

April 15, 1941.

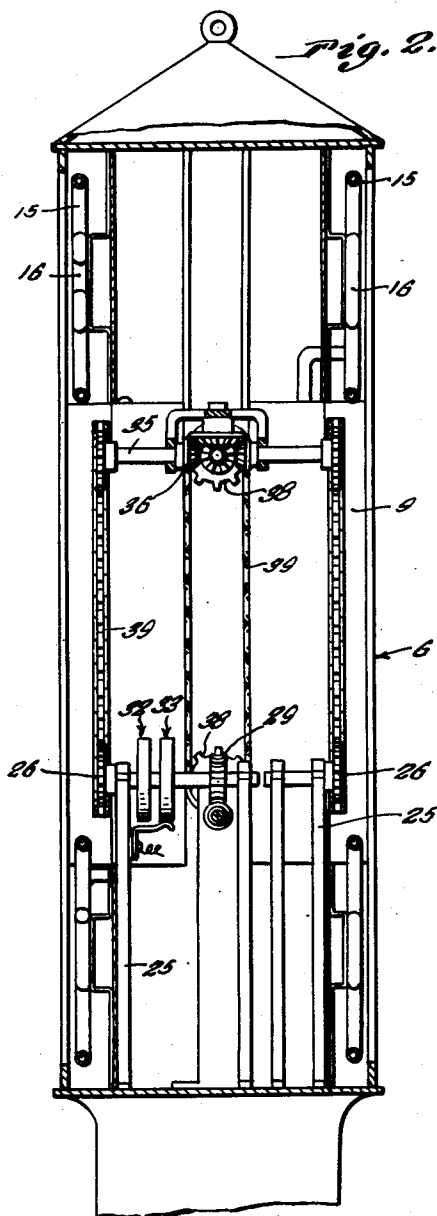
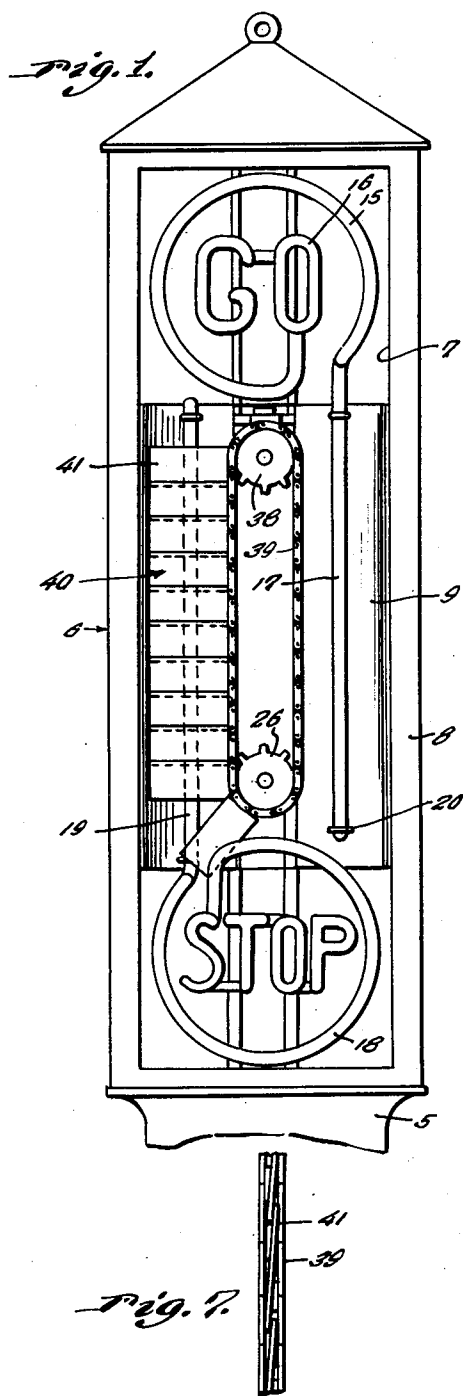
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2,238,510

TRAFFIC SIGNAL

Filed July 13, 1939

3 Sheets-Sheet 1



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Fig. 3.

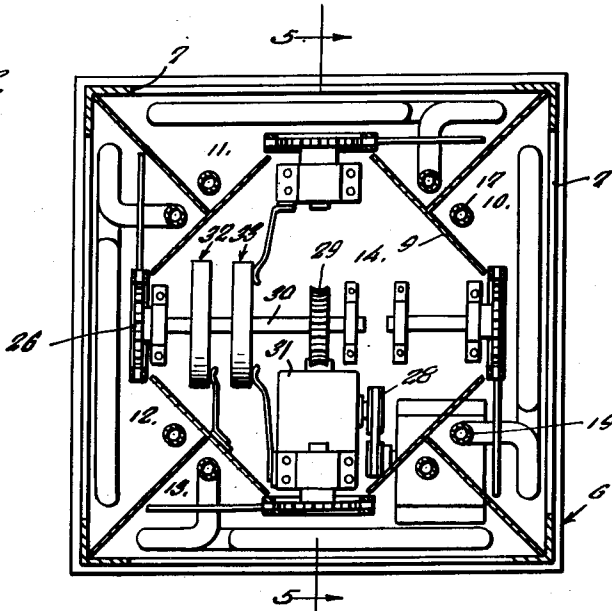
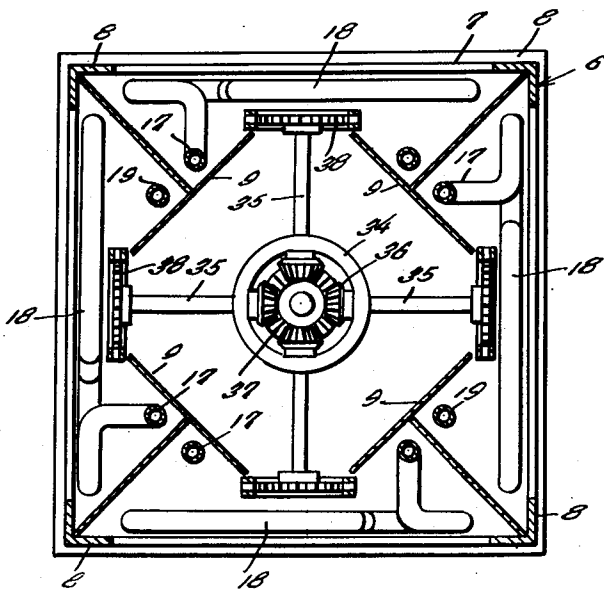


Fig. 4.



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Fig. 5.

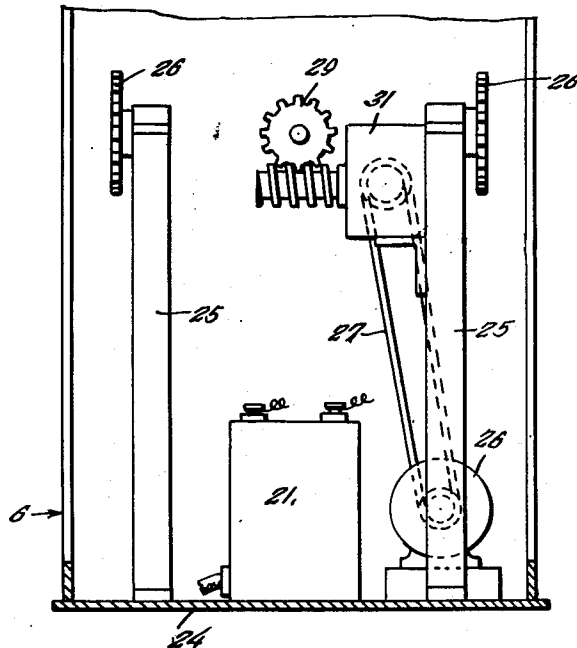
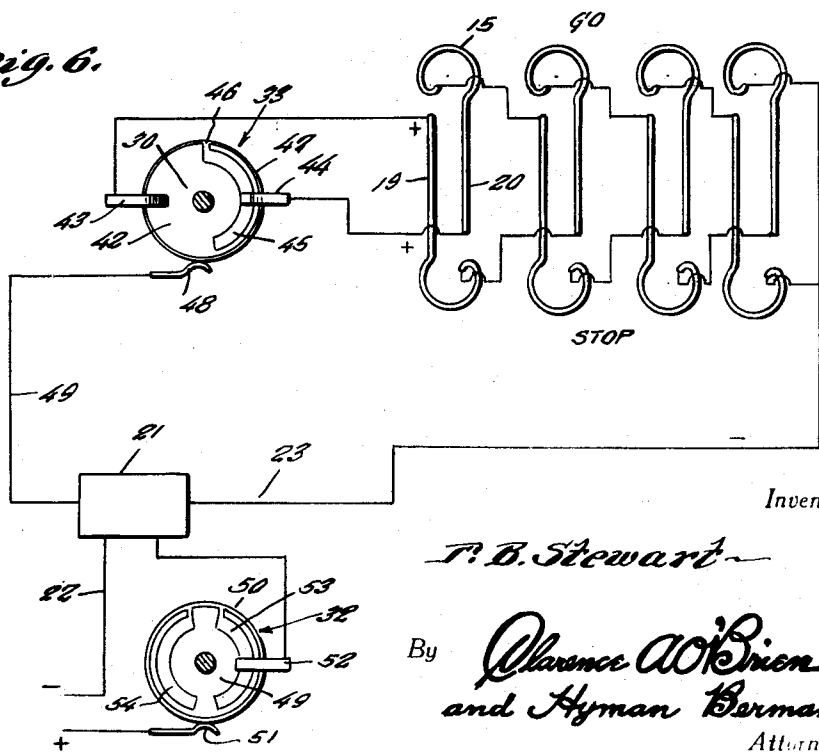


Fig. 6.



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UNITED STATES PATENT OFFICE

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TRAFFIC SIGNAL

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Application July 13, 1939, Serial No. 284,352

1 Claim. (Cl. 177-327)

This invention appertains to new and useful improvements in traffic signals of the "stop" and "go" type.

The principal object of the present invention is to provide a traffic signal of the type usually employed at intersections which will operate in such a manner as to indicate to motorists the amount of time they have left within which to make a crossing without likelihood that the signal will change before they have reached the intersection.

Another important object of the invention is to provide a traffic signal which is of simple construction and not susceptible to the ready development of defects.

Other objects and advantages of the invention will become apparent to the reader of the following specification.

In the drawings—

Figure 1 represents a side elevational view of the traffic signal.

Figure 2 is a vertical sectional view.

Figure 3 is a horizontal sectional view through the lower portion of the signal.

Figure 4 is a horizontal sectional view through the upper portion of the signal.

Figure 5 is a section substantially on line 5—5 of Figure 3.

Figure 6 is a diagrammatic view disclosing the electrical connections between the electrical devices involved.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 represents the post from which rises the framework generally referred to by numeral 6, the same being of square cross-section, or in fact any other required polygonal cross-section, and each side has a window opening 7 therein in which the glass pane can be disposed if desired, but not shown in the drawings.

Extending into the frame structure from which each corner post 8 is a T-shaped partition 9. These T-shaped partitions go together to form the outer neon or electric discharge tube chambers 10, 11, 12 and 13, and also the internal chamber 14.

In each of these tube chambers, 10, 11, 12 and 13, is mounted the upper circular tube structure 15 which merges into the word formation "Go" denoted by numeral 16. From this formation 15 depends the tubular column 17, the lower end of which will have an electrode therein.

Furthermore in each of these chambers 10, 11, 12 and 13 is located a circular tube arrangement 18 at the lower portion thereof, one end of which

merges with the formation of the word "Stop" while the other end extends upwardly as a tubular column 19 in spaced parallel relation with the corresponding column 17, the column 19 having an electrode at its upper end. Suitable clips or the like 20 are employed for securing the columns 17 and 19 to the corresponding T-shaped partition 9.

In the lower portion of the signal structure is mounted the neon tube transformer 21, which as shown in Figure 6 has the primary circuit 22 and the secondary circuit 23. Rising from the bottom 24 of the frame 6 are the posts 25, each of which has a sprocket wheel 26 mounted at the upper end thereof.

Adjacent one of the posts 25 and located on the bottom 24 is an electric motor 26 which by way of the bell 27 drives the pulley 28 which is on a shaft with a worm which is turned through the agency of the worm gear 29 drives the shaft 30. Numeral 31 represents a gear box.

Numerals 32 and 33 represent switches operated by the shaft 30 and as shown in Figure 3 one end of the shaft carries one of the sprocket wheels 26.

As disclosed in Figures 2 and 4, an annulus 34 has a plurality of shafts 35 journaled therethrough and each is equipped at its inner end with a beveled pinion 36 meshing with the large beveled gear 37.

The outer ends of the shafts 35 carry sprocket wheels 38 each removed vertically from a corresponding underlying sprocket wheel 26. Trained over the upper and lower sprocket wheels 38 and 26 are the sprocket chains 39, each of which carries a blind or shutter assembly generally referred to by numeral 40.

This blind structure 40 consists of a multiplicity of plates 41 extending rigidly outwardly from the chain 39, but not connected each to another. The upper portions of these plates 41 overlap the lower portions of overlying plates so that there is no likelihood of light passing through these blind plates. Obviously as the plates reach a sprocket wheel 26 or 38 they simply fan out as suggested in Figure 1 so as to transfer from location over one tube, such as the column tube 19, to the column tube 20.

The transformer secondary switch 33 consists of the disk 42 of insulation which has the two contact brushes 43 and 44 in wiping engagement with one side thereof. This side of the disk 42 has a semi-circular extending contact strip 45 against which either one or the other of the brushes 43—44 can wipe. This contact strip

45 is connected as at 46 to the peripheral contact band 47 against which the brush 48 wipes, this brush 48 being at the end of the jumper 49 of the secondary circuit of the transformer 21.

Figure 6 shows the various neon or electric discharge tube assemblies and the manner in which the switch 33 distributes electricity in the secondary circuit of the transformer to the various sections thereof.

The primary circuit 22 of the transformer 21 is broken simultaneously with the switch 33, the switch 32 consisting of the disk 49 of insulation and having the peripheral contact band 50 against which the primary circuit brush 51 wipes. The complementary brush is denoted by numeral 52 and wipes either the semi-circular band 53 or the semi-circular band 54, both of which are disposed against the same side of the disk 49.

Obviously when the signal is in operation, the blinds 40 will gradually move up the column 17 while the "Go" signal is energized, gradually concealing the column 17 until only the word "Go"

is left and this operation is repeated on the column 18 for the "Stop" signal.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention what is claimed as new is:

A traffic signal comprising a signal formation including illuminated vertically spaced "stop" and "go" signals having illuminated extensions arranged in horizontally spaced relation, means for illuminating said signal formation, an endless belt having a plurality of overlapping blades mounted between said illuminated extensions to progressively cover the said extensions, and means synchronously operated to illuminate the signals alternately as an illuminated extension is completely hidden from view.

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