Dec. 31, 1929. R. R. ROBERTSON 1,741,585

CONTRACTION ROAD STRIP

Filed Dec. 10, 1927

FIG. 1

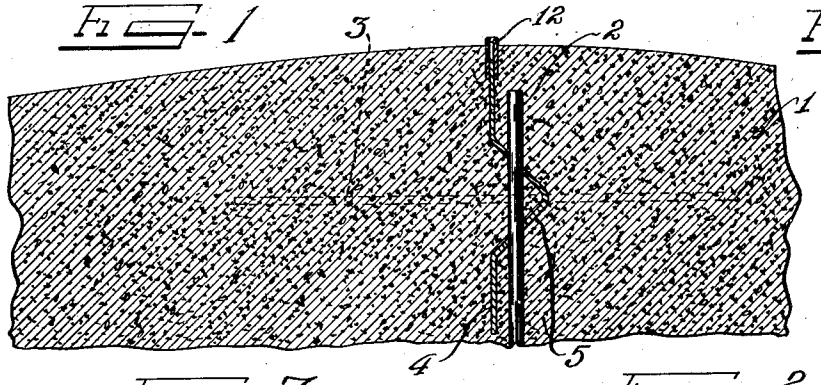


FIG. 4

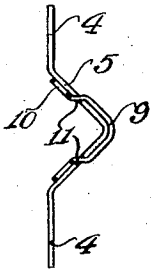


FIG. 3

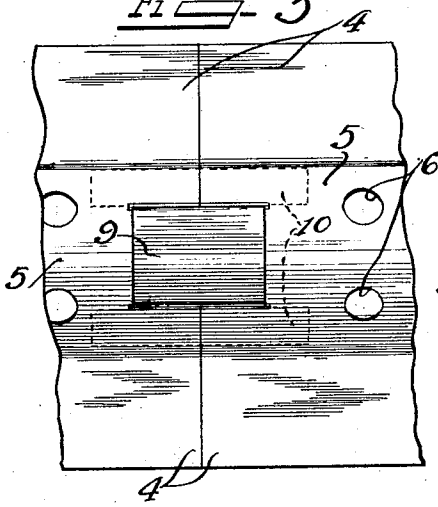


FIG. 2

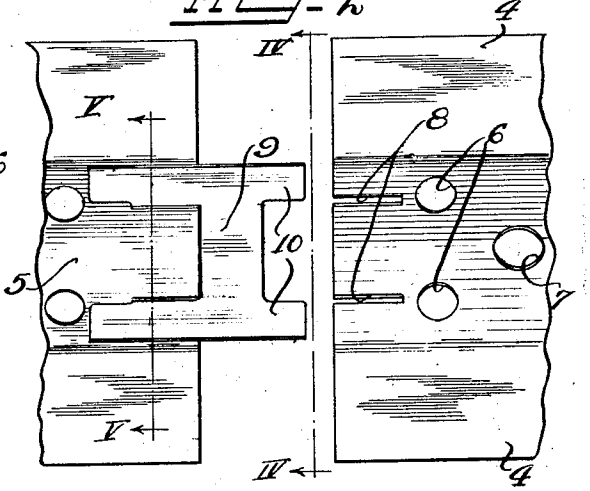


FIG. 6

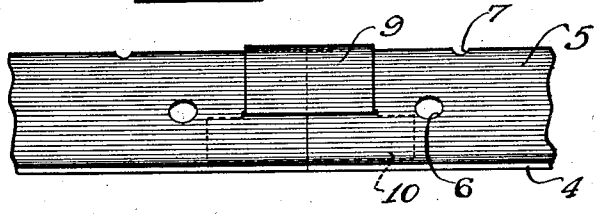


FIG. 5

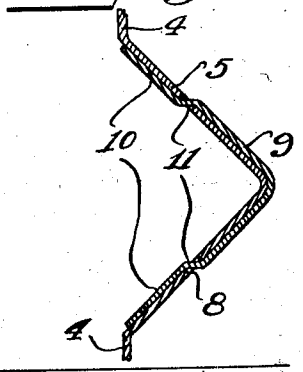
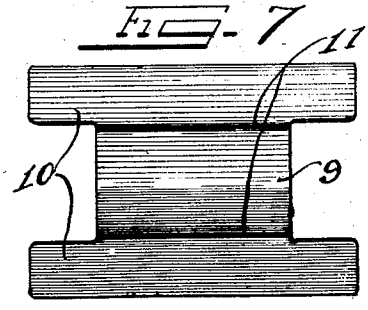


FIG. 7



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UNITED STATES PATENT OFFICE

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CONTRACTION ROAD STRIP

Application filed December 10, 1927. Serial No. 239,045.

In the construction of concrete roads it has been the practice to position contraction strips longitudinally in the middle of the road and secure said strips in place by means of stakes or the like, after which concrete is poured to imbed the strips, leaving the upper edges of the same to designate the center or crown of the road.

The road strips heretofore used have been constructed in such a manner that it has been necessary to overlap the plates at their ends, which contain apertures provided to permit retaining stakes to be engaged therethrough to hold said strips locked one to the other. This arrangement has not proven satisfactory for the reason that by overlapping the strips the line formed by the upper edge of such strips is not of uniform thickness, due to the overlapping of the strips, which, consequently, makes an irregular line along the crown of the road.

To obviate the above conditions, this invention has been devised to provide road strips and connectors which are so constructed that the strips may be held connected one to the other in abutting relation so that the flanges of the strips will form a continuous straight edge, over which channel or U-cross-sectioned beams or rails may be removably engaged to project above the crown of the road after the concrete has been poured to permit a straight groove to be provided longitudinally along the crown of the road when said channel rails are removed, so that tar or the like may be poured into said groove to form a center strip for the road.

It is an object of this invention to provide improved simplified contraction road strips with means for holding the same connected in abutting relation to facilitate the forming of a center groove along the crown of a road in which the strips are imbedded.

It is also an object of this invention to provide apertured contraction road strips adapted to be held in aligned abutting relation with one another by means of an H-connector to permit channel rails to be removably engaged over the upper edges of the strips when mounted in position ready to have concrete poured therearound.

It is a further object of this invention to provide apertured road strips for receiving retaining and reinforcing bars, said strips having the ends thereof notched for the purpose of receiving a connector, constructed to permit the adjacent edges of the strips to abut one another, to facilitate the forming of a straight longitudinal groove of uniform width along the crown of a road in which the strips are used.

It is an important object of this invention to provide improved means for forming a straight groove of uniform width longitudinally along the crown of a concrete road by using improved road strips, the ends of which are held in abutting relation by improved connectors for the strips, so that the upper aligned edges of the strips may have removable rails engaged thereon during the pouring of the concrete over said strips and connectors.

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

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

On the drawings:

Figure 1 is a transverse section through the crown of a concrete road having improved road strips imbedded therein and carrying removable top rails to facilitate the forming of a straight groove along the crown of a road.

Figure 2 is an enlarged fragmentary side elevation of a pair of road strips separated from one another, showing a connector engaged on one of said strips ready to have the other strip engaged thereon.

Figure 3 is an opposite side elevation of the strips illustrated in Figure 2, illustrating the abutting relation of said strips made possible by use of the improved connector.

Figure 4 is a reduced end view of one of the strips and the connector taken on line IV—IV of Figure 2.

Figure 5 is an enlarged transverse section taken on line V—V of Figure 2.

Figure 6 is a longitudinal side elevation of the connected strips illustrated in Figure 3.

Figure 7 is a plan view of the improved connector removed from the strips.

As shown on the drawings:

The reference numeral 1 indicates a fragmentary portion of the crown section of a concrete road having improved contraction road strips imbedded therein and supported by retaining rods or stakes 2 and supporting transversely disposed reinforcing rods or bars 3 at substantially right angles to the vertical retaining rods 2.

The improved means for forming a continuous straight groove of substantially uniform width longitudinally along the center or crown of the concrete road comprises a plurality of plates or strips, each comprising a pair of flat metal flanges 4 disposed in substantially the same plane and integrally connected by means of a longitudinally disposed intermediate trough or V-cross-sectioned middle section 5 having a plurality of pairs of apertures 6 in the opposite sides of the intermediate section and near the ends thereof, in addition to aperture 7 provided along the middle or bight portion of said intermediate section 5.

Each end of the strip is also provided with a pair of parallel grooves or notches 8 disposed in the opposite sides of the intermediate section 5, as clearly illustrated in Figure 2. The road strips or plates thus comprise an intermediate apertured trough section having end slots and a pair of flange plates integral with the longitudinal edges of the intermediate section. The improved road strips are adapted to be supported in a substantially vertical position, as illustrated in Figure 1, longitudinally along the middle of a road bed, with said strips having the adjacent edges thereof abutting one another by means of improved H-connectors, each of which comprises a middle V-cross-sectioned intermediate section or trough 9 and a pair of flanges or strips 10 projecting beyond the ends of the intermediate section 9 and integrally therewith and offset therefrom by deflected connecting strips 11.

A road strip is adapted to be mounted in a vertical position by means of a pair of retaining rods or stakes 2, which are projected downwardly through the pairs of apertures 6 and are secured in the road bed. A connector is now engaged in one end of the supported road strip, as indicated in Figure 2, with the offset strips 11 projecting into the notches 8 in the end of the intermediate section 5 of the strip. With this arrangement, a second road strip may be readily mounted in position, aligned with the first road strip by inserting the slots 8 in one end of the second strip over the projecting end of the connector, half of which is engaged on the previously supported road strip. The second road strip is now pushed into position, as illustrated in Figure 3, with the two adjacent ends of the road strips abutting one another. Another retaining rod 2 is now engaged in the outermost pair of apertures 6 and is driven into the road bed to secure the second road strip in place. It will thus be noted that as additional road strips are mounted in position only one retaining rod is required for each of said strips.

With a series of road strips mounted in aligned vertical position, as illustrated in Figures 1 and 3, the upper flanges of said strips are aligned with one another and are adapted to have engaged thereover U-cross-sectioned rails or groove-formers 12, which are frictionally engaged over the upwardly projecting flanges 4 of the road strips and may be adjusted to be positioned at different heights, depending upon the location of the upper surface of the crown section of the road. As will be noted from Figure 1, the removable rails 12 are adapted to project above the crown of the road a slight distance to permit convenient removal thereof after the concrete has been poured.

With a line of road strips engaged longitudinally along the center of the road bed, concrete may then be poured upon the road bed on opposite sides of the road strips and the same covered to about half of their height. The transverse reinforcing rods 3 are now adapted to be projected through the apertures 7 of the road strips, as illustrated in dotted lines in Figure 1, after which the process of pouring the concrete is continued until the road is completed. After the concrete has been permitted to set a predetermined length of time, the rails 12 are removed from the aligned abutting road strips, thereby leaving a groove of uniform width longitudinally along the center of the crown of the road. This center groove, after the concrete has hardened, is filled with pitch or any other suitable material to provide the customary black center line of the road.

The improved road strips of this invention afford a convenient means whereby said strips may be supported in abutting relation by means of the connectors 9—10, and said road strips are secured in place by means of the rods or stakes 2, as described, to afford an arrangement whereby a straight groove of substantially uniform width may be provided longitudinally along the crown of a road by means of the removable rails 12.

I am aware that many changes may be made, and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted hereon, otherwise than necessitated by the prior art.

I claim as my invention:

1. The combination with a plurality of slotted road strips, of a connector interfitting said road strips to hold the same in aligned

abutting relation, said connector comprising an intermediate trough section, a pair of longitudinal flanges extending beyond the ends of said trough section, and offset strips integrally connecting said intermediate trough section with said flanges.

2. A contraction device for concrete roads comprising a pair of plates having the central portions formed to afford V-shaped sections, said sections having apertures in the opposite walls thereof intermediate the ends of the plates and slots in the ends of said intermediate sections, and a notched connector for joining said plates and projecting into the slots thereof to hold the plates aligned in abutting relation.

3. A contraction device for concrete roads, comprising a plurality of metal plates having the middle portions thereof deflected out of the planes of said plates to form troughs, with said troughs having apertures and slots therein, connectors for joining said plates in abutting relation, with each of said connectors comprising a pair of flanges integrally connected by an intermediate trough section of a length shorter than the length of said flanges and offset with respect to the planes of said flanges to permit the connector to fit into the slots of said plates.

4. The combination with a pair of slotted road strips, of a connector interfitting said road strips to hold the same in aligned abutting relation, said connector comprising an intermediate trough section, a pair of flanges, and offset strips connecting said flanges with said trough section.

5. A road strip device comprising a pair of plates having the central portions formed to afford V-shaped sections, said sections having apertures in the opposite walls thereof intermediate the ends of the plates and slots in the ends of said intermediate sections, and a connector having offset flanges for joining said plates and projecting into the slots thereof to hold the plates aligned.

6. A parting strip connector comprising a pair of flanges integrally connected by an intermediate trough section, of a length shorter than the length of said flanges and offset with respect to the plane of the flanges.

7. A parting strip connector comprising a trough section and flanges integrally connected to opposite edges thereof by offset strips.

8. A parting strip connector comprising connected walls having deflected strips formed therein to offset portions of said walls from the remaining portions thereof.

In testimony whereof I have hereunto subscribed my name.

ROBERT R. ROBERTSON.