July 8, 1930. A. C. FISCHER 1,770,359

SUPPORT FOR SEPARATING STRIPS

Original Filed June 30, 1927

Fig. 1.

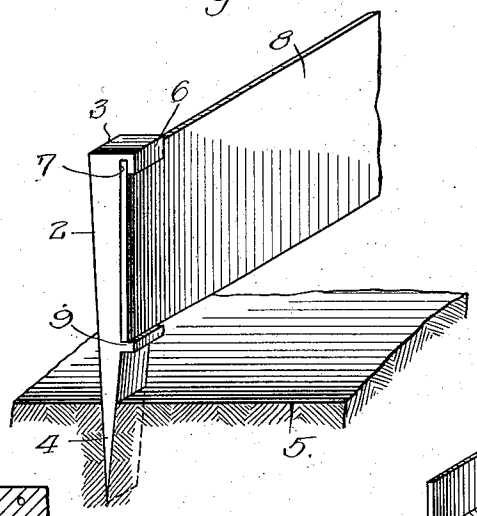



Fig. 4.

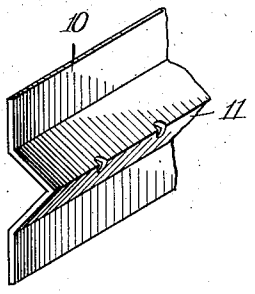



Fig. 3.

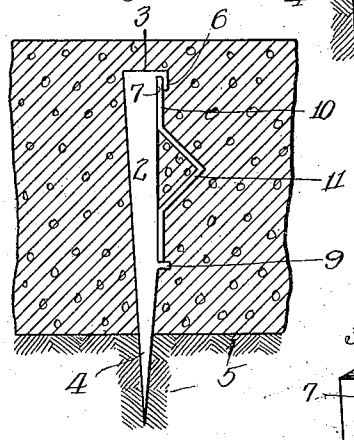
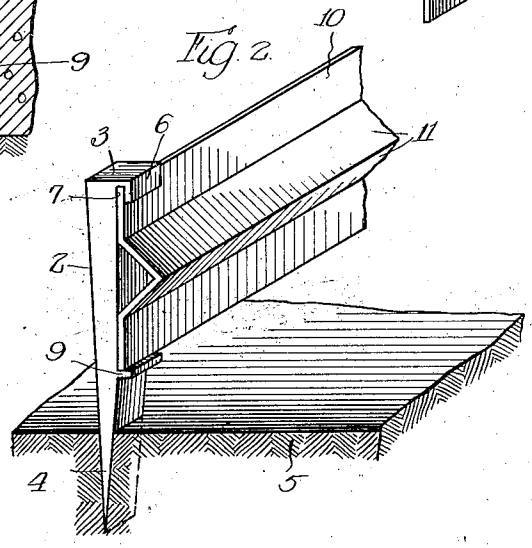



Fig. 2.




Inventor:
Albert C. Fischer,
By Ballard Moore atty

Patented July 8, 1930 1,770,359

# UNITED STATES PATENT OFFICE

ALBERT C. FISCHER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE PHILIP CAREY MANUFACTURING COMPANY, A CORPORATION OF OHIO

## SUPPORT FOR SEPARATING STRIPS

Application filed June 30, 1927, Serial No. 202,577. Renewed January 24, 1930.

My invention relates in general to paving and has particular reference to a convenient and practical means for supporting so-called separating strips as commonly used for separating the divisions of concrete paving.

In referring to separating strips I perhaps should briefly explain just what is meant by the term, so as to avoid any possible confusion. It is a more or less common expedient to divide concrete pavements, or even other concrete structures, into sections so as to avoid possible deterioration of the concrete due to expansion and contraction. These separating strips are sometimes installed every thirty, forty or fifty feet transversely of the road, as an example, and other times a longitudinal strip is used without the transverse strips, or even in combination with the transverse strips.

There are various types of separating strips. Those which are known more often as a separating strip are nothing more than a strip of sheet metal cut to the proper size and often formed with a so-called tongue on one side and a groove on the opposite side. These metal separating strips quite naturally lack compressible qualities to compensate for expansion of the concrete sections between which they are installed, but they do, however, compensate for contraction of the concrete. Sometimes they are installed with their crowning edges flush with the surface of the concrete, and sometimes they are completely imbedded in the concrete so that their crowning edges, so to speak, terminate below the surface of the concrete. In this capacity they function primarily to develop a line of weakness for controlling cracks due to contraction of the concrete, so that instead of having the cracks occur irregularly over the surface they are developed along certain lines.

Another form of the so-called separating strips is a preformed strip of compressible material, such as, a mixture of asphalt and fibre. These strips are more frequently referred to as expansion joint strips and are installed for the purpose of compensating for expansion as well as contraction of the concrete.

So far as my support is concerned it is not confined to any of these various types of separating strips, as in reality they are installed in the concrete in more or less the same fashion, i. e. to say, they must be supported on edge perpendicularly with the concrete poured around opposite sides of the strip.

Since the support in this particular instance has been devised primarily for use in combination with a metal separating strip I have selected this particular form in the accompanying drawing to illustrate the support.

In said drawing Figure 1 is a perspective view of my improved support for a separating strip.

Figure 2 is a corresponding view, wherein the support is shown as supporting a separating strip of the tongue and groove type.

Figure 3 is a view of Figure 2 with the concrete moulded about the support and separating strip; and

Figure 4 is a perspective view of a modified form of tongue and groove separating strip with apertures at the apex of the tongue and groove for receiving transversely disposed bracing rods.

Referring now to the drawing in detail. My improved support comprises preferably a metal stake 2, having a head 3, so that it may be hit with a sledge and driven into the ground. The opposite end of the stake is pointed or formed wedge-shaped as at 4, so as to enable it more easily to enter the ground 5. The head 3 is arranged to engage the upper edge of the metal separating strip and to firmly hold it. In the present form I accomplish this by extending the head 3 preferably to one side only of the main body of the stake 2, and form the underside of the overhanging head 6 with a groove 7 of substantially the same width as the separating strip 8, so that the upper edge of the separating strip may be received within the groove and held in position.

In order to hold the bottom edge of the separating strip at a desired distance from the ground 5, in which the stake 2 is driven, I provide the same side or lateral face of the

stake 2 from which the overhanging head 6 projects, with an outstanding shoulder or shelf-like lug 9, preferably formed integral with the stake. The distance between this lug 9 and the upper edge of the groove 7 in the overhanging shoulder 6 of the head 3 is substantially equal to the height of the separating strip 8. More properly stated, this distance is arranged so that the metal separating strip may be positioned with its upper edge in the groove and its lower edge resting on the shoulder 9, thus rigidly supporting the separating strip with its face preferably resting flat against the side of the stake.

In the form shown in Figures 2 and 3 the separating strip 10 is provided with a tongue and groove portion 11, and upper and lower flanges, the upper flange having its upper edge resting within the groove 7 and the lower flange having its lower edge resting on the shoulder 9. In this instance these upper and lower flanges lie flush with the side of the stake. As shown in the drawings the separating strips are adapted to be installed on edge and it is more or less necessary that they be imbedded in the concrete exactly perpendicular, otherwise there will be a tendency for one section of concrete to ride up over a confronting section, especially in instances where the tongue and groove form is not used. Not only is it necessary to install the strip perpendicularly but it must be installed in a straight line, otherwise in those forms of separating strips which terminate with their edges flush with the concrete anything but a straight line would make an unsightly installation.

In using the support the separating strip 8 is positioned on the stake with the upper or crowning edge in the groove 7, and the lower edge resting on the shoulder, and the stake is driven into the ground. It will be observed that neither the shoulder 9 nor the strip 8 go below the ground surface, while on the contrary they are spaced the required amount above the top plane of the ground 5. In this way the base clip or shoulder 9 acts as a support for the strip 8, and prevents the same from being imbedded in the ground, which would ordinarily happen in the absence of the shoulder 9, as the thickness of the strip is so slight as to present a comparatively sharp edge to the ground surface.

I have shown and described a strip with only one support. It is, of course, understood that as many stakes and supports may be used along the length of the strip as will be required.

I claim:

1. A support for inserting separating strips in paving structures comprising a stake adapted to be driven into the surface upon which the strip is supported, said stake having a pointed end and having an integral outstanding shoulder spaced from the pointed end to receive the bottom edge of the separating strip, the upper end of the stake constituting a driving head having an overhanging portion provided on its underside with a groove adapted to receive the upper edge of the separating strip.

2. A support for inserting separating strips in paving structures comprising a metal stake having a pointed end and having an oppositely disposed driving head formed with a laterally extending groove adapted to receive the crowning edge of a separating strip, said stake having an integral outstanding lug spaced from the head substantially the height of the supporting strip, and adapted to form a support for the lower edge of the supporting strip.

3. A support for inserting separating strips in paving structures comprising a metal stake having a pointed end and having a top provided with an outstanding integral extension formed with a groove on its undersurface, which groove forms a continuation of the lateral face of the stake, said groove being of sufficient width to receive the crowning edge of a supporting strip, the same side of the stake from which the overhanging edge of the head projects having an integral outstanding lug spaced from the head the height of a separating strip, and adapted to form a supporting ledge for the bottom edge of a separating strip.

Signed at Chicago, Illinois, this 16th day of June 1927.

ALBERT C. FISCHER.