April 26, 1927.

1,625,990

H. GARRETT

TRAFFIC SIGNAL

Filed Aug. 29 1925

2 Sheets-Sheet 1

Fig. 1.

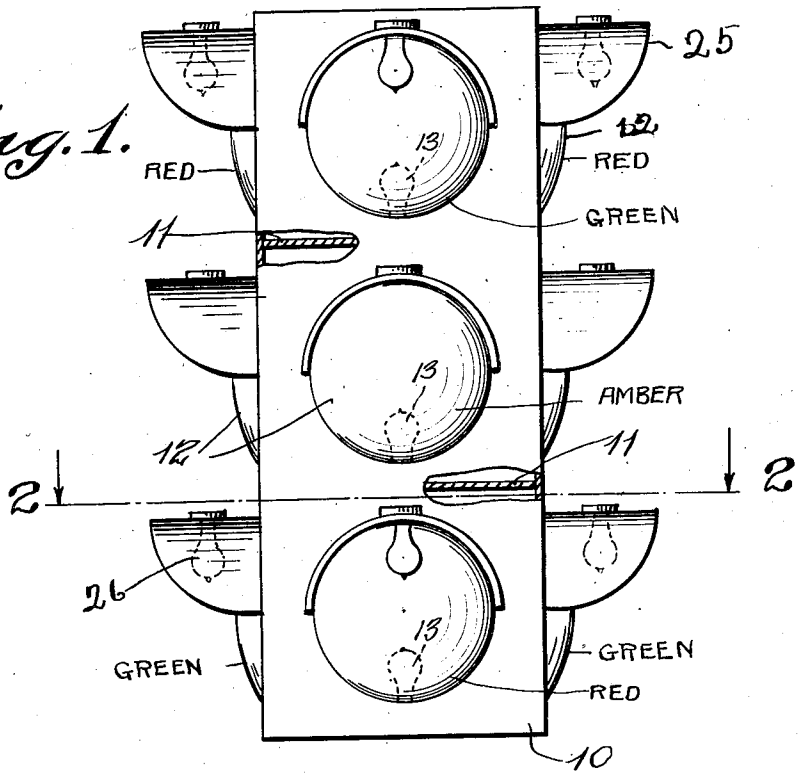
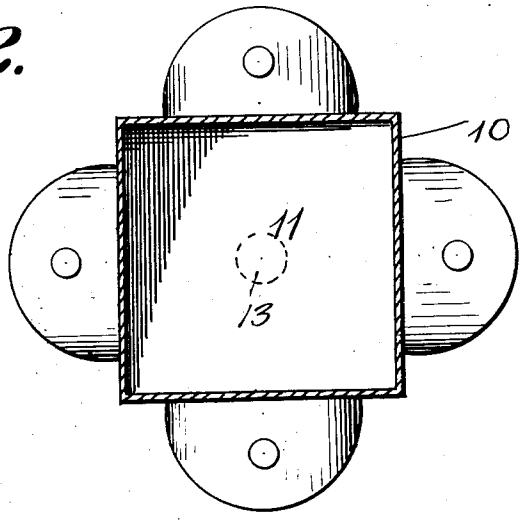


Fig. 2.



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2 Sheets-Sheet 2

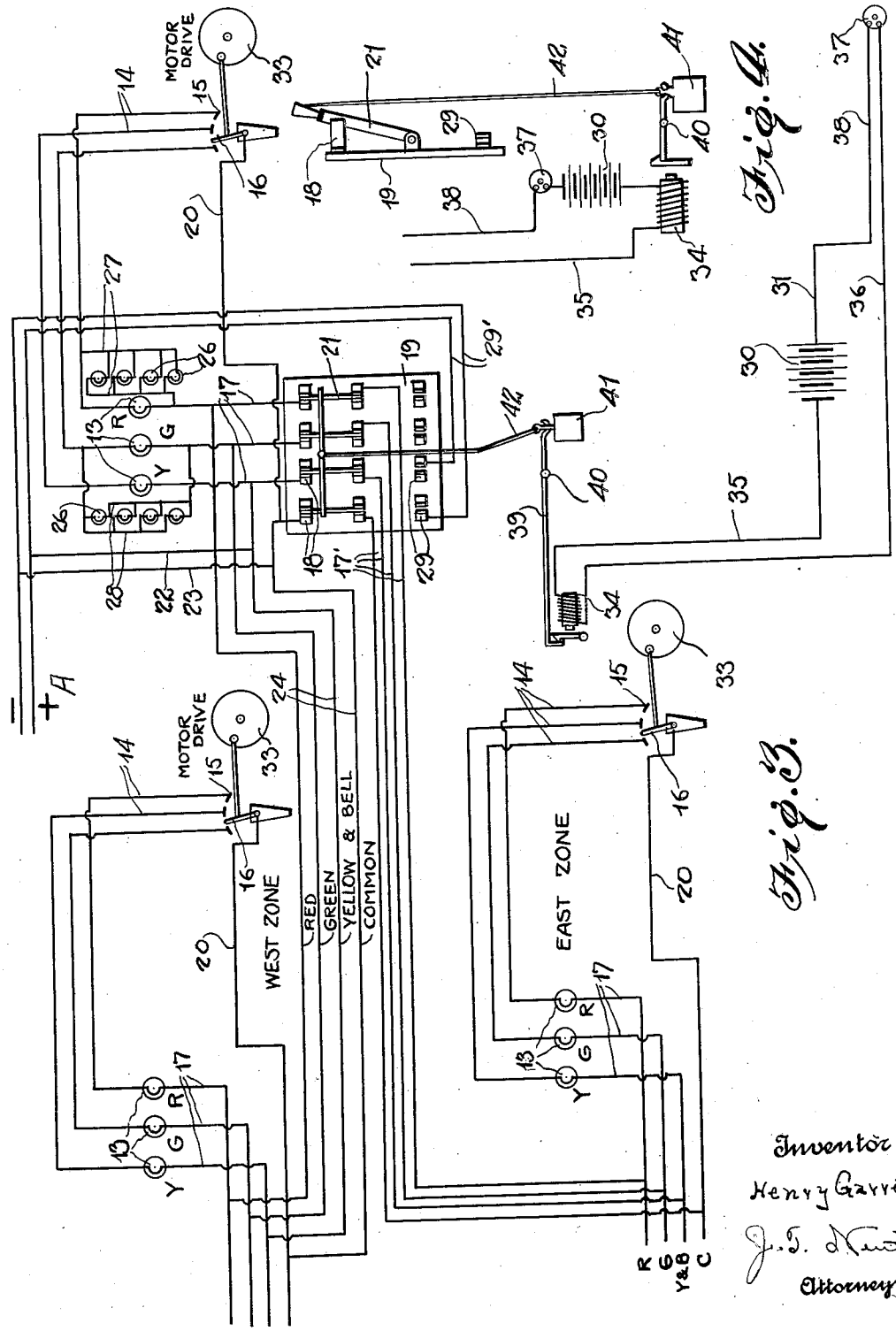


Fig. 4.

Fig. 3.

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Patented Apr. 26, 1927. 1,625,990

UNITED STATES PATENT OFFICE.

HENRY GARRETT, OF DALLAS, TEXAS.

TRAFFIC SIGNAL.

Application filed August 29, 1925. Serial No. 53,333.

This invention relates to traffic signals for streets and highways and has special reference to the type of traffic signal disclosed in my copending application bearing the Serial Number 9,625 and filed the 16th day of February, 1925.

More particularly the invention relates to a circuit changing device for such systems.

The invention contemplates the provision of means, controllable from a central point, such as central fire station whereby, for a certain predetermined section of a city, the automatic signaling means referred to in my prior application may be cut out and caution signals displayed over the selected section thereby stopping all traffic in said section during the movement of fire engines, or the like, while in other sections the signals continue to be operated as usual.

The object of the invention is to provide a novel and efficient device whereby the current employed for the production of automatic signals in a predetermined section may be cut off by pushing a button at the central point and a second circuit established which includes a series of non-changeable stop lights.

Another object of the invention is to provide a signal that will be visible from the sides as well as the front of the signal.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of a signal device as employed herewith.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a general wiring diagram of the improved circuits and circuit changing arrangements as embodied in this invention.

Figure 4 is a detail diagram showing the operation of the circuit changing switch.

In the embodiment of the invention as here illustrated there is disclosed a lamp casing 10 divided by partitions 11 into three chambers. The casing 10 is four-sided and each chamber is provided on each side with an opening wherein is fitted a lens 12.

The upper chamber has two oppositely disposed red lenses and two oppositely disposed green lenses and the lower chamber has the same arrangement but the red lenses of the lower chamber are located on the same sides of the casing as the green lenses of the upper chamber. The middle chamber has all four lenses of amber glass.

The colors here given are arbitrary and may be changed but they are those most commonly used for the indications "danger", "clear" and "caution."

In each of these chambers is a suitable electric lamp shown in the diagram at 13 and each of these lamps is connected by a wire 14 with one contact 15 of a series of three which are traversed by an arm 16 or by a motor operated make and break device moved automatically as described in my prior application. These lamps are also connected by wires 17 to three of the poles 18 of a four pole double throw switch 19, the remaining pole 18 being connected by a wire 20 with the arm 16. So long as the switch knives 21 remain in engagement with the poles 18 the signal lights 13 will light in succession, one light going out as the next is lit, being connected by the wire 20 to a feed wire 22 and the pivot of the arm 16 being connected to a return wire 23. The pivoted arm 16 is oscillated by the motor drive 13.

Each of the lenses is provided with a hood 25 and beneath the hoods of the top and bottom sets of the lenses are suspended lamps 26 corresponding in color to the lenses in front of which they are suspended. These lamps are suitably connected, according to their voltage, to wires 27 and 28 branching from the wires 17 of the upper and lower lamps. Thus whenever the respective upper and lower lamps 13 are lit the respective lamps 26 are simultaneously illuminated. By reason of this arrangement, the lamps 26 being mounted in the front part of the hoods and as the casings are considerably elevated a person coming around the corner of the street can obtain the indications even before he sees the main lenses.

While I have only shown in the diagram of Figure 3, the wiring for a signal, there

are of course similar signals like the signal lamps 13 and 26 at each street crossing.

In the case of fires it is frequently desirable to stop all traffic in a predetermined section while leaving the traffic control signals in the other part of the city to operate as before the fire alarm was turned in. I have conventionally shown means for cutting out a predetermined zone, leaving the rest of the traffic of the city to operate as before cutting out this predetermined zone; for convenience of description I have denominated it on the drawing the eastern zone, leaving the rest of the city under the denomination of western zone. It will be noticed from the diagram in Fig. 3 that so long as the connections are made at 15 and 16 and the switch 19 is in the position shown in the diagram, that the signals will flash in what is denominated both the western zone and the eastern zone to display in succession the red, green and amber lights. In case, however, a fire alarm signal is turned in, the attendant at a central station will push a button 37 and thus through a local circuit including the battery 30, and connections 35, 36 and button 37 and wire 38 operate a solenoid 34 which in turn will pull a hook and release a lever 39 pivoted at 40 and having connected thereto a weight 41 and a cord 42, this cord being connected to the switch bars 21 pivoted as shown in Fig. 4. On releasing the weight, these bars will be reversed to their lower position and close circuits at two contacts 29 which are fed by feed wires 29′ from the same source of current that feeds a current through the wires 22 and 23, as at A, although a different source of current may be utilized.

It will be noticed that the contacts 29 now being fed in what I denominate the eastern zone, are connected to the amber or yellow light and bell only and with the common return. Hence all the signals in the eastern zone will display the amber colored light only and ring the bell, whereas, all the signals in what I denominate the western zone will continue to flash red, green and amber in succession and thus give the ordinary traffic signals. These connections will continue until the fire engines have reached their destination when the attendant at the central station will replace the lever 39 in its normal position as shown in Fig. 3. When this is done the signals then sent through the contact 15—16, will be transmitted through the switch bars 17 to the red, green and yellow or amber light in succession as before the fire alarm sounded.

As shown by the diagram there are two signal stations in this west zone, which are duplicates of each other, except that in one the auxiliary lights are omitted; and in the east zone only one station is shown. It is obvious, however, that the number of stations in each zone may be extended indefinitely. The wires 17 and 17′ constitute the primary circuits of the system, one of the leads constituting a common return wire for the other three, and each of the primary circuits formed by the return wire and one of the other three leads including all of the signals of the same indication. That is, one of the primary circuits includes all the red lights, a second one all the yellow lights and a third all the green lights. These primary circuits are supplied with current from a suitable source, as at A, through the wires 22 and 23.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

What I claim as my invention is:

1. A traffic control signal system including stations grouped in two distinct zones with each station having the usual indicative signals, primary circuits leading from a central power station to both zones with each circuit including all the signals of like indication in the different stations of both zones means in each zone for normally controlling the selective operation of the indicative signals for that zone for normally controlling traffic, a switching means normally closing the primary circuits between the two zones, a normally open auxiliary circuit leading from a source of energy to the switching means, and mechanism electrically controlled at a distant point and operative to actuate the switching mechanism to open the primary circuits through the farther zone and to close the auxiliary circuit through one of the lines of signals of like indication in said farther zone.

2. A traffic control signal system including stations grouped in two distinct zones with each station having the usual indicative signals; primary circuits including a common return wire and leading to both zones with each circuit including all signals of like indication in the different stations of both zones, the signals in each station being included in individual local circuits in multiple connection with the respective primary circuits, said local circuits having a common return wire connected with the common return wire of the primary circuits means in each zone for normally controlling the selective operation of the indicative signals for that zone for normally controlling traffic, a switching means normally closing the primary circuits between the two zones, a

normally open auxiliary circuit leading from a source of energy to the switching mechanism, and mechanism electrically controlled at a distant point and operative to actuate the switching mechanism to open the primary circuits through the farther zone and to close the auxiliary circuit through one of the lines of signals of like indication in the farther zone, the local circuits in the stations of the near zone operating to maintain the primary circuits in said nearer zone while the farther zone is cut out of the primary circuits.

In testimony whereof I affix my signature.

HENRY GARRETT.