

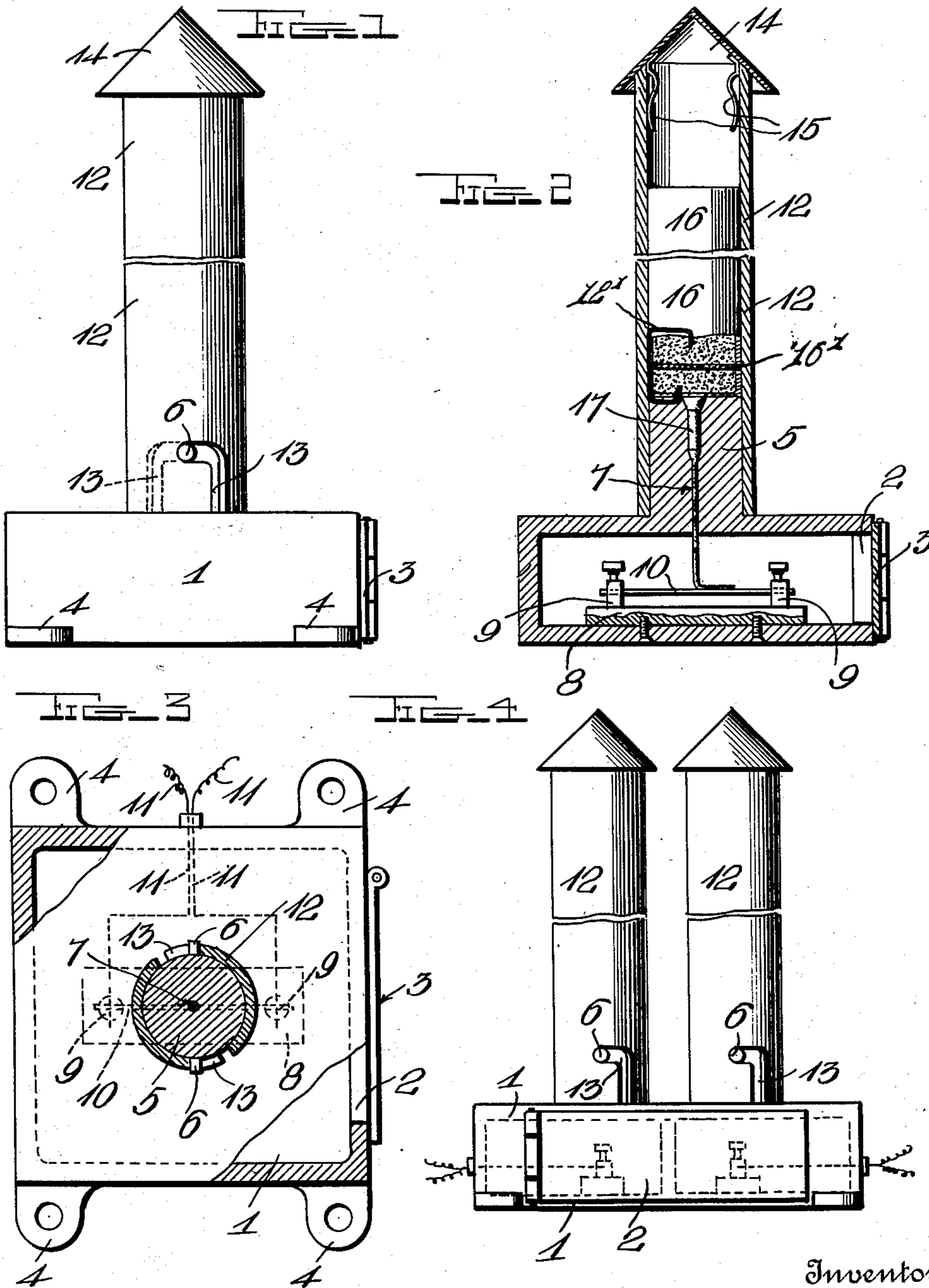
E. G. REED.

SIGNAL.

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950,956.

Patented Mar. 1, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN G. REED, OF WILKINSBURG, PENNSYLVANIA.

SIGNAL.

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To all whom it may concern:

Be it known that I, EDWIN G. REED, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Signals; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in signaling devices.

The object of the invention is to provide means for holding and protecting a signal in the form of a shell or aerial projectile adapted to be discharged to a great height and to burst in the air making a loud report and a brilliant pyrotechnical display at night and a black cloud in day light.

A further object is to provide electrically operated means for igniting the fuse of the shell or projectile in the barrel or casing from which it is discharged whereby the shell may be fired from a distant point.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side view of a signal constructed in accordance with the invention; Fig. 2 is a vertical sectional view of the same; Fig. 3 is a horizontal sectional view through the base of the signal; Fig. 4 is a side view of a modified form of the device.

In the embodiment of the invention, I provide a hollow base 1, one side of which is provided with an opening 2, which is normally closed by a suitable cover plate 3. On the opposite ends of the base are formed apertured fastening lugs 4 by means of which the base is secured to a suitable support. On the upper side of the base is formed a barrel attaching boss 5 having oppositely projecting barrel attaching studs 6. The boss 5 is provided with a centrally disposed fuse holding passage 7.

In the base 1 is arranged a fuse holding block 8, on which are secured and spaced apart the binding posts 9 of an electric circuit. The binding posts 9 are connected within the base by a fuse 10 and to the binding posts are secured the opposite ends of

electric conducting wires 11 which may extend to any point of operation and have connected thereto a switch whereby an electric circuit may be completed through said conducting wires and the fuse 10 burned out.

Secured to the boss 5 on the base, is a shell or rocket projecting barrel 12 in the lower end of which is formed bayonet slots 13 which are adapted to be engaged with the laterally projecting studs 6 whereby the tube 12 is detachably secured to the boss 5 on the base, thereby holding said tube or barrel in operative position. On the end of the tube or barrel 12 is arranged a detachable cap or cover 14, which is preferably conical in shape and has its lower edges projecting over the sides of the barrel, thus preventing the entrance of moisture in the upper end of the same.

The cap 14 is detachably secured in the upper end of the barrel 12 by means of spring attaching fingers 15 which are secured to the inner side of the cap and project into the barrel and into engagement with the inner walls thereof thereby holding the cap into frictional engagement with the inner side of the barrel.

In the use of the device, the shell or projectile 16 is arranged in the barrel and with the shell or projectile is connected a fuse 17 connected with the propelling charge in the lower end of the shell, said charge being separated from the explosive charge by a partition 16' and a time fuse 12' connects the fuse 17 with the explosive charge as is clearly shown in Fig. 2, which projects through the passage 7 and into the hollow base and is engaged with the fuse 10 of the electric circuit whereby when said circuit fuse is burned out, the projectile fuse will be ignited and will thereby ignite the shell or projectile and cause the same to be thrown or projected from the barrel. The shell when thus fired from the barrel will be projected into the air and will explode after reaching a certain height, thus causing a pyrotechnical display by night or a black cloud by day, accompanied by a loud report, thus serving both as a day and night signal.

In Fig. 4 is shown a modified form of the device, wherein two of the shell projecting barrels are employed, each of which is connected with an independent base having an independent firing mechanism. It will thus be seen that while the device has been particularly shown and described in single form,

it is obvious that any desired number of signal discharging barrels may be employed, and that they may be connected together to be simultaneously or independently fired.

This invention is primarily intended for use as a police signal whereby the desk sergeant in a station may operate the signal which will preferably be arranged on the roof or on a suitable elevation above the station, thereby notifying the patrolmen on duty to proceed to their respective patrol boxes for instructions.

While the device is intended especially as a police signal, it is obvious that the same may be employed for many other purposes in which a signal is used.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a signal of the character described, a shell projecting barrel, a base, means to secure said barrel to the base, an electrically controlled means in said base for firing the shell in said barrel.

2. In a signal of the character described, a shell projecting barrel, a hollow base, means to secure said shell to the base, a protecting cap arranged on the upper end of the barrel, an electric fuse arranged in the base, an elec-

tric circuit connected to said fuse, a shell arranged in said barrel, and a firing fuse to connect said shell with the electric fuse in the base, whereby a current of electricity sent through said electric fuse will ignite the firing fuse and fire the projectile from the barrel.

3. In a signal of the character described, a hollow base having formed thereon a boss, laterally projecting studs on said boss, a shell projecting barrel having in its lower end bayonet slots adapted to be operatively engaged with said studs to detachably secure said barrel to the base, binding posts arranged in said hollow base, electric conducting wires having their terminals connected in said binding posts, an electric fuse arranged between said posts, a shell arranged in said barrel, a firing fuse to connect said shell with the electric fuse in the base, whereby said firing fuse is ignited by the burning out of the electric fuse and the projectile thereby fired from the barrel.

4. In a signal of the character described, a hollow supporting base, means to attach said base to a suitable support, a firing barrel arranged on said base to receive an explosive shell, an electric firing mechanism arranged in said base and connected with said shell, a cap arranged on the outer end of said barrel, and spring fingers to detachably secure the cap in the outer end of the barrel.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWIN G. REED,

Witnesses:

WILLIAM F. SHROYER,
G. W. CUVER.