Nov. 28, 1933. R. R. ROBERTSON 1,936,859

PARTING STRIP SUPPORT

Filed June 19, 1930

Fig. 1

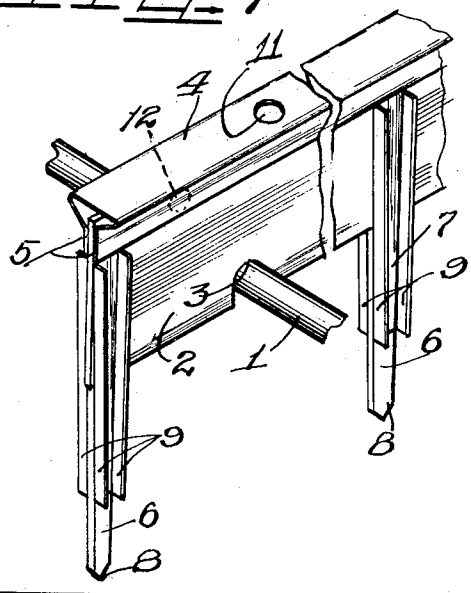


Fig. 4

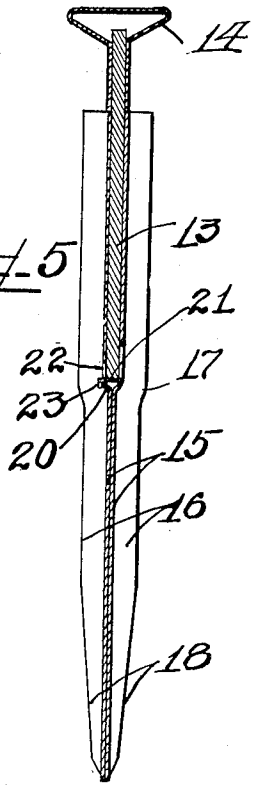


Fig. 5

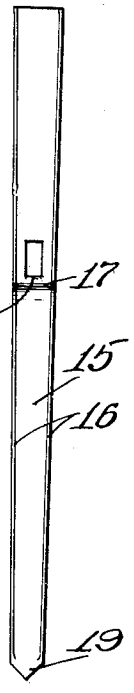


Fig. 3

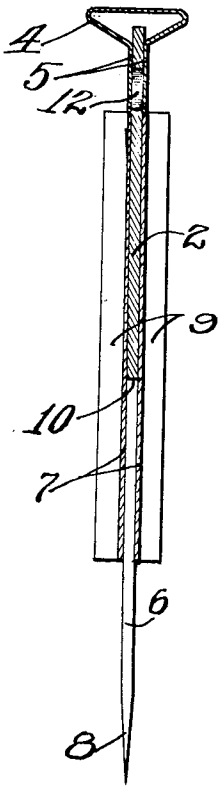
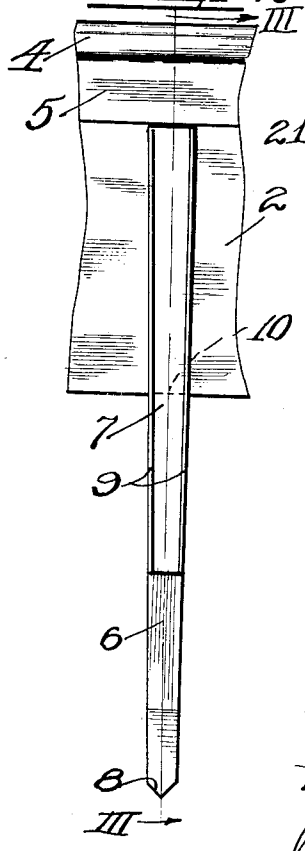


Fig. 2



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UNITED STATES PATENT OFFICE

1,936,859

PARTING STRIP SUPPORT

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Application June 19, 1930. Serial No. 462,188

1 Claim. (Cl. 94—8)

This invention relates to an improved type of concrete road parting strip and support therefor constructed to eliminate the use of the ordinary type of staking pins by replacing the same with improved notched or yoked supporting pins which are adapted to be driven into a concrete road sub-grade with the upper portions of the improved supporting pins provided with suitable upwardly opening pockets or recesses for the removable reception of improved parting or center strip plates, the lower margins of which are notched to permit the same to be removably engaged over supported dowel bars while the upper projecting ends of the removable center strip plates are permitted to project above the upper ends of the supporting pins to receive a channeled mould cap, thereby affording an arrangement permitting the mould cap and the center strip to be removed from the body of the road after the pouring of concrete to provide the necessary center strip pocket or crack for the reception of pitch or the like, and furthermore permitting the reuse of the center strip plates and mould caps, to greatly reduce the cost of concrete road construction work.

It is an object of this invention to provide an improved type of concrete road center strip groove-forming device consisting of improved center strip-supporting pins for engagement in the concrete road sub-grade for the removable reception of center strip plates and mould caps, permitting the reuse of the plates and mould caps, which, when removed from the supporting pin, leave the required center groove or crack in the crown of the road to be eventually filled with pitch or other suitable expansible and contractible material.

It is also an object of this invention to provide improved center strip plate-supporting pins adapted to be engaged in a road sub-grade and having the upper ends thereof so constructed that center strip plates may be temporarily supported therein during the pouring and setting of concrete to form the crown of the road and furthermore adapted to be removed from the concrete after it has set to leave the required center strip groove to be filled with pitch, and permitting the center strip plates to be repeatedly reused, thereby greatly reducing the quantity of metal required for road construction work.

It is furthermore an object of this invention to provide an improved center strip groove-forming device for concrete roads, said device embracing improved flanged supporting pins adapted to be permanently engaged in the concrete road sub-grade and having the upper end thereof so formed that center strip plates may be removably supported therein and seated over dowel bars to afford an improved method of forming the necessary center groove of the road by lifting the center strip plates upwardly out of engagement with the supporting pins and the dowel bars to permit reuse of the center strip plates, thereby reducing the cost of road construction work, since the amount of metal permanently remaining in the road consists merely of the supporting pins, together with the dowel bars and the dowel bar supporting members.

It is an important object of this invention to provide an improved concrete road center strip groove-forming device consisting of removably interfitting supporting pins and center strip plates adapted to be supported on a concrete road sub-grade or the like, to be embedded in concrete in removable interfitting engagement with dowel bars, with the eventual removal of the center strip plates from the supporting pins and from engagement with the dowel bars to cause the required center strip crack or groove to be formed in the concrete road body section, leaving the supporting pins and the dowel bar members embedded in the concrete to reenforce the same.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawing.

The invention (in a preferred form) is illustrated in the drawing and hereinafter more fully described.

On the drawing:

Figure 1 is a fragmentary perspective view of the improved center strip groove-forming device embodying the principles of this invention, and shown in association with a dowel bar.

Figure 2 is an enlarged side elevation of one of the improved supporting pins forming a part of the device, and illustrated as supporting a fragmentary portion of a center strip plate and the mould cap carried thereby.

Figure 3 is a vertical sectional view taken on line III—III of Figure 2.

Figure 4 is a sectional view similar to that illustrated in Figure 3 but illustrating a modified form of supporting pin.

Figure 5 is a front elevational view of the modified form of supporting pin illustrated in Figure 4, with the center strip plate and the mould cap thereof omitted.

As shown on the drawing:

An improved method whereby a center strip groove or crack may be formed in the upper body

section of a concrete road is adapted to be accomplished by means of the improved contraction joint device of the type illustrated in Figures 1 to 3 of the drawing, in which the reference numeral 1 indicates a dowel bar adapted to be positioned transversely across a road above the sub-grade, with the end portions of the dowel bar supported by means of dowel bar supporting stakes or pins of any desired construction for engagement into the top surface of the sub-grade, whereby the dowel bar is adapted to be supported at a predetermined elevation.

The improved device comprises a sheet metal center strip or plate 2 of any desired depth, with the lower longitudinal margin of the strip or plate having notches or pockets 3 formed therein at spaced intervals to permit the strip or plate, when mounted in position, to be removably engaged or seated over the dowel bars 1 which are supported transversely across the road at a given elevation above the top surface of the sub-grade.

Removably mounted on the upper longitudinal edge of the center strip or plate 2 is a mould cap comprising a head section 4, the side margins of which are bent downwardly and inwardly and terminate in a pair of spaced parallel flanges 5 to afford a channel construction, permitting the mould cap to be removably engaged on the upper longitudinal margin of the center strip or plate 2, as illustrated in Figure 1.

The improved notched center strip plate and the mould cap removably engaged thereon form parts of the device which are adapted for repeated reuse in the construction of a concrete road for the formation of the necessary center groove or crack longitudinally in the upper section of the road, so that the amount of metal required for the formation of the contraction joint in the road is greatly reduced, thereby also reducing the cost of construction.

For the purpose of removably supporting the center strip or plate 2, together with the mould cap thereof, in position at a predetermined elevation longitudinally above the longitudinal center line of the concrete road sub-grade, a plurality of improved stakes or supports are provided to be partly driven into the sub-grade, leaving the upper portion thereof in proper position for removably receiving and supporting the center strip plate and its mould cap in position.

Each of the improved supporting stakes or supports comprises a pair of channel cross-sectioned head members or channel bars positioned back-to-back in spaced relation, with the lower portions thereof contacting opposite sides of the upper end of a tapered blade or flat pin 6, to the opposite surfaces of which the lower portions of the exterior surfaces of the main plates 7 of the channel bar members are adapted to be brazed, welded or riveted. The lower end of the blade 6 is tapered at 8 to permit the same to be conveniently driven into the sub-grade or any other suitable support. Integrally formed on the longitudinal margin of the main plate 7 forming part of the channel bar head section of the support are side flanges 9. Since the upper end of the blade 6 projects only part way up between the channel head members of the support, a shoulder or seat 10 is provided between the upper ends of the channel bar sections to afford a recess or pocket in the upper end of the support for the removable reception of the center strip or plate 2. The lower edge of the plate 2 is adapted to seat on the shoulder 10, allowing the upper longitudinal margin of the plate to project above the upper end of the support to allow the bottom portion of the mould cap 4 to be removably engaged on the upper margin of the plate, with the lower edges of the mould cap flanges 5 seating upon the upper ends of the flanges 9, whereby the mould cap is held in a predetermined position.

As illustrated in Figure 1, a plurality of the improved stakes or supports are adapted to be driven into the top surface of the concrete road sub-grade along the center line of the road or at any other desired location, and the tapered ends of the blades 6 are driven downwardly into the sub-grade the required distance so that eventually the top surface of the mould cap will be at the required elevation. After a plurality of the improved stakes or supports are secured in place upon the sub-grade, the center strip or plate 2 is seated in the notches or pockets provided in the upper ends of the supports between the flanged channel members, with the lower edge of the plate resting upon the shoulders 10 and with the notches 3 engaged over the dowel bars 1.

With the center strip of plate 2 supported in position upon the improved stakes or supports, the mould cap 4 is adapted to be removably engaged on the upper margin of the plate 2, with the mould cap flanges engaged on opposite sides of the plate and resting upon the upper ends of the support flanges 9 to hold the mould cap supported in position at the desired elevation above the road sub-grade. In case the top surface of the mould cap 4 is too high, the mould cap may be removed and the upper edge of the center strip or plate 2 may be pounded, thereby causing the blades 6 of the supports to be driven further into the sub-grade for the purpose of permitting the top of the mould cap to be properly positioned at the required elevation.

After the center strip 2 and the mould cap 4 have been properly supported in position by means of the improved supporting stakes, concrete is adapted to be poured on opposite sides of the mould cap and plate to embed the dowel bars and the supporting stakes, together with the center strip and the lower portion of the mould cap. The concrete is permitted to set, after which the mould cap 4 is adapted to be removed by engaging hooks to other suitable means in openings 11 provided at spaced intervals along the top of the mould cap. The mould cap is so shaped that, when the same is removed from the concrete, an enlarged center groove is provided in the concrete, with said groove being tapered downwardly to the upper ends of the supporting stakes. After the mould cap has been removed, hooks or other suitable tools are engaged in openings 12 provided in the upper longitudinal margin of the center strip plate 2 to permit the center strip plate to be pulled upwardly out of engagement with the upper ends of the supporting stakes and out of engagement with the dowel bars 1. The removal of the center strip plate provides a center strip crack or groove in the concrete which extends upwardly and terminates in the enlarged mouth section of the center strip groove. After removal of the mould cap and plate, pitch or other expansible material is adapted to be poured into the center strip groove or crack to fill the same and provide the required center line longitudinally along the middle of the concrete road. The flanged supporting stakes are permitted to be permanently embedded in the concrete to serve as reenforcement members.

It will be noted that the improved device af-

fords a means for producing a convenient method whereby the center crack or groove may be formed in concrete roads, allowing the mould cap and the center strip plate to be removed and repeatedly reused, so that the amount of metal required to be left embedded in the concrete is materially reduced, thereby also materially reducing the cost of concrete road construction work.

Figures 4 and 5 illustrate a modified form of center strip plate supporting stake adapted to afford a convenient support for a removable center strip plate 13 having a mould cap 14 removably engaged on the upper longitudinal margin thereof. The modified form of support or stake comprises a pair of metal channel sections, preferably of tapered construction and comprising back plates 15 and longitudinal side flanges 16. Each of the channel sections is deflected outwardly at 17, permitting the lower ends of the back plates 15 to abut one another and be rigidly secured to one another by means of brazing, welding or riveting, to provide a solid reenforced pin section, with the lower ends of the flanges 16 tapered at 18 and with the lower ends of the back plates 15 also tapered as indicated by the reference numeral 19 to afford a suitable tip or point, permitting the lower end of the improved support or stake to be driven into a road sub-grade or into any other type of support in which the stake is to be supported. The deflected portions 17 of the channel sections afford a crotch at 20 whereby the upper ends of the channel sections are spaced apart in parallel relation to afford a suitable pocket or recess for the reception of the removable center strip or plate 13, as clearly illustrated in Figure 4. Struck inwardly from the back plate of one of the channel sections immediately above the crotch 20 is a tongue or lug 21 which is adapted to span the space above the crotch 20 and project through an opening 22 in the back face of the opposite channel section to permit the lug or tongue 21 to have the end thereof bent over at an angle to afford a hook 23 which projects through the opening 22 and engages the opposite channel section to hold the lug or tongue 21 properly positioned to afford a shoulder or seat upon which the lower longitudinal edge of the center strip or plate 13 is adapted to rest. It will thus be noted that the tongue or shoulder 21 not only affords a seat for the lower longitudinal edge of the center plate 13 but also acts as a stop to prevent the center strip plate from wedging downwardly into the crotch 20 to deflect or separate the connected portions of the back plates forming the base or pin section of the improved support.

The modified form of stake or support illustrated in Figures 4 and 5 is adapted to be used similarly to the stake described in connection with Figures 1 to 3, inclusive.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention, and it is, therefore, not purposed to limit the patent granted hereon otherwise than necessitated by the scope of the appended claim.

I claim as my invention:

A parting strip support consisting of a flat stake pin, and a pair of oppositely directed channel members secured to the upper portion of said pin and extending thereabove in spaced parallel relation whereby a parting strip receiving pocket is defined therebetween, and a plurality of upper and lower shoulders are provided thereby.

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