it may concern:

Be it known that I, HARRIS EPSTEIN, a citizen of the United States, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain Improvements in Signaling Apparatus, of which the following is a specification.

This invention relates to certain improvements in signaling apparatus and more particularly in that class of such devices which are especially designed and adapted for use at gas cocks, burners and the like for giving an alarm for the prevention of accidents should the flame of a gas cock, burner or the like be extinguished independently of the controlling valve or should such controlling valve be accidentally turned to operative position, and the object of the invention is to provide a device of this general character of a simple and comparatively inexpensive nature and of a compact and durable construction which shall be capable of employment as an effective alarm.

The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts of the improved signaling apparatus, whereby certain important advantages are attained and the device is rendered simpler, less expensive and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein—

Figure 1 is a view in perspective illustrating a burner constructed in accordance with my invention; Fig. 2 is an enlarged longitudinal section through such burner; Fig. 3 is a sectional view taken on the line *a—b* of Fig. 2; Fig. 4 illustrates a further embodiment of the invention; and Fig. 5, is a sectional view taken on the line *b—b* of Fig. 2.

Referring first to Figs. 1 to 3, 1 represents a supply pipe herein shown as made in the form of an ordinary wall bracket while 2 represents a pillar extended above the supply pipe and having detachable connection therewith as shown at 3, said pillar being provided with a tip 4 whereat the gas is burned.

Positioned within the pillar 2 is the signaling device 5 herein shown as a whistle and the open end of the signaling device or

whistle 5 is formed into the bell 6 which is adapted to snugly fit against the inner wall of the pillar 2 and to hold the signaling device or whistle 5 into operative position against the pillar 2 through frictional contact therewith. The gas to be ignited flows through the supply pipe 1 within the signaling device or whistle 5 and out through the opening 7 thereof to within the pillar 2 up to the burner whereat the same is burned.

It is the flow of the gas through the opening 7 of the signaling device or whistle 5 that creates the alarm and in order to silence or shut off the signaling device or whistle under normal conditions, the valve 8 is provided adjacent the opening 7 and this valve 8 is of such a character as to prevent the sounding of the signaling device or whistle when it is in contact therewith and extended across such opening 7.

As shown in the drawings the valve 8 has movement in a direction transverse of the signaling device or whistle 5 and this movement is effected through the medium of a spring arm 9 extended longitudinally of the signaling device or whistle 5 and positioned in alinement with the opening 7 and adjacent the side of the signaling device or whistle opposite to such opening and between such signaling device or whistle 5 of the pillar 2. The upper end portion 10 of this spring 9 is bent back upon itself in substantial parallelism therewith and is secured to the upper end portion of the signaling device or whistle 5 at a point above the opening 7. This spring serves as a thermostat and the heat of the flame burning at the tip 4 causes this spring 9 to expand and this movement serves to bring the valve 8 across the opening 7 and thereby silence or shut off the sound thereof.

To prevent an alarm being given when the flame is to be ignited under normal conditions I have mounted within the pillar 2 and extending between the spring 9 and the signaling device or whistle 5 the shaft 11 on which is mounted the cam 12 adapted to contact with the spring 9 and thereby carry the valve 8 in proper position relative to the openings 7 to silence the alarm and to impart the proper rocking movement to the shaft 11 I have secured thereto exterior of the pillar 2 the arm 13. The point of engagement of the arm 13 with the shaft 11 is intermediate the length of such arm and to one end of such arm 13 I have affixed the

weight 14 which holds the cam 12 normally in its inoperative position or in the position shown in Figs. 2 and 4. The opposite end of the arm 13 is engaged by a flexible connection 15 which by proper manipulation elevates the weighted end of the arm 13 which movement is sufficient to cause the cam 12 to force the spring 9 outwardly in which position such cam is held frictionally by the spring 9. The spring 9, however, is capable of expansion through the medium of the heat of the flame to an extent greater than the throw of the cam 12 whereby it will be seen that the cam 12 will automatically return to its normal position through the medium of the weighted end 14 of the arm 13.

It is particularly desired that the shaft 11 make but substantially one quarter revolution for purposes which are thought to be obvious and in order to assure this maximum movement, the arm 13 is provided with the laterally extended stop pin 16 which is adapted to contact with the pillar 2 and limit the upward movement of the weighted end of such arm 13, such pin 16 being so positioned relatively to the arm 13 as to contact with the pillar 2 when the shaft 11 has made substantially one quarter revolution.

In Fig. 4 I have disclosed an embodiment of my invention in connection with an incandescent burner. In this form of invention the signaling device or whistle is comprised within the pillar 17 which extends within the mixing chamber 18 produced by the casing 19 suitably secured to or carried by the pillar 17. The details for controlling the alarm or signaling device in this form of my invention are the same as that hereinbefore disclosed with reference to Figs. 1-3 inclusive, the spring or thermostatic member 9^a being positioned to be affected by the heat of the flame within the mantle of the burner (not shown).

From the foregoing description of my invention it will be apparent that I have provided a novel and improved signaling device to be employed in connection with gas cocks, burners and the like which is of durable and compact construction and which is par-

ticularly advantageous for use by reason of the efficiency and certainty with which an audible signal is given when the flame of the gas cock, burner or the like is accidentally extinguished independently of the ordinary valve, and it is also to be observed that the signaling device constructed according to my invention is susceptible of some modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise formation and arrangement of the several parts of the same as herein set forth in carrying out my invention in practice.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A device of the character described comprising a pillar having an alarm device, a spring carried by the pillar for controlling the alarm device, said spring being capable of expansion by the action of heat to cause the alarm device to become inoperative, and manually operated means engageable with the spring to cause the alarm device to become inoperative.

2. A device of the character described comprising a pillar having a signaling device, a spring for controlling the signaling device, a cam rotatably held by the pillar to contact with the spring to impart movement thereto in one direction and means for rotating the cam in the opposite direction.

3. A device of the character described comprising a pillar having a signaling device, a spring for controlling the operation of the signaling device, a cam rotatably carried by the pillar engageable with the spring to impart movement thereto in one direction, and automatic means for imparting movement to the cam in the opposite direction.

In witness whereof I have hereunto signed my name this 23rd day of Jan'y 1911, in the presence of two subscribing witnesses.

HARRIS EPSTEIN.

Witnesses:

W. E. LAWSON,
W. C. ABBOTT.