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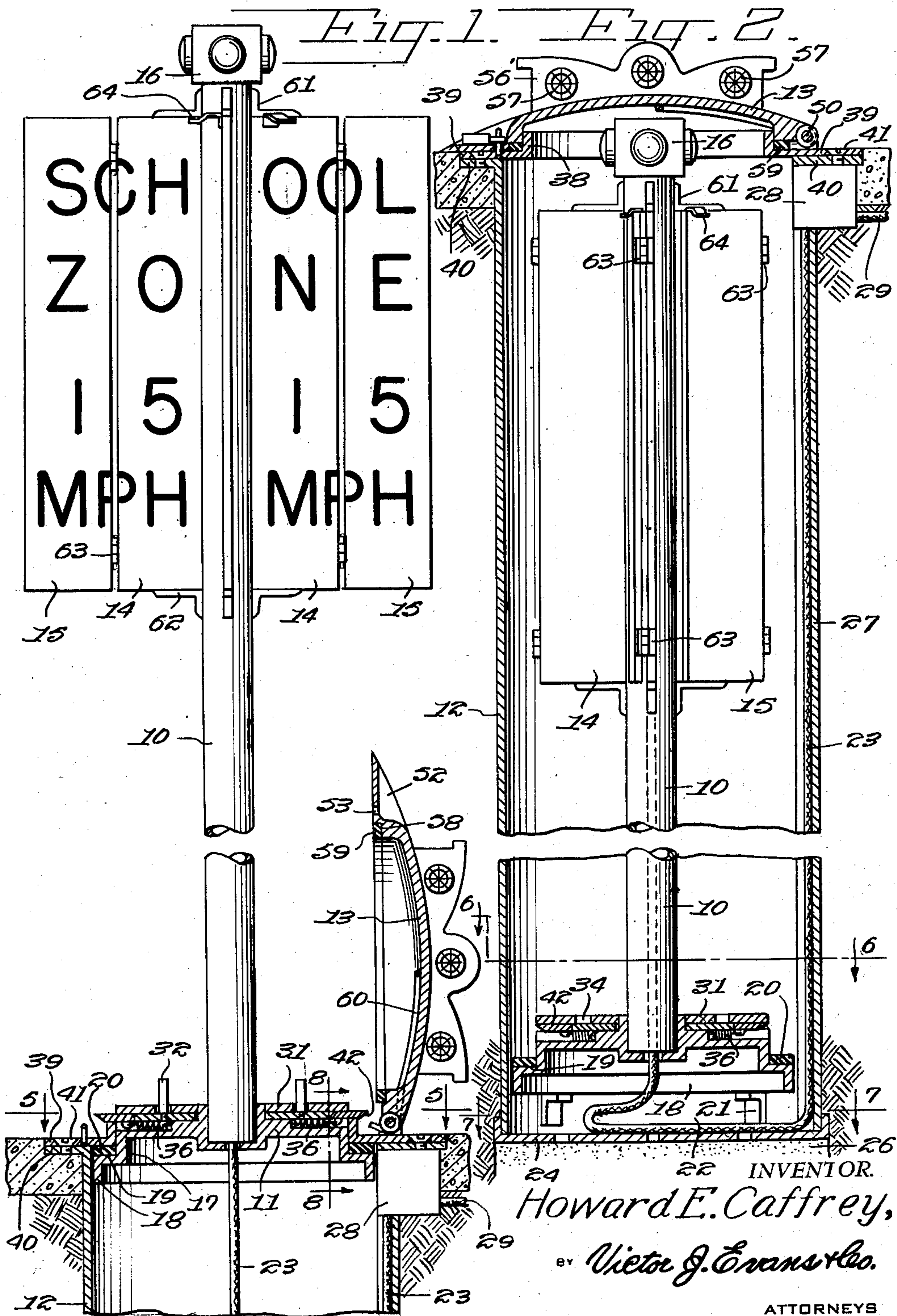
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2,624,307

RETRACTABLE TRAFFIC SIGN

Filed Oct. 26, 1949

3 Sheets-Sheet 1



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Fig. 3

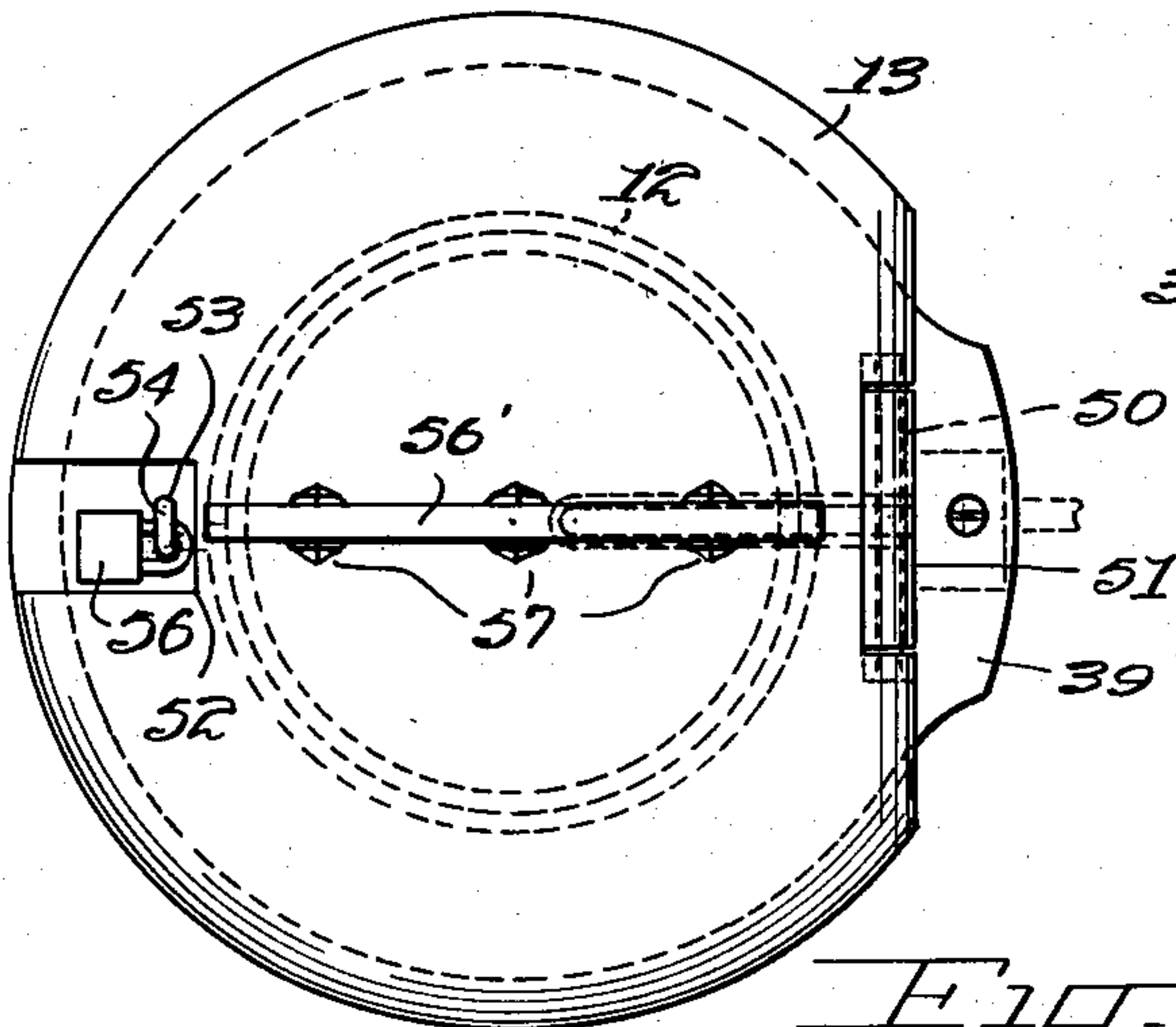


Fig. 6

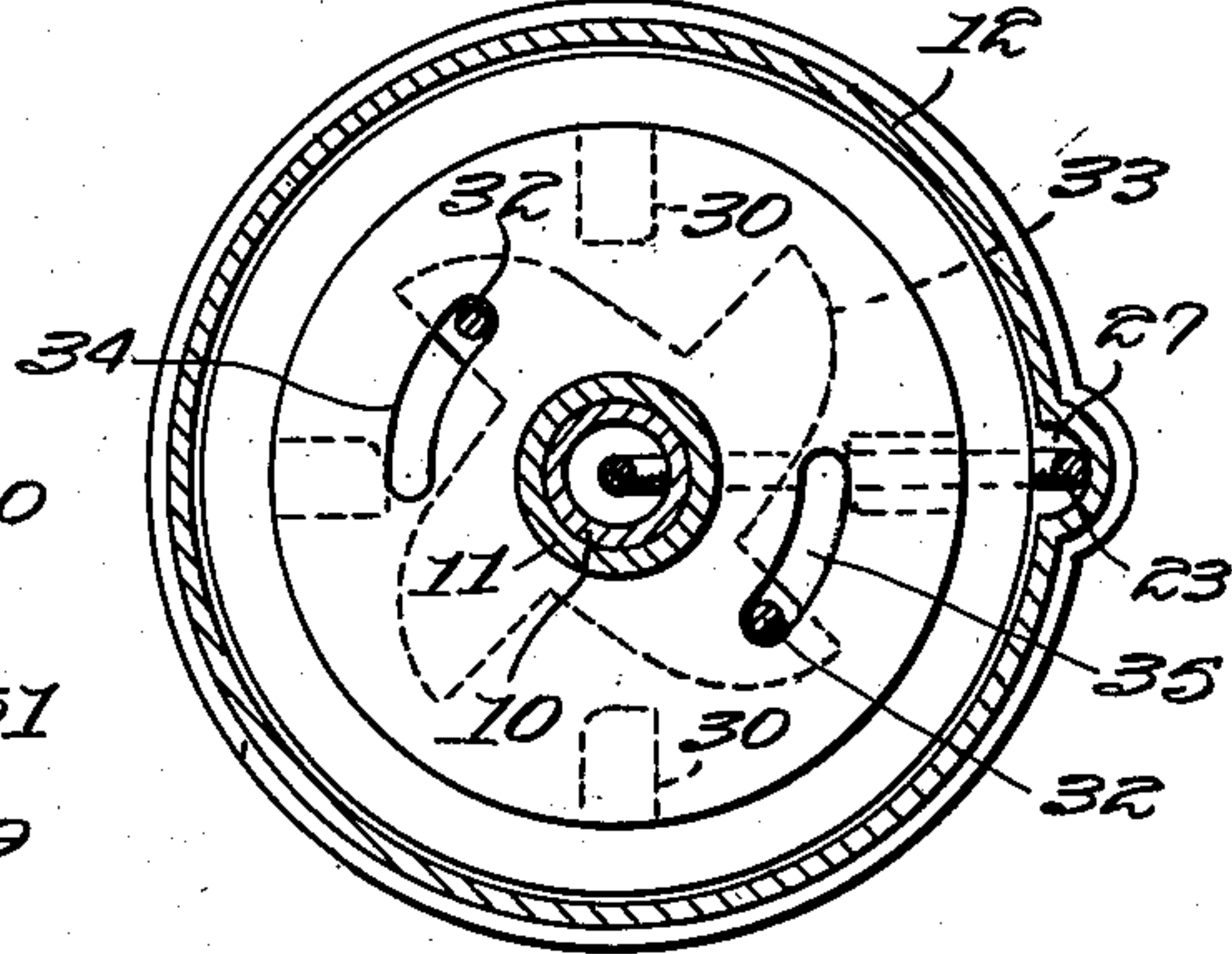


Fig. 7

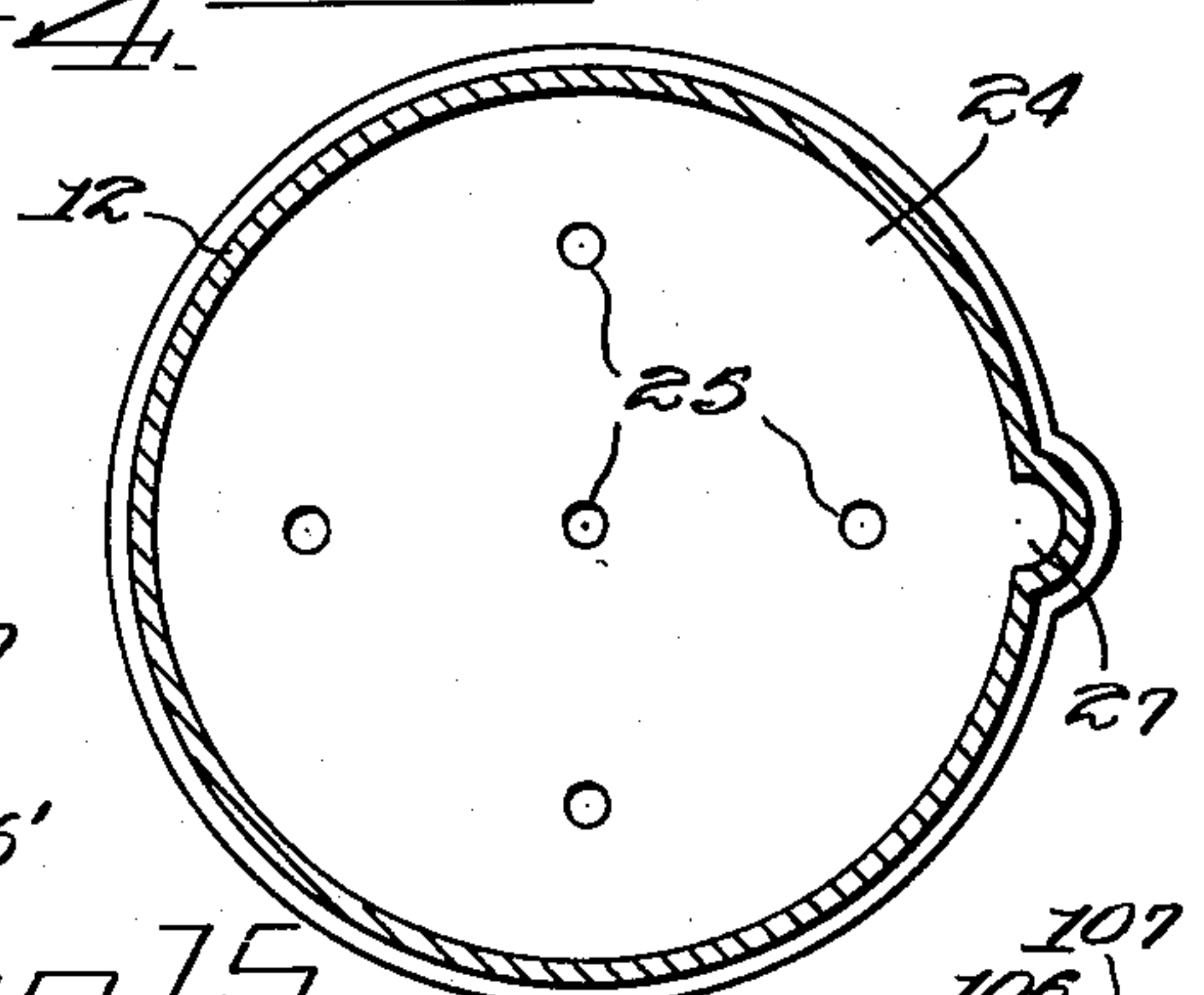
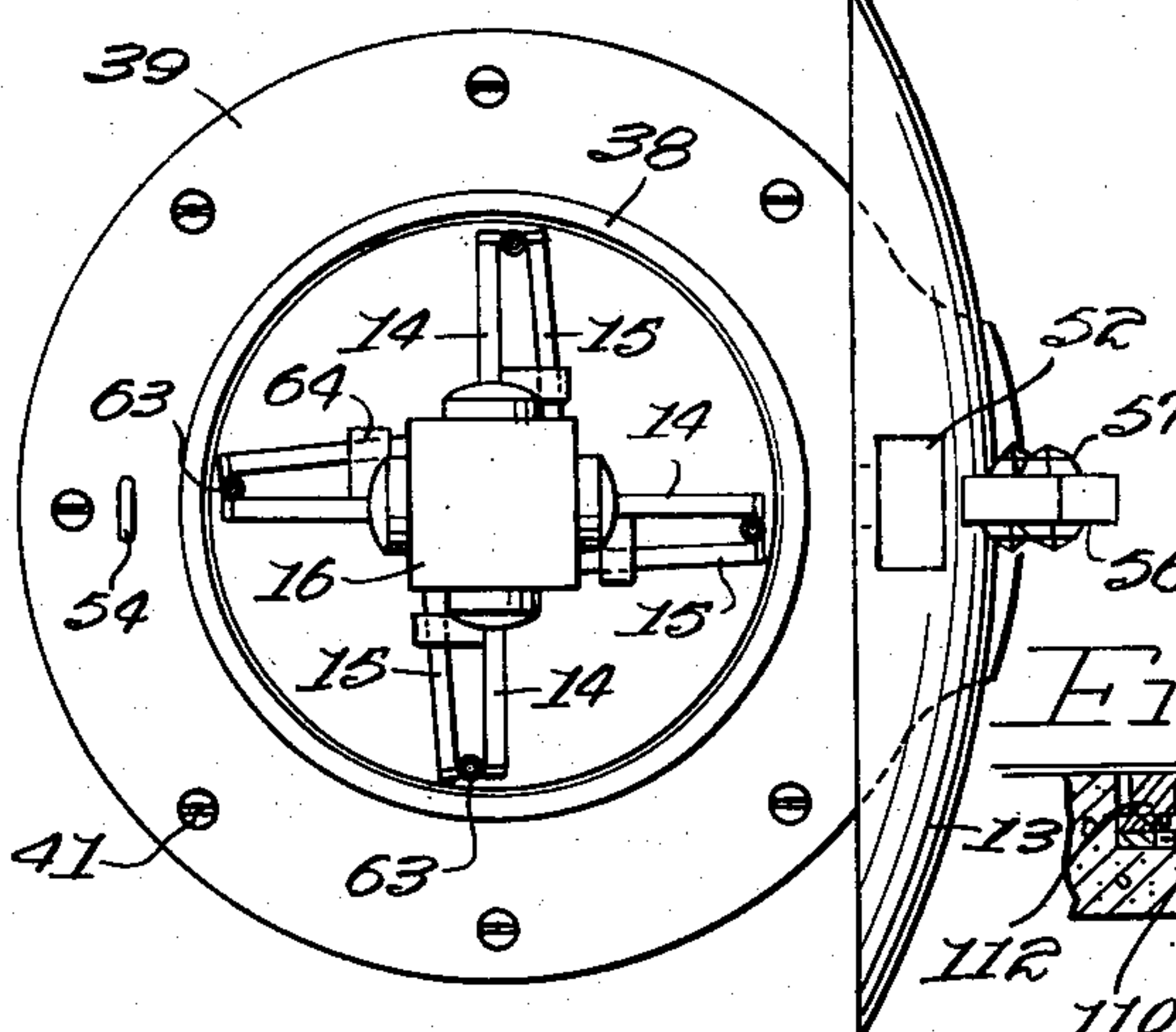


Fig. 4



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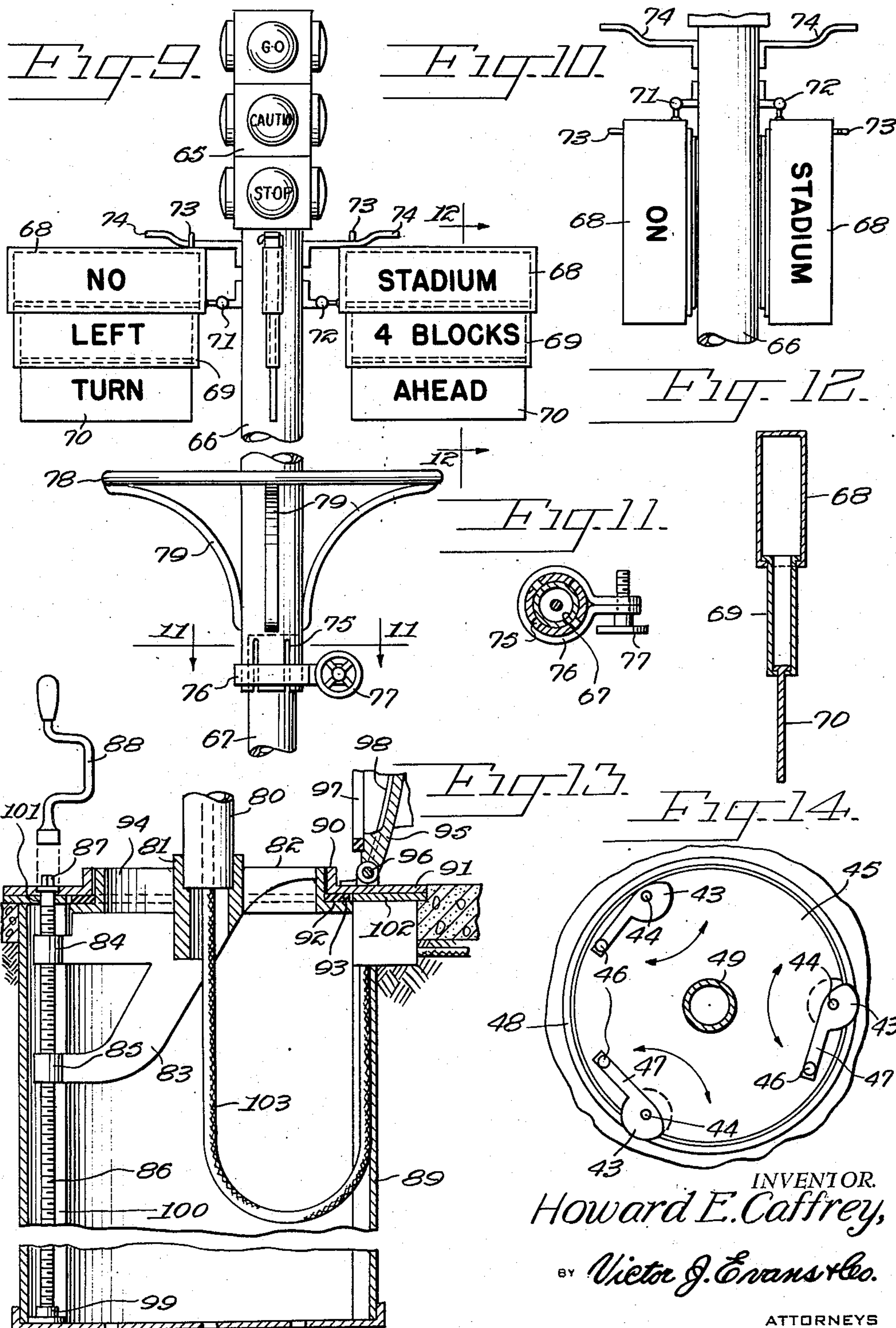
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UNITED STATES PATENT OFFICE

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RETRACTABLE TRAFFIC SIGN

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2 Claims. (Cl. 116—63)

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This invention relates to retractable or disappearing signs of the type used as speed or warning signs on the side of a highway or for traffic signs at intersections, and in particular the invention relates to a post having a sign or signs on the upper end and a well into which the post with the signs thereon is dropped when not in use with means for retaining the post in an extended position and also a cover for substantially sealing the well with the post therein.

The purpose of this invention is to provide a disappearing sign that may be dropped into a well buried in a roadway or on the side thereof when not in use and that may readily be elevated when use thereof is desired, whereby the necessity of rolling heavy traffic signs to and from positions in streets or on the sides of roadways is eliminated.

In numerous types of parking, street and traffic signs it is desired to use the signs only during certain hours or when an occasion requires the signs and when use of the signs is not required it is difficult to dispense therewith. With this thought in mind this invention contemplates a sign positioned in a tubular well extended downwardly in a street or on the side of a roadway and means for supporting the sign in the upper end of the well with the sign extended for use.

The object of this invention is, therefore, to provide means for mounting a sign of the type used for traffic and the like whereby the sign may or may not be used as may be desired.

Another object of the invention is to provide a traffic sign of the disappearing type in which lights may be incorporated therein.

Another object of the invention is to provide a sign of the disappearing type for traffic use wherein it is only necessary to raise the sign upwardly and lock it in an upwardly extended position when use thereof is desired.

A further object of the invention is to provide a street and traffic sign of the disappearing type which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a tubular post having folding signs with lights on the upper end thereof, a tubular well positioned to receive the post and sign, a base carried by the lower end of the post having locking means thereon for retaining the post and signs in upwardly extended positions, and a cover plate hinged to the upper end of the well for sealing the well with the post and sign therein.

Other features and advantages of the inven-

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tion will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a view showing a side elevation of the tubular post with signs on the upper end thereof and with the upper end of a tubular well in which the post is positioned shown in section.

Figure 2 is a vertical cross section through the traffic sign retaining well with parts broken away and part shown in elevation.

Figure 3 is a plan view of the well showing the cover thereof in the closed position.

Figure 4 is a similar view showing the cover open and showing signs extended from the sides of the post in folded positions.

Figure 5 is a similar view taken on line 5—5 of Figure 1 showing locking dogs for holding the post with the signs thereon in the upwardly extended position.

Figure 6 is a cross section through the well taken on line 6—6 of Figure 2 showing the locking dog operating elements.

Figure 7 is a sectional plan showing the lower end of the well with drain holes shown therein.

Figure 8 is a detail showing a section taken on line 8—8 of Figure 1 illustrating one of the locking dogs with a retracting spring connected thereto.

Figure 9 is a view illustrating a modification wherein traffic lights and signs are used on the upper end of the post.

Figure 10 is a view similar to that shown in Figure 9 illustrating the folded positions of traffic signs that may be carried by the upper end of the post and with parts broken away.

Figure 11 is a detail showing a section on line 11—11 of Figure 9 illustrating a clamp for securing the traffic signals on the upper end of the post as shown in Figure 9.

Figure 12 is a cross section taken on line 12—12 of Figure 9 illustrating a telescoping signal housing.

Figure 13 is a vertical section through a traffic signal well similar to the section shown in Figure 2 and illustrating a modification wherein the post is elevated by a screw.

Figure 14 is a plan view similar to that shown in Figure 5 illustrating a further modification wherein cam shaped pivotally mounted dogs are provided for retaining the post and signs in an upwardly extended position.

Figure 15 is a view illustrating a modification wherein the well is provided with a flat cover so that it may be incorporated in a manhole in a street or may be positioned in a roadway or street.

Referring now to the drawings wherein like reference characters denote corresponding parts

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the disappearing traffic signal of this invention includes a post 10 having a base 11 on the lower end, and a well formed with a tubular casing 12 having a hinged cover 13, and the upper end of the post is provided with signs 14 having fold-
ing sections 15, and with lights 16 on the upper end above the signs.

The base 11 of the post 10 is formed with an intermediate depending flange 17 and an outer flange 18 providing a horizontally disposed rim or seat 19 on which a packing ring 20 is positioned. With the sign in the well the lower edge of the flange 18 rests on stops 21 providing an open area 22 in the lower part of the well for an armored electric cable 23. The lower end 24 of the well is also provided with perforations 25 to provide drainage into a sand bed 26 that may be provided below the lower end of the well. The cable 23 extends upwardly through a vertically disposed recess 27 in one side of the tube 12 to a switch or control box 28 in the upper end of the well from which a cable 29 may extend to any suitable point.

Locking dogs 30, as illustrated in Figure 5 are mounted between the upper surface of the base and a plate 31 with pins 32 extended upwardly from a star shaped cam 33 through slots 34 and 35 in the plate 31. The dogs 30 are resiliently held inwardly by springs 36 attached to the lower surfaces thereof and the springs are positioned in slots 37 in the base 11 as shown in Figure 8. The pins 32 may be actuated by hand or may be kicked in the slots 34 and 35 whereby the star shaped cam 33 will engage the dogs 30, forcing the dogs outwardly to the position shown in Figure 5 so that they will rest on a collar 38 of an annular ring 39 mounted on a flange 40 extended around the upper end of the tube 12 and secured to the flange by screws 41. The dogs 30 are provided with beveled under surfaces 42 through which a clamping action is obtained as the dogs are forced outwardly, clamping the packing washer 20 against the under surface of the ring 41 providing sealing means to prevent moisture or water passing downwardly into the well with the cover 13 open.

It will be understood that the locking dogs for securing the base of the post 10 in the upper extended position may be of any type or design and may be operated by any suitable means. A modification is illustrated in Figure 14 wherein cam shaped dogs 43 are used and these dogs are pivotally mounted by pins 44 on a base 45 similar to the base 11, and these dogs are actuated by pins 46 on arms 47 whereby the dogs may be extended over the upper edge of a flange 48 similar to the flange or rim 38 of the design shown in Figure 1. The base 45 is provided on the lower end of a post 49 similar to the post 10.

The cover 13 is hinged to the flange 39 by a pin 50 extended through a lug 51 extended upwardly from the flange and extended into the adjoining sides of the cover. The opposite side of the cover is provided with a recess 52 having a slot 53 therein through which an eye 54 extends, with the cover in the closed position and a bail 55 of a lock 56 may be inserted through the eye, as illustrated in Figure 3 to lock the cover in the closed position.

The upper surface of the cover is provided with a flange 56 having reflectors 57 positioned thereon and the reflectors are positioned to return light rays to indicate the position of the traffic well.

The inner surface of the cover 13 is provided with an annular recess 58 in which a gasket 59

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is positioned and, as illustrated in Figure 2 the gasket contacts the upper surface of the flange 39 to seal the upper end of the well with the flange 38 extended upwardly beyond the gasket and into the cover. The cover is held upwardly in the position shown in Figure 1 by a spring 60 that is positioned around the pin 50 of the hinge.

It will be understood that panels for signs may be mounted on the upper end of the post in any suitable manner and in the design shown the sign panels 14 are attached to the post by clip angles 61 at the upper end and 62 at the lower end and when it is desired to extend the width of the sign folding panels 15 are attached to the panels 14 by hinges 63. Spring clips 64 are provided at the upper end to retain the extended panels 15 in the folded positions as shown in Figures 2 and 4.

The light 16, provided at the upper end of the post is illustrated as having lenses on four sides thereof and it will be understood that a signal light of any type or design may be used.

In the design illustrated in Figure 9 the usual traffic lights, as indicated by the numeral 65 are positioned on a sleeve 66 on the upper end of a post 67 similar to the post 10 and a plurality of signs are provided on the faces of telescoping sections 68 and 69. Panels 70 are attached to the sleeve 66 by hinges 71 and 72, and the sections 68 are provided with fasteners 73 that coact with spring clips 74 to hold the telescoping sections and panels in outwardly extended positions as illustrated in Figure 9. It will be understood that the telescoping sections and panels may be replaced by signs of any type and the signs may be mounted on the post by any means. In this design the lower end of the sleeve 66 is provided with slits 75 and a clamp 76 with a thumb screw 77 therein is provided to clamp the sleeve 66 with a post 67. The sleeve 66 is also provided with a hand ring 78 with arcuate arms 79 to facilitate withdrawing the post with the signs thereon from the well.

In the design illustrated in Figure 13 a post 80 similar to the post 10 is mounted in a hub 81 of a base 82 and the base is provided with a bracket 83 having hubs 84 and 85 that are threaded on a screw 86 and with the screw 86 rotated through a stud 87 on the upper end thereof by a brace 88 the post may be raised or lowered as desired. In this design the post is suspended in a well 89 similar to the well 12 and the well is provided with a collar 90 on a flange 91 around the upper end. The base 82 is also provided with a flange 92 and a gasket 93 is positioned between the flange 92 and the flange 91 to seal the area around the upper end of the well.

In this design, however, the base 82 is provided with openings 94 and a cover 95, similar to the cover 13 is hinged to the flange 91 by a pin 96. The cover 95 is also provided with a gasket 97 and a spring 98 holds the cover in the open position. The screw 86 is journaled in a bearing 99 in a vertically disposed recess 100 in one side of the well 89 and the upper end of the screw is journaled in an opening 101 in a flange 102 similar to the flange 40. A cable 103 similar to the cable 23 extends upwardly through the post to connect the signals on the upper end thereof to a suitable source of current and to control devices.

With the parts as illustrated and described a sign such as a school or stop sign may be incorporated in a tubular well extended downwardly into the ground and when use of the sign is not desired the well may be closed, sealed and locked. When it is desired to use the sign the cover may

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be unlocked and opened and the post with the signs thereon elevated to the position illustrated in Figure 1 and the post and signs may be locked in this position by the dogs 36. The sign post may, therefore, be used only as desired and when not in use it is out of the way and completely enclosed in a tubular well below the ground.

The disappearing post may be used for different types of signs, traffic signals, and the like and any suitable means may be provided for raising and lowering the post with the signs thereon.

It will also be understood that a well 104 may be provided with a flat cover 105 that may be hinged through a pin 106 in a hub 107 to a collar 108 with a packing gasket 109 between the cover and collar. The collar is mounted on a flange 110 of the well 104 by screws 111. The outer edge of the cover 105 may be provided with an overlapping bead or flange 112.

The well may, therefore, be positioned on the side of a street or roadway or may be sunk into a street, highway, or the like or may be temporarily positioned in a manhole of a sewer or the like and where the well is positioned in the surface of a roadway the flat cover is used.

It will be understood that other modifications may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. In a disappearing traffic sign and signal, the combination which comprises a tubular well extended downwardly and positioned below the surface of the ground, a post having signs there-

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on and mounted on a base vertically slidable in the well and normally positioned within the well, means closing the well with the post and signs therein, manually actuated dogs carried by the base of the post for securing the post in an elevated position in the upper end of the well, and manually actuated screw means for raising and lowering the post in the well.

2. In a disappearing traffic sign and signal, the combination which comprises a tubular well extended downwardly and positioned below the surface of the ground, a post having signs thereon mounted on a base vertically slidable in the well and normally positioned within the well, means closing the well within the post and signs therein, manually actuated dogs carried by the base of the post for securing the post in an elevated position in the upper end of the well, manually actuated screw means for raising and lowering the post in the well, and an electric cable extended downwardly through the well and upwardly through the post to lights on the post.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

30 Number	Name	Date
1,364,490	Feltham	Jan. 4, 1921
1,698,966	Quick	Jan. 15, 1929
1,843,956	Otte	Feb. 9, 1932
2,035,694	Eckard et al.	Mar. 31, 1936