(No Model.)

C. R. ALSOP.

AERO-ELECTRIC WHISTLE.

No. 581,802. Patented May 4, 1897.

Fig. 1.

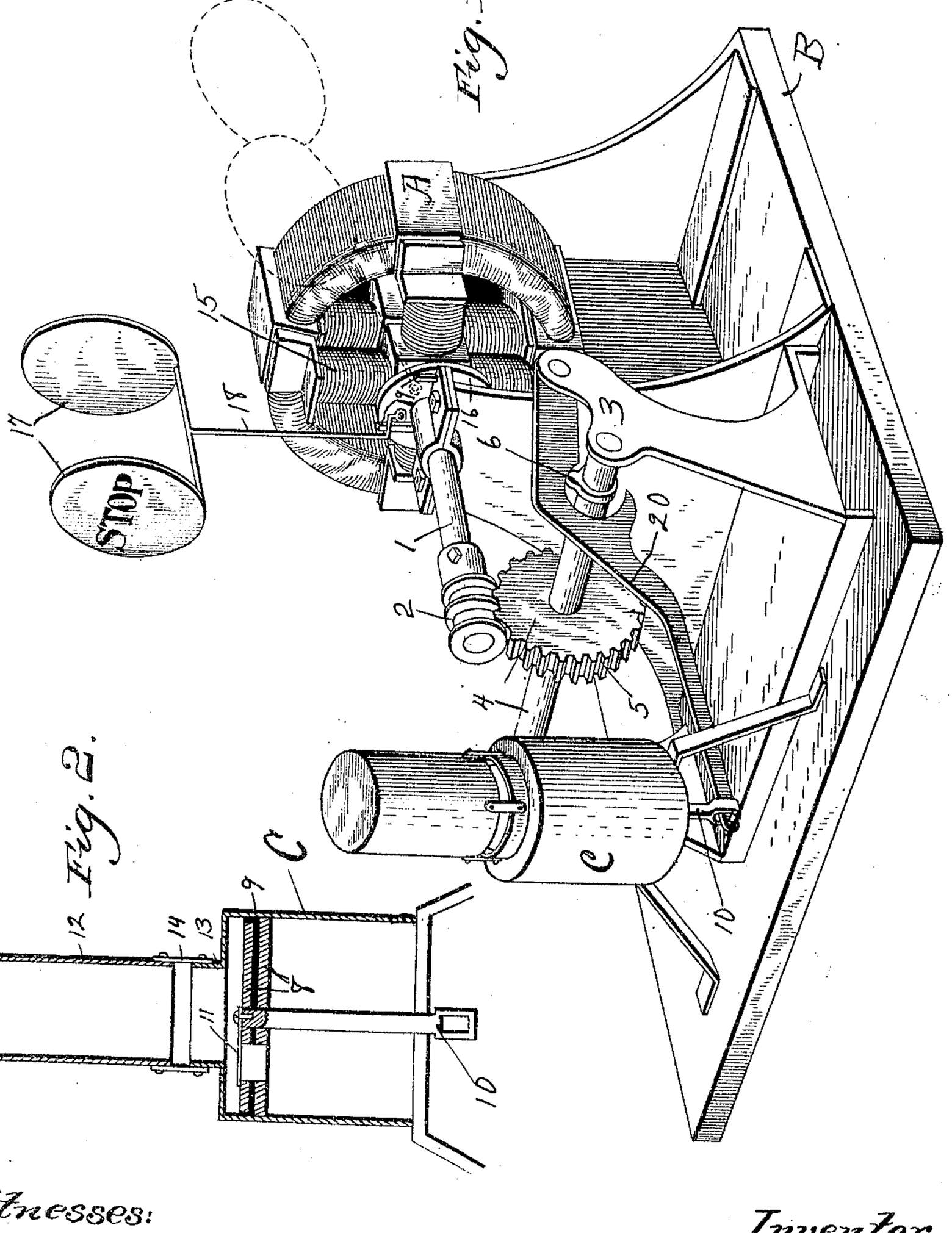

Fig. 2.

Witnesses:

J. B. McGirr.

R. Caldwell

Inventor:

Charles R. Alsop

by Geo. H. Holgate atty

UNITED STATES PATENT OFFICE.

CHARLES RICHARD ALSOP, OF MIDDLETOWN, CONNECTICUT.

AERO-ELECTRIC WHISTLE.

SPECIFICATION forming part of Letters Patent No. 581,802, dated May 4, 1897.

Application filed July 13, 1895. Serial No. 555,895. (No model.)

To all whom it may concern:

Be it known that I, CHARLES RICHARD ALSOP, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Aero-Electric Whistles, of which the following is a specification.

My invention relates to alarm-signals of any kind in which a whistle or fog-horn is used for the purpose of giving notification of danger.

The object of my invention is to supply a whistle which may be located at any point desired relative to the point where the motive power for operating the same is generated and the points or point at which the operation may be controlled, and by means of which a system of alarm-signals may be established along a line of railways at grade-crossings and for use in block systems.

With these and other objects in view the invention consists in the details of construction and combination of elements hereinafter set forth, and specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my invention, showing the target raised. Fig. 2 is a vertical section of the pump and whistle.

In the drawings, A is an electric motor of ordinary construction secured to a base-board B and adapted to operate the air-pump and whistle C through the following mechanism:

On the shaft 1 of the motor is secured a worm 2, so as to revolve therewith, and journaled in a frame 3 is a shaft 4, carrying a worm-wheel 5, which meshes with the worm 2, so as to revolve the shaft 4 when the motor operates. A lever 20 is pivoted to an extension of the frame 3 and has a cam-aperture thereon which rides over a cam-collar 6, secured to the shaft 4, causing the lever to reciprocate vertically when the shaft revolves.

In the pump C the lower cylinder is provided with a piston composed of two disks 8, clamping between them a leather disk 9, all of said disks having apertures which coincide to form a valve-opening.

A piston-rod 10 is hinged to the lever and passes through the piston, where it has secured upon its upper end a valve 11, which is adapted to close the valve-opening when the piston is forced upward, but to fly back and allow air to pass through when the piston is brought downward.

The upper cylinder is composed of a hood 12, secured to the collar 13 by the uprights 14, leaving a space therebetween forming a whistle directly connected with the pump.

15 is a supplemental armature journaled on the shaft of the motor and having its faces in such proximity to the motor-fields as to be attracted thereby and caused to revolve. To this supplemental armature is secured a disk 16, carrying a sign 17, which is secured to said disk by the rod 18, and in the path of this rod are two pins 19, secured on the frame of the motor and against which the rod abuts, thereby limiting the movement of the disk and supplemental armature.

The supplemental armature is connected in the same electric circuit as the motor proper, so that while the motor is operating to sound the whistle the sign is held elevated, but when the circuit is broken to stop the motor the supplemental armature is demagnetized and the sign drops by force of gravity to the position shown in the dotted lines in Fig. 1. Thus it will be seen that when it is desired to signal with my apparatus it is only necessary to close the circuit, when the armature of the motor will revolve the shaft 4 through the worm-wheel 5, thereby causing the cam 6 to reciprocate the lever 20, which in turn operates the piston, forcing air through the whistle to produce intermittent sounds. In the meantime the supplemental armature has been energized and attracted by the fields, thereby elevating the sign, as before described.

It is obvious that many changes may be made in the details of my device without departing from the spirit of the invention. Therefore I do not wish to be limited to the exact construction herein shown and described.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, a

signal consisting of a suitable motor, a worm connected to the shaft thereof, a worm-wheel meshing therewith, a lug carried by the worm-wheel, a lever operated by the lug and an air-pump having a sounding mechanism adapted to be operated by said lever, as and for the purpose described.

2. In combination with an electric motor adapted to operate a sounding mechanism, a supplemental armature journaled on the motor-shaft, carrying a sign having electrical connections whereby when the motor is operated the supplemental armature will become magnetized and attracted by the fields of the motor to expose the sign, as and for the purpose described.

3. In a device of the character described, a signal consisting of a suitable motor, a worm on the shaft thereof, a worm-wheel meshing therewith, a lug carried by the worm-wheel, a lever operated by the lug, an air-pump having a sounding mechanism adapted to be operated by the lever and a supplemental armature carrying a sign journaled on the motor-shaft adapted to be attracted by the fields of the motor when in operation for the purpose of displaying the sign, as and for the purpose described.

4. In a device of the character described, a signal consisting of an electric motor, a worm on the shaft thereof, a worm-wheel meshing therewith, a lug carried by the worm-wheel, a lever having a cam operated by the lug, an air-pump having a whistle connected thereto, operated by the lever, a supplemental armature journaled to the motor-shaft and connected in the same electric circuit therewith, said supplemental armature having its faces in close proximity to the fields of the motor, so that when the circuit is closed the supplemental armature will be attracted by the fields and a sign attached to the supplemental armature adapted to be raised and lowered by the action of said supplemental armature, as and for the purpose described.

CHARLES RICHARD ALSOP.

Witnesses:
EUGENE J. CLARK,
FRANK A. COLES.