

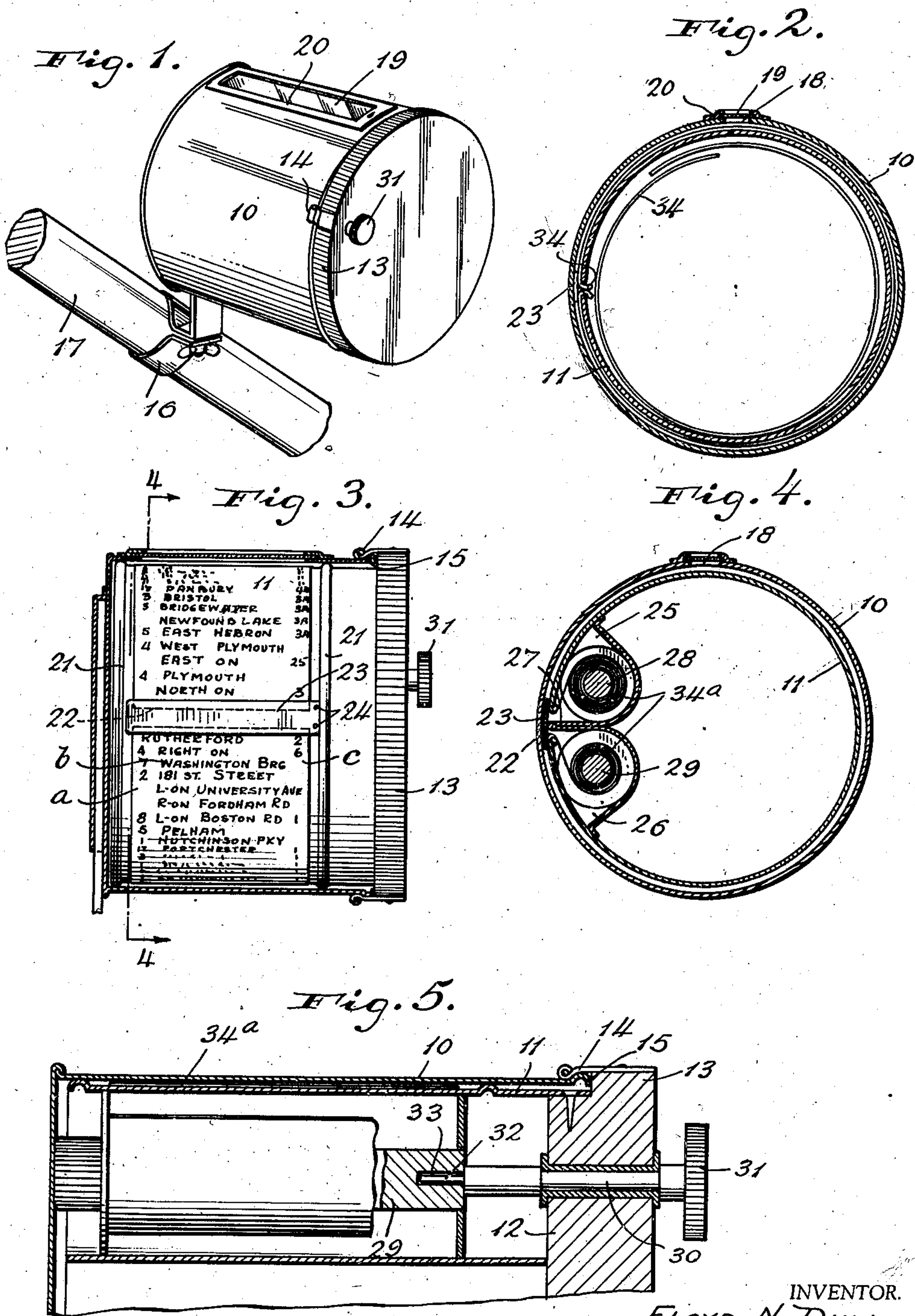
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HIGHWAY DIRECTOR

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HIGHWAY DIRECTOR

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The invention relates to highway directors and has for its object to provide a device designed primarily for use in connection with vehicles and more particularly automotive vehicles for enabling the driver or operator of the vehicle to accurately determine routes of travel in a simple and efficient manner. Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

In the accompanying drawing, which illustrates an example of the invention without defining its limits, Fig. 1 is a perspective view of the novel highway director in an operative position; Fig. 2 is a cross-section of one form of the director; Fig. 3 is a longitudinal section of another form thereof; Fig. 4 is a cross-section on the line 4—4 of Fig. 3, and Fig. 5 is a fragmentary longitudinal section, on an enlarged scale, showing details of the form illustrated in Figs. 3 and 4.

As shown in the illustrated forms of the invention, the highway director consists of an outer casing 10 and an inner casing 11 both preferably of cylindrical form and each having an open end and a closed end, said casings being telescopically combined in reversed relation and said inner casing 11 being rotatably adjustable within the outer casing 10. The arrangement is such that, in the operative assembled condition of the director, the inner open end of the inner casing 11 is located in contiguous relation to the closed end of the outer casing 10, as shown in Figs. 3 and 5. The outer end of the inner casing 11 is closed for instance by means of a closure 12 and is provided at said outer end with an annular flange 13 which, as shown, may constitute a part of the closure 12 and in any case is adapted to bear against the outer casing 10 at the outer end thereof as illustrated in Figs. 3 and 5. The annular flange 13 preferably is dimensioned and arranged to constitute the medium whereby the inner casing 11 is rotatably adjusted in the outer casing 10, and accordingly may be provided with a knurled or equivalent peripheral surface to facilitate such adjustment; it will be understood that other means may replace the annular flange 13 for manipulating the inner casing 11. Suitable means may be provided for removably maintaining said casings 10 and 11 against unintentional axial separation without interfering with the rotatable adjustment of the casing 11 in the casing 10; in the illustrated examples the inner casing 11 is accordingly provided with one or more elastic catches 14 secured to the annular flange 13 and arranged to snap over and behind

an annular bead 15 with which the outer casing 10, in such case, may be provided as shown in Figs. 3 and 5.

In addition the highway director may be provided with means for fixing it in an operative position, the character of said means depending upon the operative position which the director is to occupy in the vehicle or its equivalent; in the examples shown in the drawing, the aforesaid means is in the form of a clamping device 16 arranged for detachable connection with the outer casing 10 and adapted to be clamped for instance upon the steering post 17 of an automobile to fix the director in an operative position thereon within easy reach and view of the driver.

In the illustrated examples of the highway director the outer casing 10 is provided with an opening 18 in its circumferential wall, said opening extending in the direction of the axis of said casing 10 and preferably being closed by a sheet 19 of glass or other suitable material secured in place in a suitable frame 20, as shown in Figs. 1, 2, 3 and 4. To facilitate the rotatable adjustment of the inner casing 11 within the outer casing 10 said inner casing 11 may be provided with one or more annular ribs 21 adapted to engage the inner surface of the outer casing 10 to constitute annular bearings for said inner casing 11. The latter is further provided in its circumferential wall with a slot 22 extending in the direction of the axis of said casing 11 and preferably terminating in an open end at the open end of said casing 11, as illustrated in Fig. 3. The inner casing 11 in addition includes a clamping device of suitable construction which in the form illustrated in Fig. 3 comprises an elastic clamping member 23 having its one end permanently fixed at 24 of the inner casing and projecting in an axial direction toward the open end of said inner casing 11 preferably in registry with the aforesaid slot 22, as shown in Fig. 3; it will be understood that the type and arrangement of the clamping device may be different from the member 23 and that said clamping device may be otherwise constructed and arranged to meet the requirements of any special conditions.

In the form of the highway director shown in Figs. 3, 4 and 5, the inner casing 11 is provided interiorly with a pair of adjacent chambers 25 and 26 separated by a partition 27 which extends up to and preferably into the slot 22 to divide said slot lengthwise, as shown in Fig. 4. In the illustrated example the chambers 25 and 26 respectively contain reels 28 and 29 which are

rotatably fitted in said chambers 25 and 26 in any convenient manner and one or both of which may be provided with means located at the closed end of the inner casing 11 and accessible exteriorly thereof for rotatively actuating either one or both of said reels 28 and 29 for the purpose to be more fully set forth hereinafter. As shown in Fig. 5 the means in question may comprise a rod 30 rotatably and slidably mounted in the closure 12 and provided exteriorly of the latter with an operating knob 31, or its equivalent, to facilitate the manipulation of said rod 30; at its inner end the rod 30 is provided with a suitable coupling device illustrated in the form of a flat member 32 adapted to removably extend into a recess 33 with which the reel 29 is provided. If the highway director is designed to enable both of the reels 28 and 29 to be manually controlled, for instance to permit the web 34^a to be shifted in opposite directions, a duplicate rod 30 with its associated elements will in such case be provided for the reel 28.

In the novel highway director the highway directions are produced upon a flexible member arranged to extend circumferentially of the inner casing 11 upon the outer surface thereof and in movable relation thereto. In the form shown in Fig. 2, the flexible member consists of a card 34 of suitable dimensions to completely surround the inner casing 11 and having its opposite ends suitably fixed in place so as to be readily detachable, for instance, by projecting below the flexible clamping member 23, as illustrated in Fig. 2. In this form of the highway director a plurality of such individual cards 34 will be provided, each card in such case containing highway directions representing a travel period corresponding to a predetermined time period, such as for instance a day's run. In the form shown in Figs. 3, 4 and 5, the flexible member consists of a web of material 34^a carried by the reel 28 and extending therefrom through the slot 22 at one side of the partition 27 and extending circumferentially of the inner casing 11 on the outer surface thereof and through the slot 22 at the other side of said partition 27 to the reel 29, as illustrated in Fig. 4. On its outer surface the web of material 34^a contains the highway directions, said web 34^a if desired, being divided into sections in each of which highway directions representing a travel period corresponding to a predetermined time period are contained. In the preferred arrangement the highway directions provided on the individual cards 34 or on the web 34^a are arranged in three columns as shown in Fig. 3, the left hand column a consisting of figures representing mileage, the central column b including driving directions, that is names of cities, towns, and places, and points of interest, as well as names and other information pertaining to hotel, camps and other stopping places and the like, and the right hand column c including figures or other designations corresponding to the symbols designating the routes over which it is desired to travel.

In utilizing the highway director shown in Fig. 2, the inner casing 11 is withdrawn from the outer casing 10 and an appropriate card 34 is mounted upon the outer surface thereof, the particular card 34 in question including the highway directions for a particular travel period which may, for instance, correspond to a predetermined day's run. When the card 34 has been fixed in place upon the inner casing 11, the latter is re-inserted into the outer casing 10 and rotat-

ably secured therein by means of the elastic catches 14 or equivalent means. When thus combined the inner casing 11 is rotatably adjusted in the outer casing 10 by means of the annular flange 13 to bring the starting point of the particular card 34 into registry with the opening 18 of the outer casing 10. As the automobile or equivalent vehicle proceeds on its way the inner casing 10 is rotatably adjusted by hand at periodic intervals to progressively expose the highway directions upon said card through the opening 18 of the outer casing 10 and to thereby provide the driver of the vehicle at all times with directions as to the proper road or equivalent path of travel which is to be traversed. When the particular run corresponding to the road directions contained on the card 34 which is in place in the highway director has been completed, the card 34 may be removed and replaced by a second card 34 which contains highway directions corresponding to the next stage of travel in the particular trip or tour or their equivalent, in which the vehicle is engaged. When not in use, the cards 34 may be contained within the inner casing 11 which accordingly provides a convenient storage place for a set of cards 34 containing road directions sufficient for an entire trip or its equivalent.

In utilizing the form of the highway director shown in Figs. 3, 4 and 5, after the web 34^a has been withdrawn from the reel 28 around the inner casing 11 and attached to the reel 29, or in other words has been properly adjusted on the inner casing 11, the latter is inserted into the outer casing 10 and rotatably adjusted therein to bring the starting point of the particular run as indicated on the section of the web 34^a into registry with the opening 18 of the outer casing 10. As the vehicle proceeds on its travel, the inner casing 11 is rotatably adjusted in the outer casing 10 by means of the annular flange 13 at periodic intervals to progressively expose the road directions on said web section through the opening 18 and to thereby supply the operator of the vehicle with suitable driving directions at all times. When the particular run, which may correspond for instance to a day's travel, has been completed, the operating knob 31 of the reel 29 is rotatably actuated to correspondingly rotate the reel 29 to thereby wind the web 34^a upon said reel 29 and at the same time to unwind the web from the reel 28. This operation is continued until a successive section of said web 34^a containing highway directions for the next succeeding stage of the particular trip or tour is circumferentially located upon the outer surface of the inner casing 11. In some cases the reels 28 and 29 may be omitted from the chambers 25 and 26 and the web 34^a simply rolled upon itself in said chambers; with such arrangement the web 34^a will simply be uncoiled in one chamber and progressively coiled in the other chamber when successive sections of the web 34^a are adjusted to an operative position on the inner casing 11. In either instance the highway director is again in condition to supply the operator of the vehicle with proper driving directions by rotatably adjusting the inner casing 11 in the outer casing 10 at periodic intervals as previously described as soon as the web 34^a has been readjusted on the inner casing 11. When it is desired to replace the reels 28 and 29 with other reels, it is simply necessary to withdraw the rod or rods 30 in an axial direction to disconnect the member 32 from the

recess 33 and to permit the removal of the reels 28 and 29 or one of them, from the respective chambers 25 and 26, or from one of said chambers; it will be understood that the inner casing 11 has previously been withdrawn from the outer casing 10 to readily permit this substitution of reels. In some instances the same reels may be continuously used, in which case successive webs 34a are simply rolled upon one of the reels and utilized in the manner previously described. When not in use individual reels containing webs 34a rolled thereon, or individual webs 34a in a rolled condition may be stored within the inner casing 11.

From this it will be obvious that the road director in all of its forms may be efficiently used for either long or short trips or tours, or for any number of different trips or tours, as the case may be. In every instance the flexible member, whether in the form of an individual card 34 or a web 34a, in the operation of the highway director is located between the inner casing 11 and the outer casing 10 so that the outer surface of the individual card or of the web is located in close proximity to the inner surface of the outer casing 10 from which it follows that the road directions contained on said cards or web will be readily visible through the opening 18 of the outer casing 10. To facilitate the reading of this information through said opening 18 the glass 19 which closes the same may be in the form of a magnifying lens or its equivalent.

The highway director in all of its forms is extremely simple in construction and is easily manipulated by the driver or by another occupant of the vehicle, and at the same time makes it possible to replace the individual cards in operative position for use, or to adjust the web in a manner to provide successive highway information sufficient to enable the operator of the vehicle to correctly guide the latter over the proper roads or their equivalent and to reach the intended destination with a minimum of effort and without requiring any particular skill in the operations. The highway director is inconspicuous and may easily be located in operative position in the vehicle wherever desired, and so as to permit its use in the most efficient and comfortable manner.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of the invention.

I claim:

1. A highway director consisting of a cylindrical outer casing closed at one end and open at the other end and provided with an axially extending opening in its circumferential wall, a cylindrical inner casing rotatably fitted in said outer casing provided with a slot in its circumferential wall and having its inner end open in contiguous relation to the closed end of said outer casing, the outer end of said inner casing being closed, an annular flange on said inner casing at its closed outer end bearing against the outer casing at its open end whereby said inner casing is rotatably adjustable in said outer casing, means removably maintaining said inner casing in said outer casing, a pair of adjacent chambers in said inner casing having a partition extending into said slot of the inner casing to divide said slot lengthwise, reels in said chambers, a web of material extending from one reel through said slot at one side of said partition and extending circumferentially of said

inner casing and through said slot at the other side of said partition to the other reel, said web having highway directions on its outer surface adapted to be progressively exposed through the opening of said outer casing as said inner casing is rotatively adjusted therein, means located at the closed end of said inner casing and accessible exteriorly thereof for selectively actuating said reels to position successive sections of said web circumferentially of said inner casing, and means for fixing said highway director in an operative position.

2. A highway director consisting of a cylindrical outer casing closed at one end and open at the other end and provided with an axially extending opening in its circumferential wall, a cylindrical inner casing rotatably fitted in said outer casing provided with a slot in its circumferential wall and having its inner end open in contiguous relation to the closed end of said outer casing, the outer end of said inner casing being closed, an annular flange on said inner casing at its closed outer end bearing against the outer casing at its open end whereby said inner casing is rotatably adjustable in said outer casing, means removably maintaining said inner casing in said outer casing, a pair of adjacent chambers in said inner casing having a partition extending into said slot of the inner casing to divide said slot lengthwise, a web of material coiled in one of said chambers and extending therefrom through said slot at one side of said partition and extending circumferentially of said inner casing through said slot at the other side of said partition into the other chamber, said web having highway directions on its outer surface adapted to be progressively exposed through the opening of said outer casing as said inner casing is rotatively adjusted therein, and being itself adjustable on said inner casing to position successive sections of said web circumferentially thereof, and means for fixing said highway director in an operative position.

3. A highway director consisting of a cylindrical outer casing closed at one end and open at the other end and provided with an axially extending opening in its circumferential wall, a cylindrical inner casing rotatably fitted in said outer casing provided with a slot in its circumferential wall and having its inner end open in contiguous relation to the closed end of said outer casing, the outer end of said inner casing being closed, an annular flange on said inner casing at its closed outer end bearing against the outer casing at its open end whereby said inner casing is rotatably adjustable in said outer casing, means removably maintaining said inner casing in said outer casing, a card removably mounted on said inner casing in circumferential relation thereto and having highway directions on its outer surface adapted to be progressively exposed through the opening of said outer casing as said inner casing is rotatively adjusted therein, and means for fixing said highway director in an operative position.

4. A highway director consisting of outer and inner casings each having an open end and a closed end, said casings being telescopically combined in reversed relation and said inner casing being rotatively adjustable within said outer casing, the latter being provided with an axially extending opening in its circumferential wall, means for removably maintaining said casings against axial separation, and a flexible member extending circumferentially of said inner casing

in movable relation thereto and having highway directions on its outer surface adapted to be selectively exposed through the opening of said outer casing as said inner casing is rotatively adjusted therein.

5 5. A highway director consisting of outer and inner casings each having an open end and a closed end, said casings being telescopically combined in reversed relation and said inner casing
10 being rotatively adjustable within said outer casing, the latter being provided with an axially extending opening in its circumferential wall, means for removably maintaining said casings against axial separation, and a web of material
15 extending circumferentially of said inner casing and having highway directions produced on its outer surface adapted to be selectively exposed through the opening of said outer casing, said web being adjustable circumferentially of said
20 inner casing to position successive sections of said web thereon for exposure through said opening of the outer casing.

6. A highway director consisting of outer and inner casings each having an open end and a
25 closed end, said casings being telescopically combined in reversed relation and said inner casing being rotatively adjustable within said outer casing, the latter being provided with an axially extending opening in its circumferential wall,
30 means for removably maintaining said casings against axial separation, and a web of material

extending circumferentially of said inner casing and having highway directions produced on its outer surface in sections each representing a travel period corresponding to a predetermined time period, said web being adjustable circum- 5 ferentially of said inner casing to position successive sections of said web thereon and being rotatably adjustable with said inner casing in said outer casing to selectively expose said highway directions through the opening of the outer 10 casing.

7. A highway director consisting of outer and inner casings each having an open end and a closed end, said casings being telescopically combined in reversed relation and said inner casing 15 being rotatively adjustable within said outer casing, the latter being provided with an axially extending opening in its circumferential wall, means for removably maintaining said casings against axial separation, and cards each contain- 20 ing highway directions representing a travel period corresponding to a predetermined time period, said cards being individually mounted upon said inner casing in detachable circumferential relation thereto and being movable with 25 said inner casing as the latter is rotatably adjusted in said outer casing to selectively expose said highway directions through the opening of the outer casing.

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