Sept. 4, 1928. 1,682,951

J. BEEBY

SEMAPHORE AND THE LIKE FOR AUTOMOBILES

Filed Dec. 7, 1925 2 Sheets Sheet 1

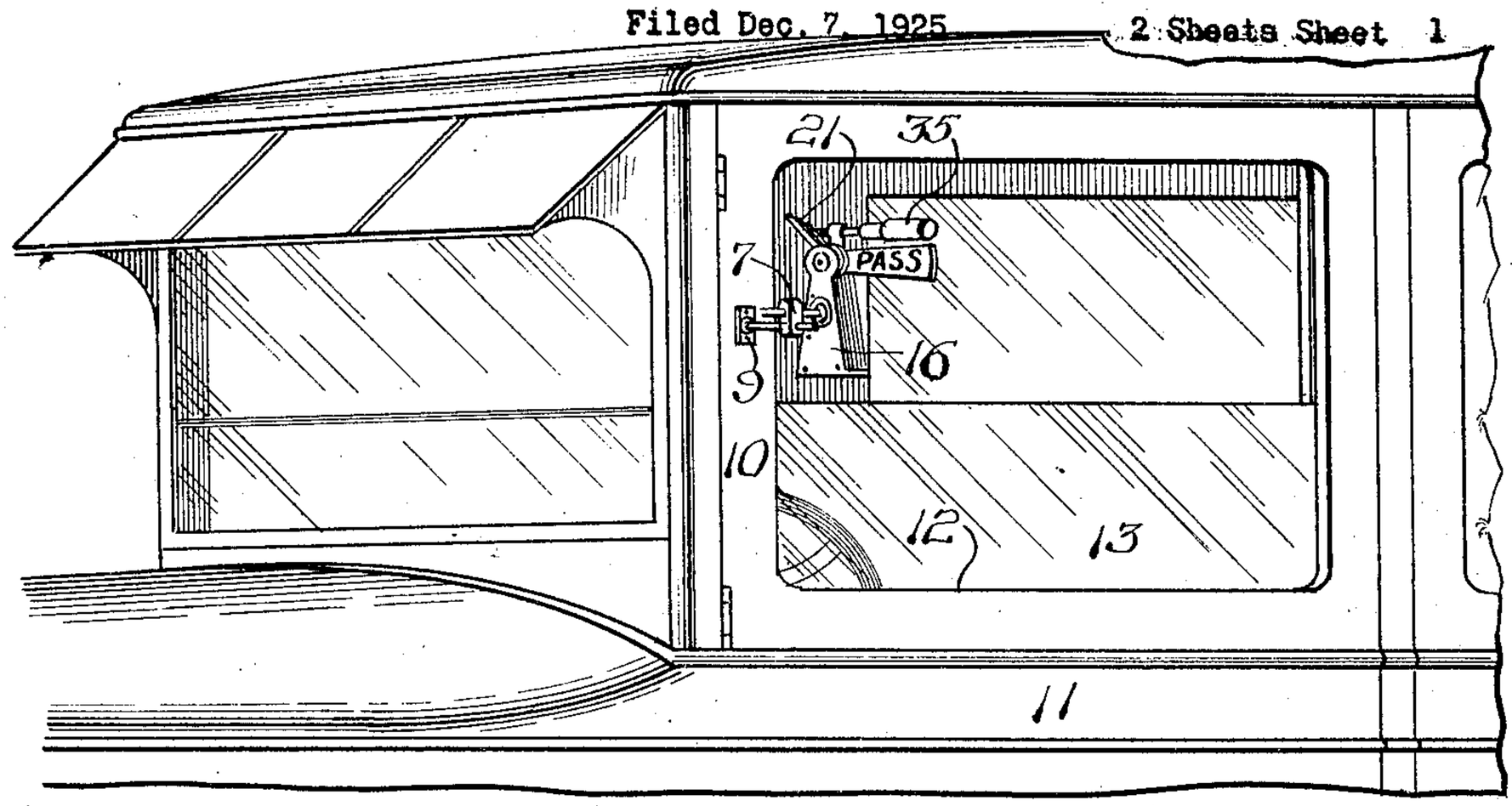

Fig. 1.

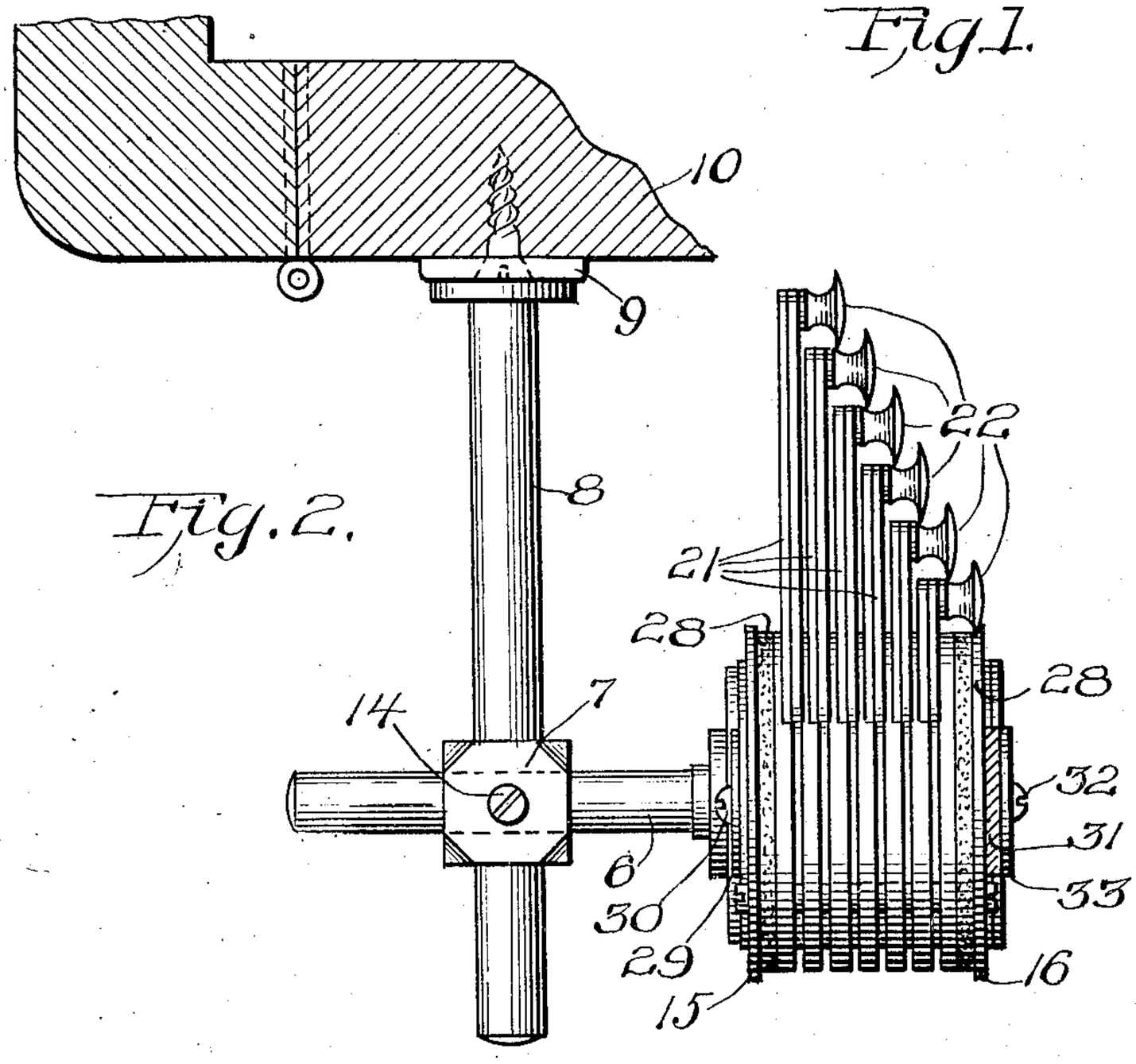

Fig. 2.

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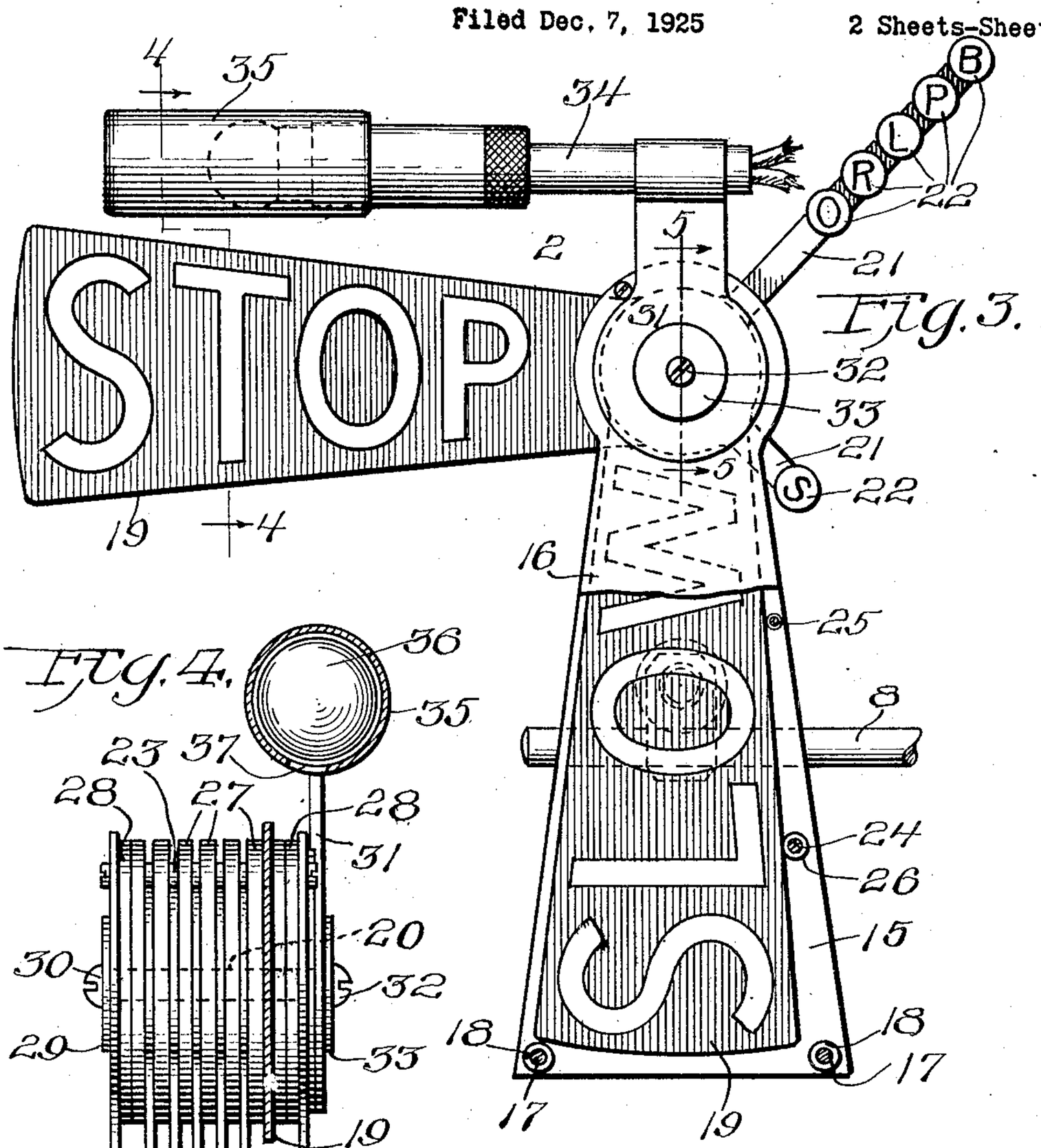

Fig. 3.

Fig. 4.

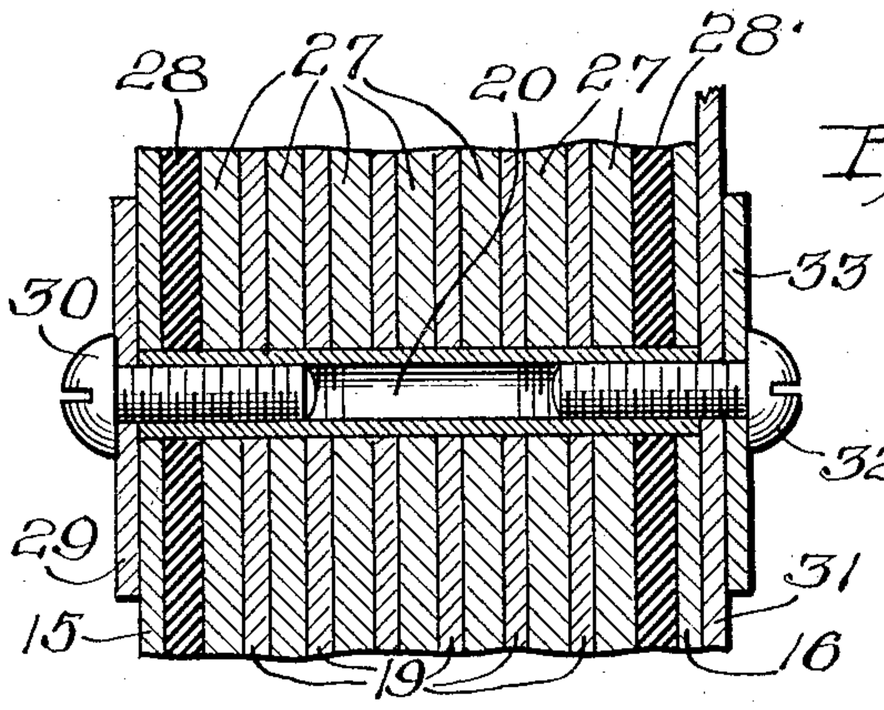

Fig. 5.

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Patented Sept. 4, 1928. 1,682,951

UNITED STATES PATENT OFFICE.

JAMES BEEBY, OF CHICAGO, ILLINOIS.

SEMAPHORE AND THE LIKE FOR AUTOMOBILES.

Application filed December 7, 1925. Serial No. 73,784.

This invention has to do with improvements in semaphores and the like for automobiles. It has to do particularly with improvements in devices for giving a signal to another person as to the prospective movements of the automobile on which the semaphore is mounted. For this purpose, the device is so arranged as to give a signal such as "start", "stop", "right", "left" "pass", etc.

The main object of the invention is to provide a very simple device, one which can be very cheaply and easily manufactured from few parts, can be cheaply assembled, will operate in a very satisfactory manner, and present a very attractive appearance when in place on an automobile.

A further object of the invention is to provide a device which is so arranged that whenever any particular signal blade is raised, it will remain in the raised position until purposely lowered by the driver. In this connection, it is a further object to make provision for exerting the necessary friction for the different blades to ensure the foregoing result without, however, causing the parts to bind unnecessarily.

Another feature of the invention relates to the provision of means for satisfactorily illuminating the blades when they are raised so as to give the desired operation for night service.

A further object of the invention is to provide a device which can be very easily adapted to the body of the vehicle or to the frame of the door or window and at very little expense.

Other objects and uses of the invention will appear from a detailed description of the same, which consists in the features of construction and combinations of parts hereinafter described and claimed.

In the drawings:

Figure 1 shows a perspective view of the upper front corner of an automobile body having applied thereto a semaphore embodying the features of the present invention;

Fig. 2 shows a plan view corresponding to Fig. 1;

Fig. 3 shows a side view of the semaphore on enlarged scale, the "stop" blade being raised, and a portion of the side plate of the device being broken away so as to reveal the interior construction;

Fig. 4 shows a cross section on the line 4—4 of Fig. 3, looking in the direction of the arrows: and

Fig. 5 shows a section on the line 5—5 of Fig. 3, looking in the direction of the arrows, but on enlarged scale.

Referring first to Figs. 1 and 2, the semaphore as a whole may be supported in any convenient manner. For this purpose, it is preferably provided with a stud 6 projecting from one of its side plates and through a bracket block 7. This bracket block in turn is mounted upon another stud 8 which projects from a bracket 9 which is secured to the frame 10 of the vehicle. In the particular construction illustrated, the bracket 9 is secured to the front post of the door 11 of the vehicle, so that the semaphore also occupies the proper position adjacent to the window opening 12. Upon lowering the window pane 13 the semaphore can be conveniently reached and manipulated. The adjustment block 7 is secured to the studs 6 and 8 in any convenient manner as by means of set screws 14.

The semaphore proper comprises a pair of vertical side plates 15 and 16. These are joined together in spaced relationship by a series of through bolts or pins 17 which draw the side plates 15 and 16 towards each other, sleeves 18 on said through bolts serving to retain the side plates in the desired spaced relationship.

The semaphore includes a number of blades 19 which are of the general shape shown in Fig. 3. These blades are pivoted on a through pin or sleeve 20 which reaches between the upper portions of the side plates 15 and 16. The blades are of such shape and size that when lowered into the vertical position they pass completely between the side plates between which they are hidden and protected when not in service. This fact is clearly indicated in Fig. 3.

The various blades 19 are provided with individual operating fingers 21 which extend from the opposite side of the pivotal shaft 20, so that said operating fingers are brought to a relatively close position to the driver's seat within the automobile. As the various blades are lowered into the vertical position, the fingers 21 assume a position extending upwardly at an angle of approximately 45°, and as each finger is depressed into the lowermost position its blade is raised into the horizontal position, as shown in Fig. 3.

Each of the fingers 21 is preferably provided with an end button 22 projecting at right angles to the face of the finger and by

means of which the finger is easily manipulated. The various fingers are preferably of successively increasing lengths, so that when the blades are all lowered, the fingers come into telescoping alignment, as clearly indicated in Figs. 2 and 3. Preferably, each finger has marked on its exposed face a suitable symbol indicating the signal which is contained on the corresponding blade.

In order to limit the upthrow of the blades, I have provided a cross pin 23 which extends across between the upper portions of the side plates 15 and 16. This pin 23 also serves another function presently to be explained.

In order to limit the downthrow of the blades I provide one or more cross pins 24 and 25 extending between the edge portions of the plates 15 and 16; and these cross pins 24 and 25 are preferably provided with sleeves of rubber or other resilient material 26, so that when the blades are lowered any unpleasant noise will be avoided.

It is desired to retain the various blades in spaced relationship with respect to each other, so that they will not interfere with each other as they are individually operated. It is also desired to avoid any cross interference between the various blades such as would cause the raising of one blade to be communicated to the adjacent blades. For the above purposes, I have provided the sleeves or washers 27 on the pivot pin 20, said washers being placed between the successive blades. These washers are of somewhat larger diameter than the blades themselves, as clearly indicated in Fig. 4, and the through pin 23, already referred to, extends through the upper edge portions of the washers as well as through the side plates 15 and 16. Consequently, said washers are effectively retained against rotation, and in this way the rotation of one blade is not communicated to the adjacent blades.

In order to place the blades and washers under such an amount of compression as will make sure that any blade will remain in the raised position until purposely lowered, I have provided spring means or the like in conjunction with the pivot ends of the various blades and washers. In the particular construction illustrated, this takes the form of a pair of blocks of rubber or the like 28 which are set between the upper portions of the side plates 15 and 16 and the lowermost of the washers 27.

The side plates themselves are perforated to receive the pivot sleeve 20. At one side a washer 29 is placed against the end of the sleeve 20 and also against the face of the plate 15, said washer being held in place by a tap screw 30 which threads onto the end of the pivot sleeve 20. A similar construction may be used at the other end if desired. It will be noted that with this sort of an arrangement the compression exerted by tightening up the screws cannot cause an excessive amount of compression of the rubber blocks, since the parts cannot be tightened up beyond the amount limited by contact of the washers with the ends of the sleeve 20. This will make it certain that when the parts are definitely tightened up, the washers and blades will be brought into a definite fixed amount of frictional contact, and will avoid either a binding action due to excessive friction or a loosening up with wear.

In the particular construction illustrated, another bracket 31 is placed against the face of the plate 16, being held in place thereon by the screw 32 which reaches through the washer 33, and through said bracket into the sleeve 20. This bracket 31, when used, is for the support of the stem 34 of a small lamp shade 35, within which lamp shade is placed the electric bulb 36. The lower portion of the tubular lamp shade 35 is slotted, as shown at 37, so as to direct the illumination down against the face of the blade which is raised, as shown in Fig. 3.

While I have herein shown and described only a single embodiment of the features of my present invention, still I do not intend to limit myself to the same, except as I may do so in the claims.

I claim:

1. As a new article of manufacture, a semaphore for the purpose specified including in combination a pair of vertical side plates, a series of pins extending between the bottom of the side plates and between the side plates along one edge thereof serving to draw the side plates towards each other, means for limiting the approaching movement of the side plates towards each other, a pivot sleeve extending between the upper portions of the side plates, means for drawing the side plates towards each other at the position of said pivot sleeve and for limiting the approaching movement of the side plates towards each other at such location, a series of semaphore arms pivotally mounted on said pivot sleeve, a series of disks located on said pivot sleeve intermediate between the pivotal ends of the arms, a cross pin extending between the side plates and through the disks at a position above the pivotal ends of the semaphore arms serving to limit the upswing of the arms and to retain the disks against rotation for the purpose specified, and a rubber block located on the pivot sleeve intermediate between each of the side plates and the proximate arm, substantially as described.

2. As a new article of manufacture, a semaphore for the purpose specified including in combination a pair of vertical side plates, means for securing said side plates in spaced relationship with respect to each other, a

pivot member extending between the upper portions of the side plates, a series of semaphore arms pivotally mounted on said pivot member, a series of disks located on said pivot member intermediate between the pivotal ends of the arms, a cross pin extending between the side plates and through the disks at a position above the pivotal ends of the semaphore arms serving to limit the up swing of the arms and to retain the disks against rotation for the purpose specified, and a compressible block located on the pivot member intermediate between each of the side plates and the proximate arm, substantially as described.

3. As a new article of manufacture, a semaphore for the purpose specified including in combination a pair of vertical side plates, means for retaining the same in spaced relationship with respect to each other, a pivot member extending between the upper portions of the side plates, a series of semaphore arms pivotally mounted on said pivot member and normally depending into a vertical position and adapted to be raised into a horizontal position to give an indication, a series of stationary members located intermediate between the pivotal ends of the arms, a compressible block located on the pivot member intermediate between each of the side plates and the proximate arm, and a horizontal lamp above the indicating position of the semaphore arms and lying parallel to said position, substantially as described.

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