Nov. 1, 1932. A. P. WHITE 1,886,324

TRAFFIC SIGN FOR ROAD SURFACES

Filed Oct. 18, 1929

Fig. 1.

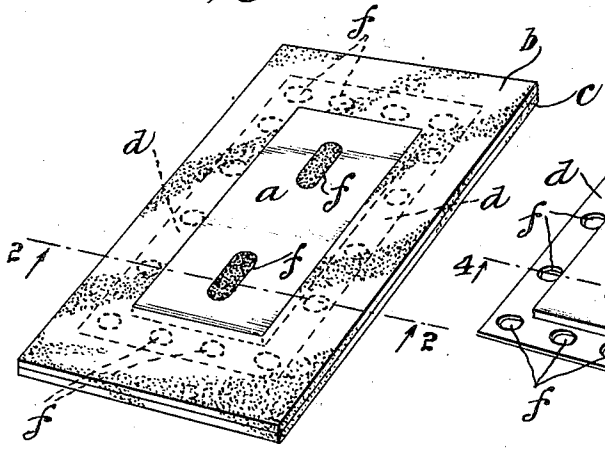


Fig. 3.

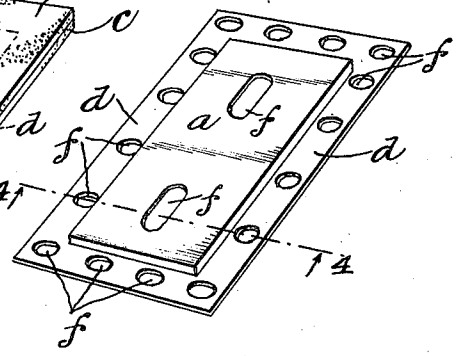


Fig. 2.

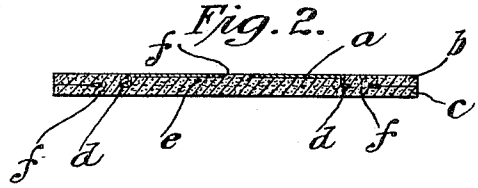


Fig. 4.



Fig. 5.

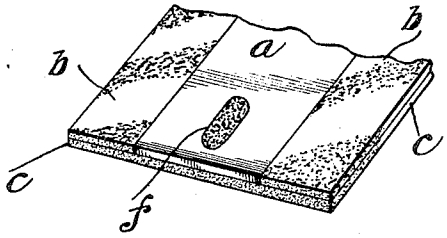


Fig. 6.

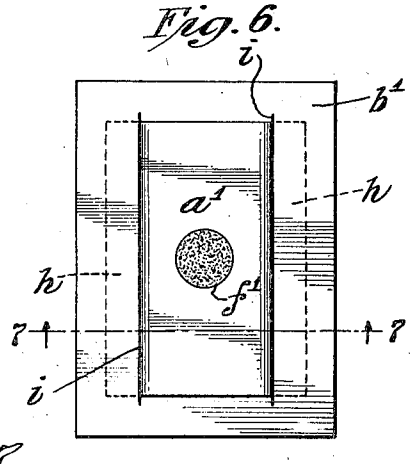
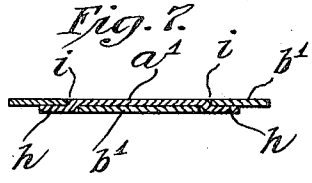


Fig. 7.



Alexander P. White

INVENTOR

Patented Nov. 1, 1932

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UNITED STATES PATENT OFFICE

ALEXANDER P. WHITE, OF CALDWELL, NEW JERSEY, ASSIGNOR OF ONE-HALF TO EDWARD T. WILKINSON, OF MONTCLAIR, NEW JERSEY

TRAFFIC SIGN FOR ROAD SURFACES

Application filed October 18, 1929. Serial No. 400,607.

My invention relates to the marking of surfaces of roads, for the guidance of vehicles and pedestrians and the further object of it is to provide an economical and durable marker or symbol that may be readily or quickly fixed in a road surface. A characteristic feature of the invention is that it comprises a marker adapted to become an integral part of the road body, after it is set or fixed in position. In principle the invention comprehends the fabrication of an article comprised of a plate serving as a symbol fixed in a bituminous mat-like base, the base in turn being adapted to become fixed in the road. The parts of the device, their relation in the combination and the manner in which they are put together, will be readily understood from the description herein and the annexed drawing which is a part of this specification.

In the drawing, like reference characters refer to like parts in different figures.

Fig. 1 is a perspective view of a complete marker ready to be fixed on the road surface. It is made up of a plate *a* fixed in a mat or shield of bituminous material in the form of two layers *b* and *c* united with an adhesive.

Fig. 2 is a cross section of Fig. 1 on the line 2—2, showing the manner in which the plate is held in the mat on a base formed by a union of the bituminous layer pieces *b* and *c*. In addition it shows the filler element *e* in the recess under the exposed or symbol portion of the plate, the recess being formed by depressing the edges of the plate in order to provide the flanged edges *d*, as shown more clearly in Fig. 3.

Fig. 3 is a perspective view of the plate before it is embedded in the mat base by insertion of the flanged portion between the layer pieces *b* and *c*, as explained in the description above of Figs. 1 and 2. It will be noted that this figure (Fig. 3) brings into view the flanges *d* and the holes *f* in the plate.

Fig. 4 is a view in cross section on the line 4—4 of Fig. 3, bringing into view the recess *e'*, which is filled with asphalt *e* as shown in Fig. 2.

Fig. 5 is a cross sectional perspective view of an end portion of a completed marker showing a modification in the construction of the device in which the plate is a simple flat member without the flanges and without the recess shown in Fig. 4. In this figure (No. 5) the plate *a* is shown as extending to an edge of the marker.

Fig. 6 is a plan view of a modified form of completed marker, consisting of a single piece mat *b'* in which the plate *a'* is fixed in place by being inserted through two parallel slits *i* in the mat after the manner of a shirring string.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6 in which it is shown that when the plate *a* is inserted through the slits, the portion of the mat between the slits is depressed and becomes a cushion for the exposed portion of the plate that constitutes the symbol. In this figure *h* is the portion of each side of the plate inserted into the slits and *f'* is a hole in the plate.

As already pointed out the article of the invention consists of two elementary parts which for convenience of description are designated the plate, shown by *a* in the drawing preferably made of metal and the mat or shield shown in the drawing as a union of *b* and *c* preferably made by uniting in a laminated base body, pieces of paper felt or burlap which have been saturated and coated with a bitumen compound such as asphalt of high melting point. It is desirable to coat also one surface of the layer pieces with coarse sand or granulated stone and press the stone particles into the body of the material. These layer pieces (*b* and *c*) are placed together so that the stone surface of one contacts with the asphalt coated surface of the other, thus incorporating the mineral of the body formed by their union. In the preferred form, as shown in Figure 1, the upper layer piece *b* is cut away in the center to expose the plate, the flanged edges *d* (Fig. 3) of which are enveloped between the two layer pieces. The recess under the plate shown by *e'* in Fig. 4, resulting from depressing the edges to form the flanges is filled with asphalt, shown by *e* in Fig. 2, making a cushion for the exposed part of the plate which exposed part is a

symbol of color contrasting with that of the road surface. The two pieces constituting the layers are attached together with a suitable adhesive, such as asphalt, dissolved or substantially liquefied, in a solution made of crude rubber and high volatile gasoline. That is to say, the agency for liquefying the asphalt for the adhesive is a solution made by dissolving, say two or three ounces of rubber in a gallon of gasoline. Tests have shown that the rubber element permeates the mat body and serves to arrest the tendency of the bituminous substance to spread under the pressure of vehicle wheels. While the fibrous material as a matrix in the mat, aids in serving the same purpose, i. e., to prevent spreading, it can be omitted. The union with the plate is then effected by simply pressing the plate with flanges omitted into a relatively thin sheet-like body of warm asphalt, formed of a thickness of, say, three eighths of an inch, by passing the asphalt while pliable from heat through a pair of rolls. In all cases it is desirable to incorporate the granular stone particles in the mat body. The holes or perforations in the plate as shown by *f* and *f'* in the drawing are a very potential means of holding the plate in position, because the asphalt, by filling the holes, establishes a riveting effect, resisting lateral movement. Obviously the holes may be varied as to number and size. Obviously also the plate may be of any desired size or pattern, circular or angular and a multiplicity thereof may be fixed in a single mat to create a pattern or figure. Obviously also it may be made of hard rubber, colored to contrast with the road surface, as well as metal, especially brass or white metal compositions.

The adhesive hereinbefore described is suitable for attaching the marker to the road. In preparing it there should be enough rubber used to produce a consistency like that of the white of an egg, say three ounces or less to a gallon. Coat the under side of the marker, as with a brush and allow from three to five minutes to elapse for the adhesive to become gummy enough to insure quick if not almost instant gripping.

In the claims below, the word "symbol" is used to refer to any plate or body of material or sheet able to withstand the wear and tear of traffic conditions, and having a color contrasting with the prevailing color of the road surface so as to adapt it to be useful as a traffic signal or mark, it being understood that the said plate is essentially a non-bituminous element.

What I claim and desire to secure by Letters Patent is:

1. As an article of manufacture, a traffic marker comprising a homogeneous body sheet of bituminous material throughout adapted to be adhesively fastened to a normal road surface, and an exposed symbol marker held within and secured by the material of the body in a position with its edges shielded by the body material, said symbol marker being out of direct contact with the road surface.

2. A traffic marker comprising, in combination, a signal symbol and a homogeneous body sheet of bituminous road surfacing material, the symbol being secured to the body sheet and the body sheet being adapted to be adhesively fastened to a normal road surface and to become substantially incorporated therewith, forming a new bituminous surface, at slight elevation to the original road surface in which the said symbol is exposed.

In witness whereof I have affixed my signature.

ALEXANDER P. WHITE.