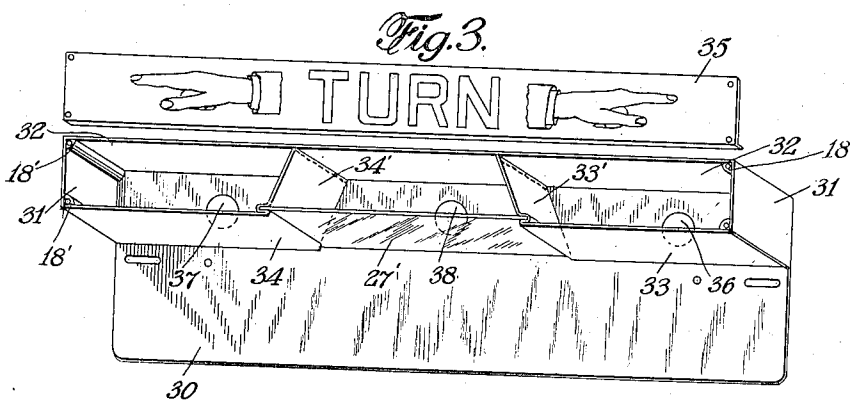
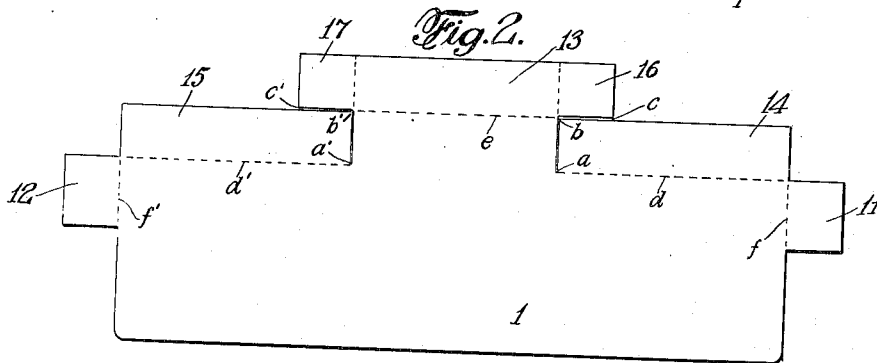
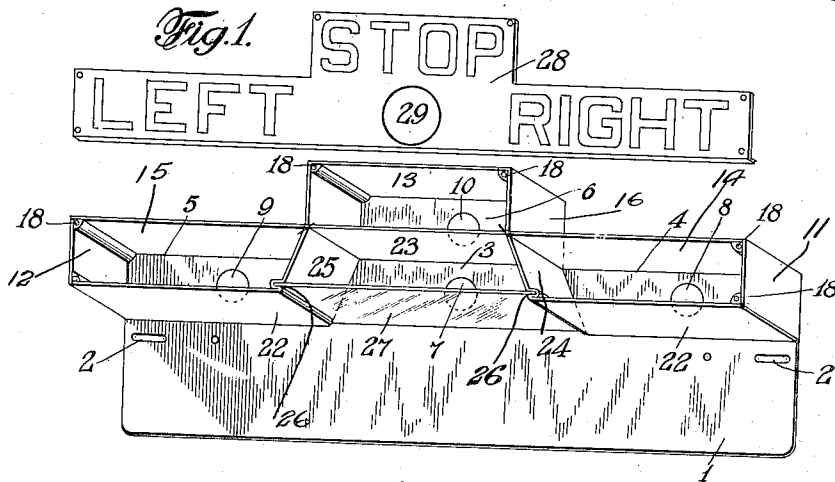


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 AUTOMOBILE SIGNAL DEVICE.  
 APPLICATION FILED MAY 1, 1922.

1,430,352.

Patented Sept. 26, 1922.

2 SHEETS—SHEET 1.



Inventor  
 Alexander Berger

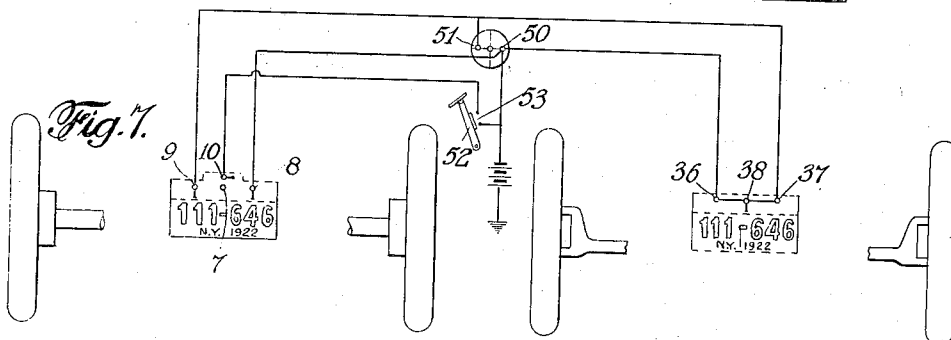
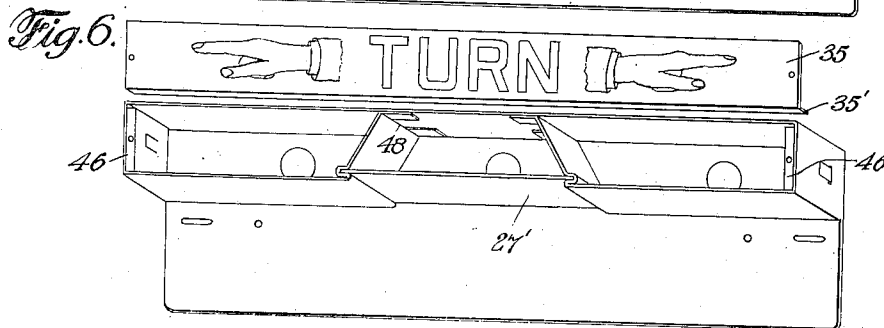
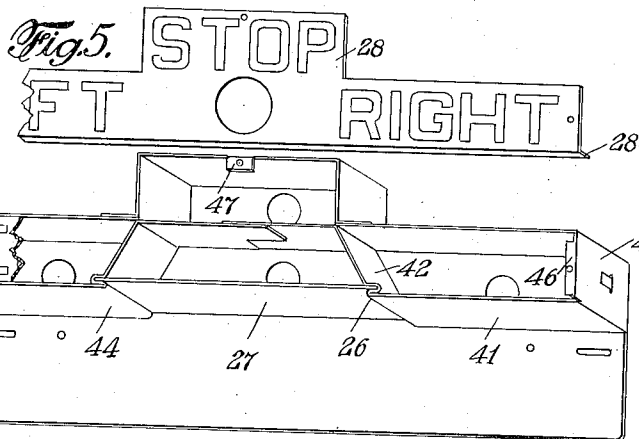
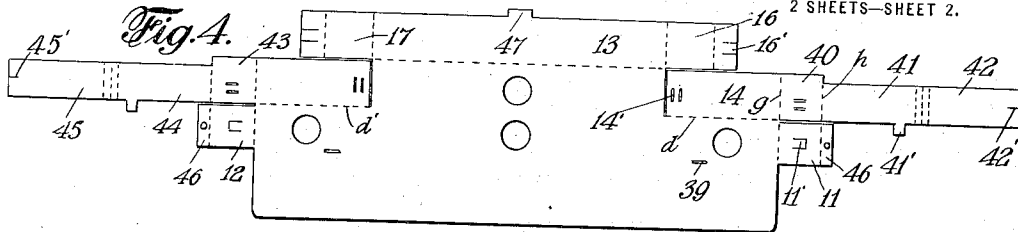
By his Attorney  
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Inventor  
 Alexander Berger

By his Attorney  
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Patented Sept. 26, 1922.

## UNITED STATES PATENT OFFICE.

ALEXANDER BERGER, OF BAYSIDE, NEW YORK.

## AUTOMOBILE SIGNAL DEVICE.

Application filed May 1, 1922. Serial No. 557,769.

*To all whom it may concern:*

Be it known that I, ALEXANDER BERGER, a citizen of the United States, residing at Bayside, New York, and whose post-office address is Bayside, New York, have invented new and useful Improvements in Automobile Signal Devices, of which the following is a specification.

My invention relates to signal and directional control devices for automobiles.

The object of my invention generally stated is an improved system of signal devices which may be inexpensively and economically manufactured and installed and which at the same time are capable of easy and ready manipulation by the operator of the vehicle to signal his intended movements both from the rear and the front thereof.

A further object is an improved signal device which may be mounted and combined with the standard license plates and license plate brackets without the necessity of any alteration thereof and which is also readily accessible for removal and replacement of lamps. My improved rear signal device also enables me to dispense with the usual rear end light since it serves both as a signal and license plate illuminating device and as a parking light. My improved front signal device also serves to illuminate the front license plate when signalling the direction of movement. I also combine with my improved system an automatic control for the stop signal which responds to the working of the brake.

For a better understanding of the above-indicated novel features and others which will hereinafter appear, reference may be had to the accompanying drawings exemplifying one embodiment of my invention wherein:

Fig. 1 is a perspective view of my improved rear signal device with the front plate removed;

Fig. 2 is a view illustrating the method of forming the device;

Fig. 3 is a view similar to Fig. 1 of my front signal device;

Figs. 4 and 5 are views (similar to Figs. 1 and 2) of an improved and modified signal device;

Fig. 6 is a perspective view of a modified and improved front signal device; and

Fig. 7 is a diagram of the simplified signal circuits.

Referring to the drawings where like numerals designate similar parts throughout

my improved rear signal device comprises a base or support 1 which has openings 2 therethrough providing for attachment to the automobile support plate or bracket together with the standard license plate. The base or support 1 carries on the upper part thereof a four-compartment signal device, these compartments being formed with certain portions thereof integral with the base 1 as will hereinafter appear. These four compartments comprise a license plate illuminating compartment 3, right and left hand signal compartments 4 and 5, and a stop signal compartment 6, all of these compartments being provided with suitable illuminating devices, such as electric lamps indicated generally by the numerals 7, 8, 9 and 10. My improved rear signal device comprising the four compartments just enumerated is formed in the novel manner following:

The base or support 1 is formed of a piece of sheet metal or other suitable material which can readily be stamped out and cut in the manner to be described. The base blank is originally stamped out to a form and shape indicated in Fig. 2, there being a rectangular main body together with end ears 11 and 12 and an upper rectangular piece 13. After the form is stamped to form into this shape it is then cut in any suitable manner along the L-shaped lines *a*, *b*, *c*, and *a'*, *b'*, *c'*. The right and left hand upper corners 14 and 15 are then turned upwardly at right angles to the main base 1 along the lines *d* and *d'*, these lines or edges being in line with each other. The upper part 13 is also turned upwardly at right angles to the main base 1 into parallel relation with the integral members 14 and 15, this being turned up along the edge or line *e*. The end portions of the walls 13, 16 and 17 are then turned downwardly at right angles to the web 13 to form unions with the inner ends of the webs 14 and 15, these end portions abutting the web portions 14 and 15, along the edges *a*, *b* and *a'*, *b'*. The ears 11 and 12 are then bent at right angles to the main base 1 along the lines *f* to form unions with the outer ends of the webs 14 and 15. The abutting and joining edges of the various webs formed at right angles to the base 1 may be sealed together in any suitable manner as, for example, by soldering. In Fig. 1 I have illustrated the corners as reinforced by the metal-

lic post 18 which may be soldered to the joining parts and thereby not only forming a tight seal but rendering the structure rigid and firm. The lower part of Fig. 1 illustrates the base 1 with the integral walls of the compartment formed therewith. The lower walls of the compartments 4, 5 and 6 are also formed of an integral piece of sheet metal 20 or other suitable material. This member 20 embodies the lower walls 21 and 22 for compartments 4 and 5 and a lower wall 23 for the compartment 5, these being joined by inclined portions 24 and 25 which flare outwardly in the downward direction. This piece 20 may be formed and stamped in any suitable manner and during the process of formation grooves 26 are formed adjacent the lower edges of 24 and 25 for the reception of a suitable transparent window 27, this window being slided thereinto as indicated in Fig. 1. The front portion of the signal device comprises the member 28 which may also be of sheet metal or other suitable material, this being stamped out to fit over the compartments 3, 4, 5 and 6 and it may be readily and easily attached to the main base by means of screws passing through the corners thereof and enter into the reinforcing post 18. This front plate member 28 is provided with transparent windows indicating the words Right, Left and Stop over the compartments 4, 5 and 6 respectively and the central window 29 is provided over the central compartment 3 to serve as a parking light or rear window which is illuminated from the lamp 7. The windows Right, Left and Stop may be of any suitable colors as, for example, green for the right and left and red for the stop. The signal device thus described is of simple construction and is of minimum parts, the whole being stamped out of three pieces of sheet metal or other suitable material and being easily assembled into the structure illustrated. It is also easily and readily attached with the license plate to the rear end of the vehicle and after installation it is a simple matter to remove the front plate 28 for the purpose of replacing signal devices or the lamps therein.

The signal device shown in Fig. 3 may be made similarly to the device shown in Fig. 1. In this case, however, the device is preferably made into four pieces instead of three although it may be made in three pieces in like manner. The main base 30 of this device is formed integrally with the end walls 31 and the upper wall 32 of the three signal compartments, all of these being formed out of a single piece of sheet metal of the form shown in Fig. 2 with the upper part 13 omitted. The lower walls of the end compartments may be formed of two separate and distinct pieces 33 and 34 having their inner ends 33' and 34' bent upwardly to form the inner walls thereof, these inner walls 33' and 34' converging in the upward direction. These various elements described may be sealed at their joining edges and secured together in any suitable manner as, for example, by means of the reinforcing posts 18' which are soldered thereto. The front piece 35 is formed of a single rectangular shaped metallic piece with two end windows in the form of hands with fingers pointing in the opposite directions and an intermediate window in the form of the word Turn, these being adapted to be illuminated by the lamps 36, 37 and 38, these lamps being shown diagrammatically for convenience in illustration. A window 27' of any suitable color is carried by the members 33 and 34 in a manner similar to the mounting of the window 27 illustrated in Fig. 1. The central lamp 38 not only illuminates the word Turn but also, through the window 27', illuminates the license plate carried therebelow. Instead of the members 33 and 34 being formed in two separate pieces they may be made into an integral piece similar to the member illustrated in Fig. 2 which may be identical therewith and therefore interchangeable. The hands illustrated in Fig. 3 may be of any suitable color as, for example, the same color as the words Right and Left in Fig. 1.

In Figs. 4, 5 and 6 I have illustrated a signal device which I prefer to that illustrated in Figs. 1, 2 and 3. According to this improvement both the front and rear signal devices are composed essentially of two parts stamped from sheet metal, or other suitable material, and formed into such shape as to give the required compartments for the various signal devices, the construction being such that the two parts may be readily assembled or disassembled and may be fastened to each other with the rapidity desired in practice.

Fig. 4 which corresponds to Fig. 2 illustrates the blank which forms the main base and body of the signal, which is similar to Figs. 1 and 2 except that the walls 21, 22, 23, 24 and 25 of the construction illustrated in Figs. 1 and 2 are formed integrally with the main base 1. In order to effect this the main base or blank 1 is provided with extensions 40, 41 and 42 on the member 14 and similar extensions 43, 44 and 45 on the portion 15 so that when these members are turned up at right angles along the lines *d* and *d'*, it is only necessary then to bend the members 40, 41 and 42, (43, 44 and 45) down at right angles to 14 along the line *g*. The members 41 and 42 (and 44 and 45) are then bent up to a horizontal position on the line *k*. The end pieces 42 (and 45) then has an inwardly facing groove 26 similar to the groove 26 in Figs. 1 and 2 formed therein and is then inclined upwardly to form

a juncture with the inner end of 14 and from whence it is then bent down into a horizontal position with its interlocking end 42' engaging the similar interlocking end 45' on the opposite end. In order to anchor the different members together I have illustrated interlocking tongue and slot connections but it is understood that the details of the fastening means may be varied to suit the different conditions. For example, I have illustrated the end piece 40 as provided with slots for the reception of a tongue 11' which is formed on the ear 11. Similarly I have illustrated the member 16 as having a tongue 16' which is formed on an extension thereof, which tongue is adapted to enter the slots 14' for securely anchoring the member 16 to the member 14 in their formed position. Similarly I have designated a tongue 41' formed on the member 41 which is adapted to enter the slot 39 formed in the bottom of the base for securely anchoring the members together. The other member of the signal device is the closing plate 28 which is similar to the one illustrated in Figs. 1 and 2 and has its lower edge 28' turned inwardly for engaging the bottom of the members 41 and 44 and supporting and reinforcing the same to maintain a substantially rigid structure. The member 28 be secured thereto in any convenient manner but it preferably rests on three inwardly turned ears which form seats therefor, one pair of ears 46 being formed respectively on the upper ends of the members 11 and 12 and inwardly turned and assembled to provide seat substantially in line with the upper edges of the members 41 and 44 for supporting the plate 28. The third ear or bracket is indicated at 47 and is formed on the member 13 so that when it is turned downwardly to form a rest for the upper edge of the plate, the upper surface of the plate is substantially flush with the edges of the members 13, 14 and 15. The plate may be secured to these seats 46 and 47 in any suitable manner as, for example, by attaching screws which are fixed to the seats and project through the openings in the plate for the reception of suitable fastening nuts.

Fig. 6 shows a signal device similar to that illustrated in Fig. 3 except that in this case the device is formed essentially of two parts stamped out and suitably formed and assembled to give the required disposition of compartments with reinforced walls. This is formed from a blank similar to that illustrated in Fig. 4 except that the members 13, 16 and 17 are omitted and instead of the members 42 and 45 being formed long enough to engage each other, when they are formed and bent into position, are discontinued at their juncture with the upper walls 14 and are formed with tongues 48 for inter-

locking engagement with cooperating slots formed in the upper wall. Plate 35 has an inwardly turned edge 35' at its bottom for engaging the lower walls of the signal device and thereby reinforcing the same. The plate 35 may be readily secured and anchored in position by means of screw attachments fixed to the inwardly turned ears 46 similar to those illustrated in Figs. 4 and 5. In order to make replacements of lamps or inspect the signal devices it is only necessary to detach the plates 28 and 35 which may be done by simply loosening the attaching nuts. The device thus illustrated is of simple construction and may be manufactured at a minimum expenditure of labor and materials. They are attached to the vehicle (front and rear) in any suitable position and in any suitable manner.

In Fig. 7 I have shown the preferred method of control for the signals illustrated herein. A switch 50, suitably and conveniently mounted near the operator, controls the illumination of the lamp 8 on the rear signal device and the lamp 36 on the front signal device so that when this switch is closed the words Right and the corresponding hand on the front end are illuminated to indicate a right turn. Similarly a switch 51 controls the lamp 9 on the rear end and the lamp 37 on the front to indicate a left turn. Either of the switches 50 and 51 energizes the lamp 38 which is in series with the lamps 36 and 37 so that when either of these switches is closed then 38 is caused to illuminate the word Turn, which together with the illuminated hand, accurately indicates to persons in front of the vehicle the intended movements of the operator. A double signal is therefore given in a highly advantageous manner. The lamp 7 which illuminates the rear license plate and serves as a parking light may be continuously illuminated in any suitable manner as is usual. The stop lamp 10 on the rear of the vehicle is illuminated preferably by the operation of a brake 41 which serves to close the switch 42 in the lamp circuit when it is actuated by the operator to retard the motion of the vehicle or to bring it to a dead stop.

It is, therefore, apparent that in addition to the improved constructional features of my front and rear signal devices I secure accurate and correct indications, both to people in the rear and to people in the front, of the intended movements of the vehicle, all of which signals are very easily and simply obtained.

I claim:

1. A signal device of the character described having a plurality of closed compartments, two of the compartments being in line with each other to contain right and left turn signals, and an intermediate compartment, said device being formed of sheet

material including one integral piece which forms the base, end and upper walls of the right and left turn signal compartments and has an integral extension at the bottom to which a license plate is adapted to be attached, a second integral piece of sheet material adapted to fit over and form the top closing plate for the compartments together with means for readily detaching the same therefrom and having suitable transparent windows formed over the right and left turn signal compartments and a transparent window disposed under the aforesaid intermediate compartment.

2. A device of the character described for automobiles comprising four signal devices and compartments formed out of two pieces of sheet material and one transparent window, two of said compartments being in line with each other to contain right and left turn signals with an intermediate compartment therebetween and the third compartment being disposed immediately above the intermediate compartment, one of said pieces of sheet material forming the base and side walls of the compartments and the other blank piece forming the top closing plate therefor and having suitable transparent windows therein and a transparent window forming the bottom wall of the intermediate compartment together with interlocking devices formed integrally with the sheet material to render the base and side walls a substantially rigid structure and means for readily detaching the top plate from the compartments.

3. A signal device of the character described comprising a plurality of compart-

ments formed out of two pieces of sheet material and one transparent window, two of said compartments being in line with each other to contain right and left turn signals with an intermediate compartment therebetween, one of said pieces of sheet material forming the base and side walls of the right and left turn signal compartments and said transparent window forming the bottom wall of the intermediate compartment, the second blank piece forming the top closing plate for said compartments and having suitable transparent windows therein together with means for rendering the base and side walls a substantially rigid structure and means for readily detaching the top plate from the compartments.

4. A signal device of the character described having a plurality of closed compartments, two of said compartments being substantially in line with each other to contain right and left turn signals, and another of said compartments being intermediate the two first mentioned compartments but out of line therewith, the walls of said compartments being formed of integral sheet pieces, one of said integral sheets being folded to have parts thereof form the bottom and inner end walls of the right and left turn compartments and the bottom wall of the intermediate compartment, and one of said integral pieces forming a top closing plate for the compartments together with means for readily removing and attaching the same.

In testimony whereof, I have signed my name to this specification.

ALEXANDER BERGER.