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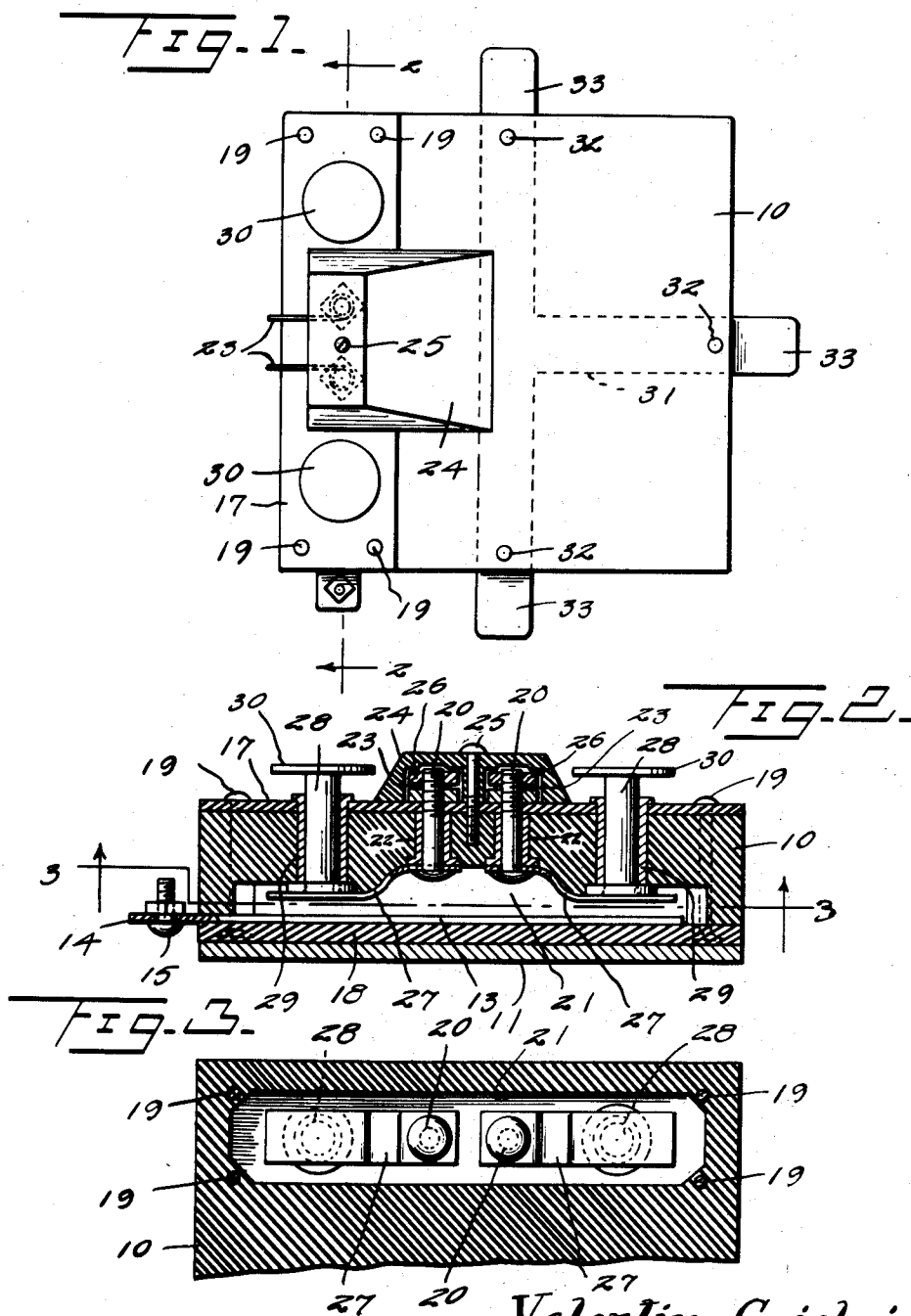
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2,195,776

TURN SIGNAL APPARATUS

Filed June 26, 1939

2 Sheets-Sheet 1



Valentin Geisheimer

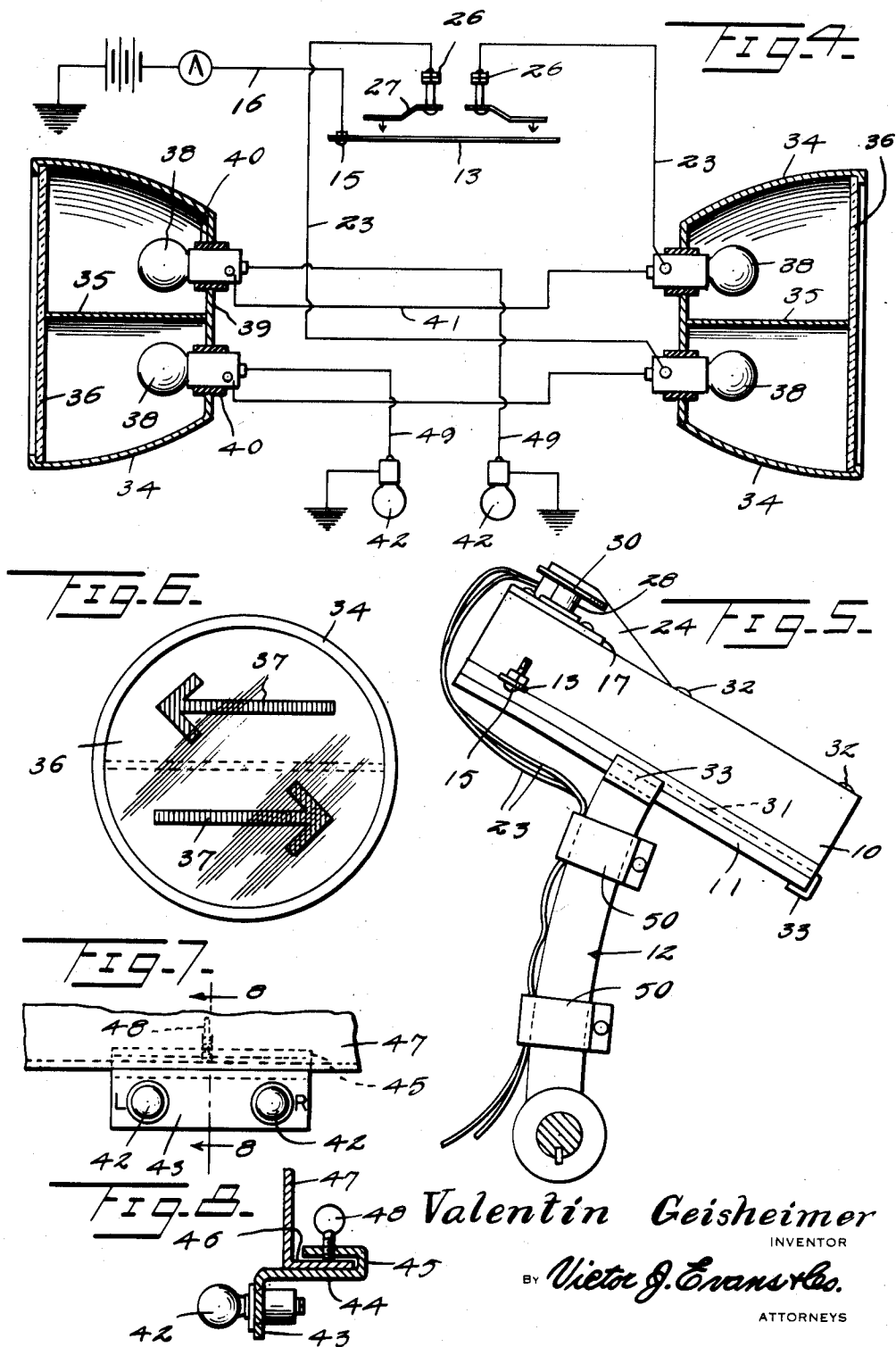
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TURN SIGNAL APPARATUS

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UNITED STATES PATENT OFFICE

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TURN SIGNAL APPARATUS

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Application June 26, 1939, Serial No. 281,241

2 Claims. (Cl. 200—59)

This invention relates to turn signal apparatus and has for an object to provide a switch which may be mounted conveniently on a clutch pedal and operated by merely shifting the foot to the right or to the left of a foot rest integral with the device to control signal circuits indicative of the driver's intention to turn.

A further object is to provide apparatus of this character which will be formed of a few strong, simple and durable parts which will be inexpensive to manufacture and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of this specification,

Figure 1 is a plan view of a switch constructed in accordance with the invention.

Figure 2 is a cross sectional view of the switch taken on the line 2—2 of Figure 1.

Figure 3 is a longitudinal sectional view of the switch taken on the line 3—3 of Figure 2.

Figure 4 is a longitudinal sectional view of a pair of signal lights and showing the electrical connections of the control switch therewith.

Figure 5 is a side elevation of the switch mounted on the clutch pedal.

Figure 6 is a front elevation of one of the signal lamps.

Figure 7 is a front elevation of the pilot lamps and supporting bracket therefor.

Figure 8 is a detail cross sectional view taken on the line 8—8 of Figure 7.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, 10 designates a pad adapted to be supported upon a foot plate 11 of a clutch pedal 12, as best shown in Figure 5. The pad is preferably formed of rubber and is provided in its front end portion with a recess in which is mounted a copper power plate 13, best shown in Figure 2. The plate is provided with a tab 14 which carries a bolt 15 through the medium of which the plate may be connected to the battery by a wire 16, as best shown in Figure 4. An upper fiber plate 17 and a lower fiber plate 18 extend entirely over the upper and lower faces of the pad, at one end of the pad as shown in Figure 1, and are secured together, and to the pad by bolts 19 passed

through these parts. The copper power plate 13 rests upon the lower fiber plate 18.

Bolts 20, forming electrical terminals, extend through the upper fiber plate 17 and through the upper portion of the pad and have their lower ends positioned in a recess 21 in the pad. The terminal bolts are spaced from the power plate and are engaged through spacing bushings 22 carried by the pad and extending to the underneath face of the top plate 17. The terminal bolts are connected by respective wires 23 to respective signal lamps, as will be presently described.

The upper ends of the terminal bolts are covered by a removable foot rest 24, preferably formed of fiber, and secured in place through the medium of a screw 25, best shown in Figures 1 and 2, this screw passing through the top plate 17 and into the pad between the terminal bolts. The foot rest is in the nature of a shell which houses the nuts 26 of the bolts, between which the conductor wires 23 are clamped.

A contact spring 27 is connected at one end to the lower end of each terminal bolt. Fiber push buttons 28 are slidably mounted in the pad and rest upon the outer free ends of the respective contact springs 27. The push buttons are slidably engaged through metal bushings 29 which guide sliding movement of the push buttons. The upper ends of the push buttons are provided with caps 30 which are located at opposite sides of the terminal cover or foot rest 24, and either one may be engaged and depressed by shifting the foot laterally in one direction or the other, from the foot rest.

A substantially T-shaped clip 31 is secured to the underneath face of the block through the medium of screws 32 passed downwardly through the block and into the clip, as best shown in Figure 1. The lateral branches and the shank of the clip are provided with projecting ends 33 which may be bent over the side edges and the bottom edge of the foot plate 11 of the clutch pedal, as best shown in Figure 5, to secure the switch in place.

As best shown in Figure 4, two signal lamps 34 are provided, adapted to be attached in any preferred manner to the front and to the rear of a vehicle. Each signal lamp is provided with a center division wall 35 adapted to divide the lamp into an upper and a lower compartment. A glass lens 36 is provided and the lens marked with upper and lower arrows 37, of distinctive colors, one pointing to the right, and one pointing to the left, to denote an intended turn.

A lamp bulb 38 is mounted in each compart-

ment and is insulated from the rear wall 39 of the lamp through the medium of an insulating bushing 40. The signal wires 23 are connected to a
5 respective signal bulb in one lamp and a conductor wire 41 connects said bulb in series with the corresponding signal bulb of the other lamp, as shown diagrammatically in Figure 4.

A pair of pilot lights 42 are provided, each being mounted on a leg 43 of a bracket 44 having
10 a hook 45 thereon to receive the flange 46 on the bottom of the instrument board 47. A set screw 48 is engaged through the hook and advanced against the flange to secure the pilot lamps within convenient view of the driver. Con-
15 ductor wires 49 connect the pilot lights in series with the two respective signal bulbs, as shown diagrammatically in Figure 4, so that when one of the signal bulbs in the front and one of the signal bulbs in the rear signal lamp are energized
20 to indicate an intended turn, the corresponding pilot lamp will be energized.

The circuit wires 23 are secured by strap clamps 50 to the clutch pedal, as best shown in Figure 5, so that the wires will not become broken.

25 In operation when the driver approaches an intersection, he need only tilt his foot to the right or to the left in either direction off of the foot rest 24 to push down a predetermined push button 26. The push button deforms the respective
30 contact spring 27 downwardly into circuit closing position with the copper power plate 13. The current flows from the power plate into the contact spring and into the selected pair of signal bulbs corresponding to the desired turn, also to
35 the respective pilot light associated with these signal bulbs.

In practice the switch may be assembled and placed in a pad mold and then the rubber may be molded around the switch or the switch may
40 be built into the rubber pad after the pad is formed.

From the above description it is thought that

the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

1. The combination with a motor vehicle pedal, 5 of a switch comprising a rubber pad adapted to be placed upon and secured to the bottom plate of the pedal, the pad being provided in its front end portion with a recess, a conductor plate in said
10 recess, means for connecting the conductor plate to a source of electricity, push buttons mounted on said pad, leaf springs on the push buttons adapted to engage the conductor plate to form
15 circuit closers, terminals securing the leaf springs stationary at one end and projecting through the top face of the pad for connection to signal
20 circuit wires, and a hollow foot rest on the pad forming a housing for the terminals, said push buttons being adapted to be operated by movement of a driver's foot laterally from the foot
rest.

2. A switch comprising a rubber pad adapted to be placed upon and secured to the foot plate of a motor vehicle pedal, the pad being provided
25 in its front end portion with a recess, a metal conductor plate in said recess having one end provided with a terminal extending exteriorly of the pad, fiber plates extending upon the pad above
30 and below the conductor plate, terminals extending through the upper fiber plate and entering said recess, spacers on said terminals engaging the underneath face of the upper fiber
35 plate, a hollow foot rest on the top face of the pad housing said terminals, leaf springs secured to the terminals in said recess, foot operated push buttons projecting through the upper fiber
40 plate on opposite sides of the foot rest and engaging the free ends of the leaf springs for moving the leaf springs into circuit closing position with said conductor plate, and guide sleeves in said pad slidably receiving the push buttons.

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