(No Model.)

O. D. & M. A. KLEINSTEUBER.

SIGNALING APPARATUS.

No. 515,589. Patented Feb. 27, 1894.

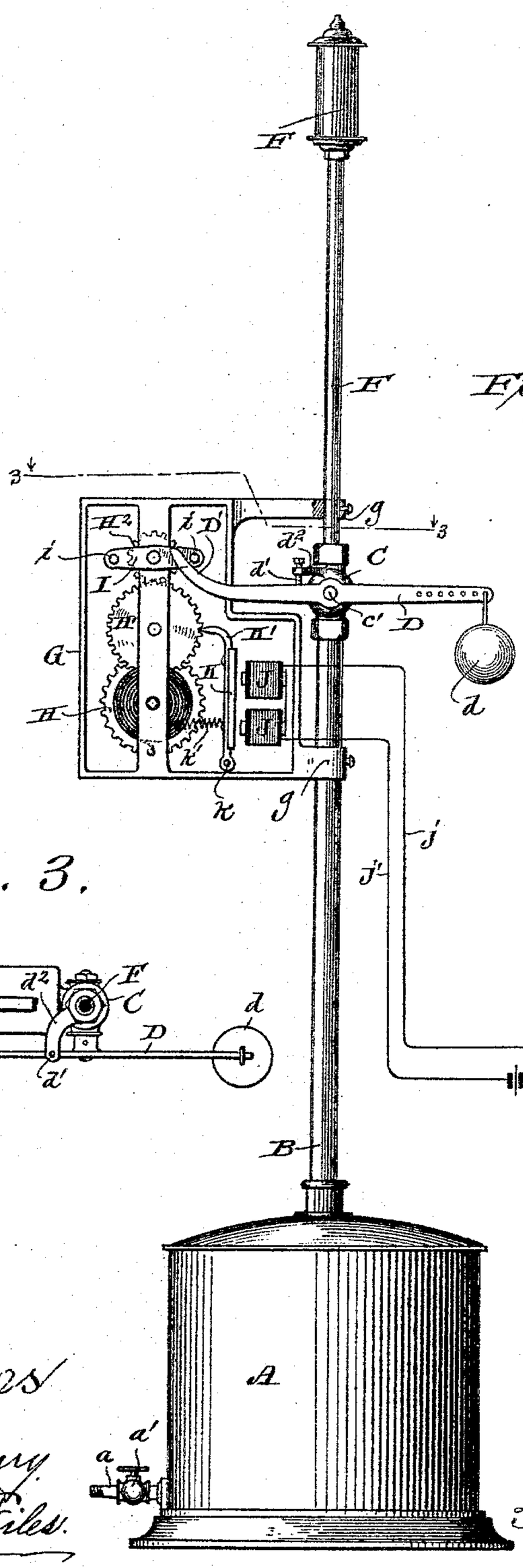

Fig. 1.

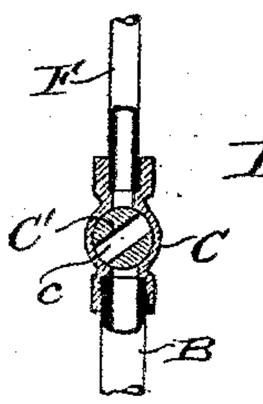

Fig. 2.

Fig. 3.

Witnesses
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OSCAR D. KLEINSTEUBER AND MONROE A. KLEINSTEUBER, OF MILWAUKEE, WISCONSIN, ASSIGNORS OF ONE-THIRD TO FRANK E. WOLLER, OF SAME PLACE.

SIGNALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 515,589, dated February 27, 1894.

Application filed April 8, 1893. Serial No. 469,558. (No model.)

To all whom it may concern:

Be it known that we, OSCAR D. KLEINSTEUBER and MONROE A. KLEINSTEUBER, citizens of the United States, and residents of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Signaling Apparatus; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to new and useful improvements in signaling apparatus for police and other purposes and consists in the matters hereinafter described and more particularly pointed out in the appended claims.

In the accompanying drawings illustrating our invention:—Figure 1 is a side elevation of a signaling apparatus constructed according to our invention. Fig. 2 is a detail sectional view of the valve employed in our device. Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 1.

Referring by letter to the drawings, A represents a tank or reservoir for holding a supply of compressed air or analogous elastic medium, and provided with a suitable filling pipe or tube *a* which is controlled by means of a shut off valve *a'*. A pipe B leads from the tank or reservoir A and is connected with a suitable valve casing C within which a revoluble valve C' having a transverse bore *c*, is engaged. A valve stem *c'* extends through the casing C, and a lever D is engaged with its outer end in the manner shown in Fig. 1, the arrangement being such that when said lever is in a substantially horizontal position, the bore *c* of the valve C' will occupy the position shown in Fig. 2, in which position, the said valve will close the pipe B against the escape of air therefrom. A weight *d* is secured to one of the free ends of the lever D, and any suitable stop is provided for limiting the movement of the said lever by said weight, as for instance, as shown in Figs. 1 and 3 of the drawings, in which a screw *d'* is threaded through a laterally extending arm d^2 upon the casing C, and arranged to engage with the upper side of the lever D, in opposition to the weight. The other end of the lever D, is conveniently curved upward as at D' and adapted for engagement with a suitable tripping device, whereby said lever will be rocked to open the valve in an obvious manner. A pipe E leads from the valve casing C, to a suitable whistle F, so that when the valve is open to permit the escape of air, the air will pass through the pipe E and blow the whistle as it escapes.

Any suitable motor may be employed for actuating the trip mechanism to move the lever D, but in the drawings, we have shown a spring motor mounted in a suitable frame or casing G and comprising a spring actuated gear H, and a suitable train of gears H' H^2, one of which carries upon its axis a transverse arm I provided at its free ends with projecting pins *i i* which extend into line with the curved arm D' of the lever D. It follows from this construction, that when the motor is set in motion the pins *i i* will be brought successively into engagement with the end D of the lever D, so as to depress the same to open the valve, and as soon as the movement of the motor has progressed sufficiently for the pin *i* to pass out of engagement with the lever, the weight *d* at the other end thereof will serve to automatically close the valve in an obvious manner.

Any suitable or desired means may be employed for holding the motor from movement and freeing it to permit it to operate to move the lever D in the manner described, the particular mechanism shown in the drawings comprising an electro-magnet J, connected with circuit wires *j j'* which lead to a battery J' and include a suitable contact button or key J^2. An armature K is pivotally secured within the casing G, at *k*, within the magnetic field of the magnet J and is provided with a laterally directed point K' adapted for engagement with the teeth of one of the gears in the manner shown in Fig. 1, of the drawings, a spring *k'* serving to normally hold the same in engagement with said wheel. While the contact button or key J^2 is closed, the circuit will obviously be completed through the electromagnet J, so as to cause it to attract the armature K to free the motor, when the gears will be rotated and the arm I revolved so as to bring the pins *i i* into engagement

with the curved end of the arm D in the manner before described, to open the valve and operate the whistle.

Our improved signaling apparatus may be located at any point where it is desired to sound a signal and the circuit wires led therefrom to any point from which the signal is to be operated, and we find said apparatus especially well adapted for police purposes.

In adapting our signaling apparatus to the use of police systems, the tank and connected signaling devices may be located at any desired points, as in or adjacent to patrol boxes, or at other localities where it is desired to call an officer.

In the use of the ordinary systems of patrol boxes, telephone instruments are located in the patrol boxes and are connected with the police station and the officers are required to report by telephone at stated intervals. In the use of such systems, when it is necessary to call from the station for an officer who is on his beat, it is necessary to do this at the time when the officer reports at the patrol box, or to send a messenger to the officer if it becomes necessary to call him at any time other than that when he reports at the patrol box. Our improved apparatus is designed to overcome such difficulties, by enabling a person at the police station to operate a signal at the patrol box which may be heard by the officer at a distance therefrom. By our improved device, the whistle may be sounded once or any desired number of times as desired, the person at the station holding the button or key closed a short or a longer time so as to cause the motor to operate to open the valve once, or any desired number of times. By our improvement therefore, the person at the station is enabled to sound the whistle at the patrol box or other point to which it is desired to call an officer, and may repeat the signal as often as necessary, or until said officer signals back from the patrol box by telephone, when instructions may be delivered to him by telephone. In this manner our improved apparatus effects a great saving of time in calling officers upon their beats, and by reason of the readiness with which instructions may be given from headquarters to the men, the police force is rendered much more efficient.

While we have described our improved apparatus as adapted more particularly to police uses, yet we would have it understood that said apparatus is designed for use in a great variety of ways and for many purposes, and our apparatus may be employed wherever a whistle is to be operated by a person at a distance from the point where said whistle is located.

Having described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. An electric signaling apparatus comprising a suitable reservoir for compressed air or other elastic medium, a pipe leading therefrom and terminating in a whistle, a valve located in said pipe between said reservoir and whistle for normally closing said pipe, and provided with a lever arm, a motor provided with a revolving arm in engagement with said lever arm to open the valve, suitable means for normally holding said motor from movement, an electric circuit leading from the signaling device and including a suitable contact device, and a suitable electric device located adjacent to the motor and arranged to release the same when the circuit is completed, substantially as set forth.

2. An electric signaling apparatus, comprising a suitable reservoir for compressed air or other elastic medium, a pipe leading directly therefrom, and terminating in a whistle, a casing intersecting said pipe and provided with a revoluble valve having a transverse bore and a valve stem projecting through said casing, a lever secured to said valve stem and having two free ends, a weight secured to one of said ends, a motor comprising a train of gears, a revoluble transverse arm upon the axis of one of said gears, projections at the ends of said transverse arm for engagement with the adjacent free end of said lever, a pivotally secured spring-controlled armature provided with a laterally directed point adapted for engagment with the teeth of one of the motor gears, an electro-magnet adjacent to said armature and a battery and contact device in electric circuit with said electro-magnet, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

OSCAR D. KLEINSTEUBER.
MONROE A. KLEINSTEUBER.

Witnesses:
H. G. UNDERWOOD,
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