April 14, 1931. H. B. WHITING 1,800,331

SIGNALING DEVICE

Filed March 29, 1928 2 Sheets-Sheet 1

Fig. 1.

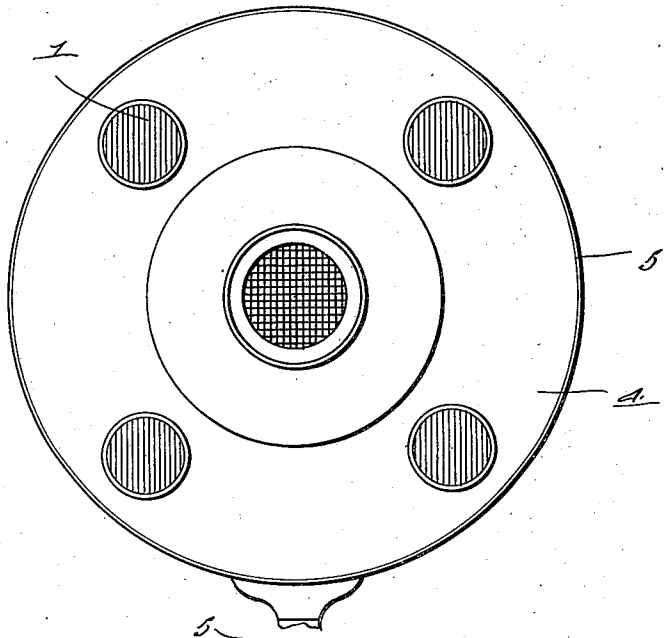
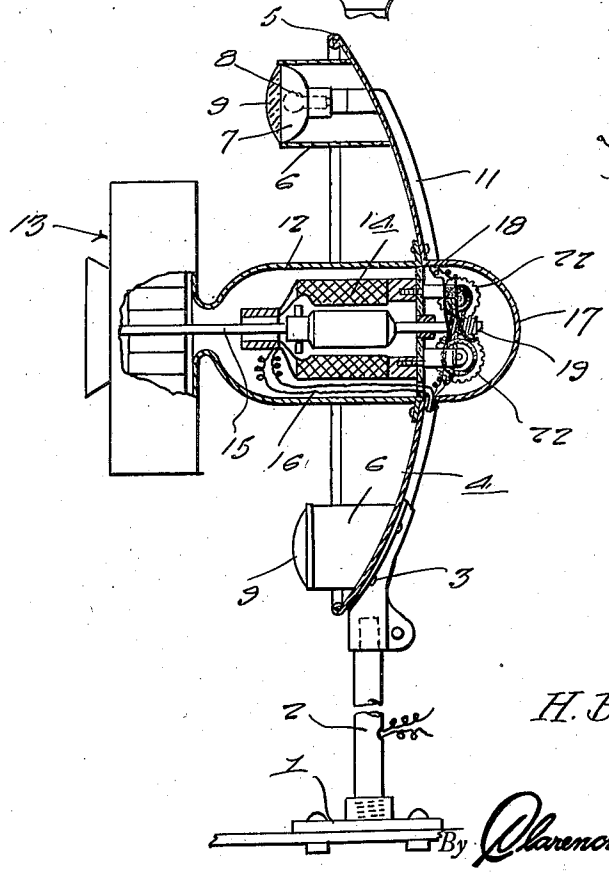


Fig. 2.



Inventor

H. B. Whiting

By Clarence A. O'Brien

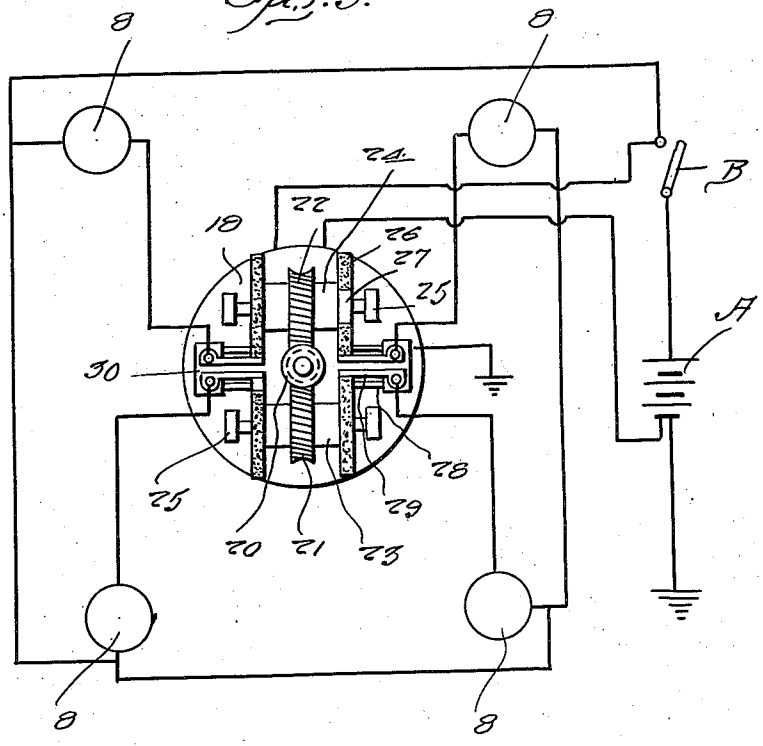
Attorney

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Fig. 3.



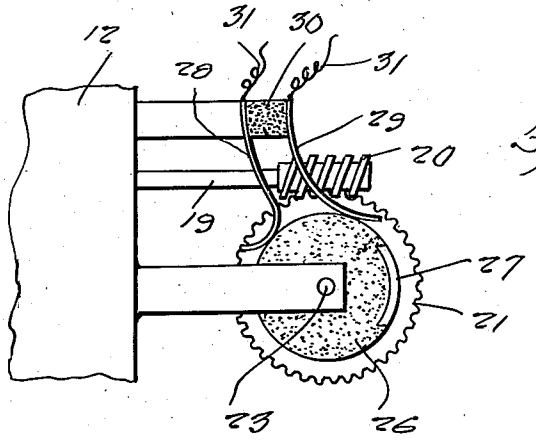


Fig. 4.

Inventor

H. B. Whiting

By Clarence A. O'Brien

Attorney

Patented Apr. 14, 1931 1,800,331

UNITED STATES PATENT OFFICE

HOMER BRIGGS WHITING, OF HAMPTON BEACH, NEW HAMPSHIRE

SIGNALING DEVICE

Application filed March 29, 1928. Serial No. 265,664.

The present invention relates to improvements in signaling devices for use upon police patrols, fire engines, ambulances, and other similar types of motor vehicles, and has for its principal object to provide a combination audible and visual signal for giving a proper warning to the other motor vehicles and pedestrians.

A further object of the invention is to provide a signaling device of the above mentioned character which includes a plurality of visual signals that are successively operated and simultaneously with the actuation of a siren.

A still further object is to provide a signaling device of the above mentioned character which will, at all times, be positive and efficient in its operation, the same being further simple in construction, inexpensive, strong and durable, and further well adapted to the purpose for which it is designed.

Other objects of the invention will become apparent as the nature of the invention proceeds and when taken in connection with the accompanying drawings.

In the accompanying drawings, forming a part of this application and in which like numerals designate like parts throughout the several views:

Figure 1 is a front elevation of the signaling device embodying my invention, the lower portion of the supporting standard being broken away.

Figure 2 is a vertical sectional view, parts being shown in elevation.

Figure 3 is a diagrammatic view showing the wiring diagram for the visual signals, and

Figure 4 is a detail view of the circuit closing means for the visual signals.

In the drawings, wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates the base that is secured, in any appropriate place upon the vehicle, preferably on the running board. A tubular standard 2 is detachably secured at its lower end in a socket provided therefor on the base 1. A bracket 3 is secured on the upper end of the tubular standard, and this bracket supports the vertically disposed dished member 4, the concaved face of which faces the front of the vehicle and the edge of this member is rolled as indicated at 5, with reference more particularly to Figure 2.

A plurality of lamp housings, each of which is designated by the numeral 6 extends forwardly from the concaved face of the dished member 4, four of such visual signals being provided, and the same are arranged in spaced relation with respect to each other, as clearly illustrated in Figure 1. A reflector 7 is arranged in the forward open end of each lamp housing, and an electric lamp 8 is supported in each lamp housing forwardly of the reflector 7, a lense 9 being mounted in the open forward end of each housing, and if desired, this lens may be colored to distinguish the particular type of emergency vehicle on which the signaling device is mounted.

The wiring for the electric lamps 8 extends through suitable housings 11 provided therefor on the convex face of the bowl or dish shaped member 4, and the manner in which the several visual signals are illuminated in a successive manner will be presently described.

A motor housing 12 extends forwardly from the concaved face of the dish shaped member 4 at the central portion thereof and mounted on the outer end of this motor housing is an electric siren designated generally by the numeral 13 and this siren may be of any well known construction.

A motor 14 is mounted in the housing 12 and the forward end of the armature shaft 15 of this motor 14 is operatively associated with the siren 13, for actuating the same in the manner well known in the art.

Current is supplied to the motor 14, by the wires 16 that extend through the tubular standard 2 and are connected to the storage battery A of the motor vehicle, and one of these wires is grounded. A switch B is arranged in the circuit for controlling the same as indicated in the wiring diagram shown in Figure 3.

The central portion of the bowl or dish member 4 is bulged outwardly in a rearward

direction to form a housing 17 for the switch or circuit closing and opening mechanism for the visual signals, and the circuit closing and opening mechanism will now be specifically described. An insulated disc, preferably of fiber and designated by the numeral 18 is secured in the rear end of the motor housing 12 and the rear end portion of the armature shaft projects through the fiber disc and extends into the housing 17, the rear end portion of the armature shaft being designated by the numeral 19. A worm pinion 20 is carried by the outer end of the rear portion 19 of this armature shaft and this worm drives the opposed worm gears 21 and 22 respectively. These worm gears are secured on rotatable shafts 23 and 24 respectively that are disposed transversely with respect to the rear end portion of the armature shaft of the motor 14 and are supported at their outer ends in rearwardly extending brackets 25 that are secured to the fiber disc 18.

A pair of insulated discs 26 are arranged on each of the transverse shafts in spaced relation with respect to the respective worm gears and on opposite sides thereof as clearly illustrated in Figure 3.

These insulated discs rotate with the shaft. A metal insert 27 is arranged in the peripheral edge of each insulated disc and cooperating with each of the insulated discs is a pair of spring contact fingers 28 and 29 respectively, which are secured at one end to the insulated support 30, the free ends of said contact springs or fingers being curved in opposite directions for frictional engagement with the peripheral edge of the respective insulated disc 26 and these contacts are adapted to engage with the metallic insert 27, for closing the circuit to the respective electric bulb in the visual signaling members, the wires 31 electrically connecting the spring contacts with the respective lamps as indicated by the wiring diagram in Figure 3.

It is to be understood that the metallic inserts 27 are arranged in the several insulated discs 26, in such a manner that only one visual signaling unit will be turned on at a time, and thereby a successive illumination of the several visual signaling members will be obtained, so that a flashing signal will be displayed for more readily attracting attention and warning vehicles or pedestrians of their immediate danger.

When the switch B is closed, the motor 14 will operate to actuate the electric siren 13 and simultaneously operate the circuit closing mechanism in the housing 17, whereby to successively illuminate the several electric lamps 8, in a positive and efficient manner.

A signaling device of the above mentioned character is particularly adapted to be used on vehicles answering emergency calls, such as for example, a police patrol, an ambulance, or a fire engine. If desired, the visual signaling device may be installed on a highway at a sharp curve or cross road for giving the proper warning to approaching vehicles.

A signaling device of the above mentioned character can be manufactured at a very low cost and the same can furthermore be readily and easily installed on a vehicle without necessitating any material alterations.

While I have shown the preferred embodiment of my invention, it is to be understood that minor changes in the size, shape and arrangement of parts may be resorted to, without departing from the spirit of the invention and the scope of the appended claim.

Having thus described my invention, what I claim as new is:—

A signaling device of the character described comprising a supporting standard, a vertically disposed plate secured on the standard and provided on its rear side with a centrally and rearwardly disposed depression, a motor housing mounted centrally on the front side of the plate having an open rear end communicating with the depression, a motor mounted in the housing, an audible signaling device mounted on the forward end of the housing and operatively connected with the motor, a support disk of insulating material mounted in the rear end portion of the motor housing, visual signal lamps mounted in spaced relation on the concave side of the plate adjacent the marginal edge thereof, current conducting wires connecting the signal lamps to a source of current supply and circuit breaking mechanism mounted on the insulating disk and disposed in the depression in the plate and operatively connected to the motor for successively energizing the signal lamps whereby the latter will be intermittently flashed simultaneously with the period of operation of the said audible signaling device.

In testimony whereof I affix my signature.

HOMER BRIGGS WHITING.