July 21, 1925. 1,547,036

B. V. HEDRICK

CONCRETE CURB FORM

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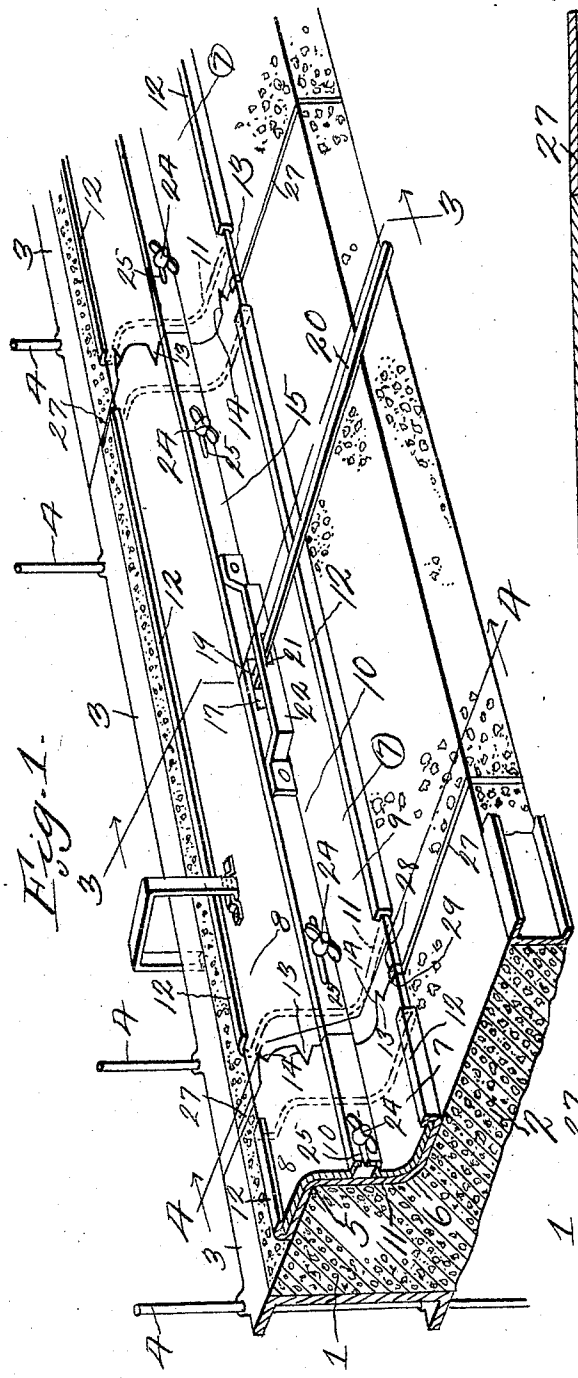


Fig. 1.

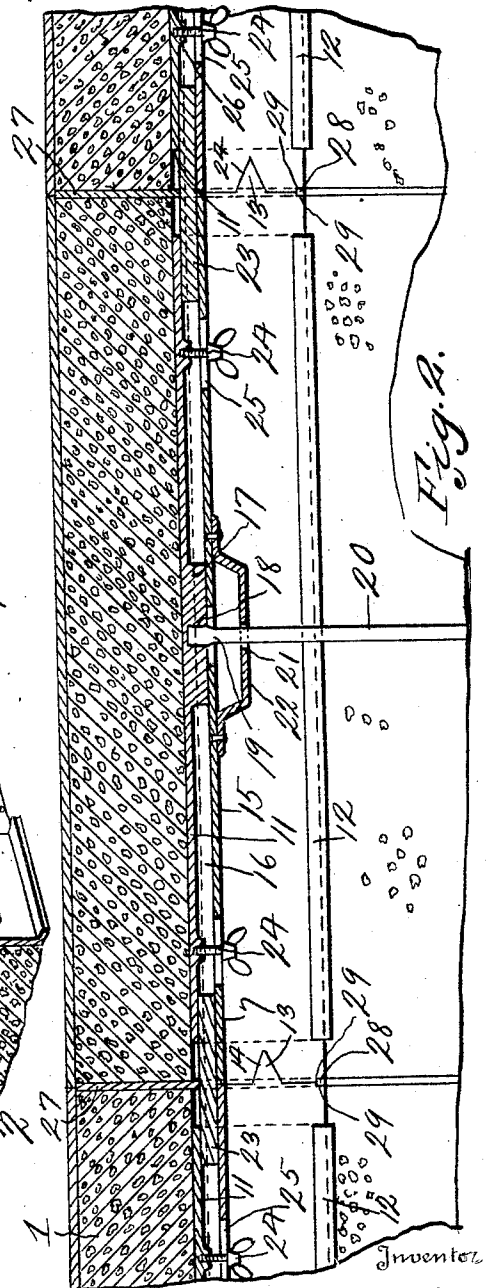


Fig. 2.

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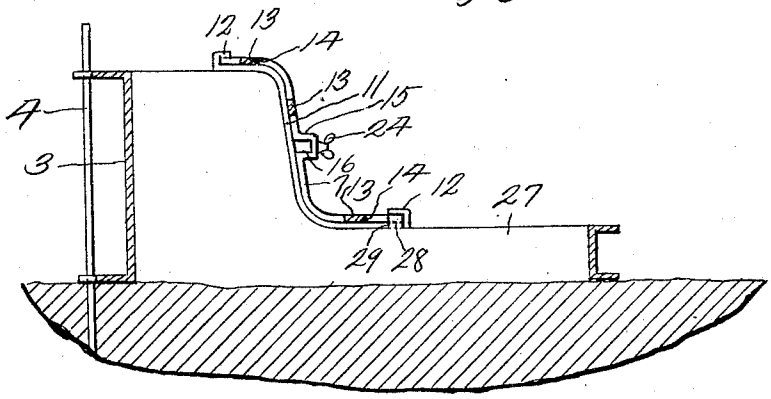
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Fig. 4.



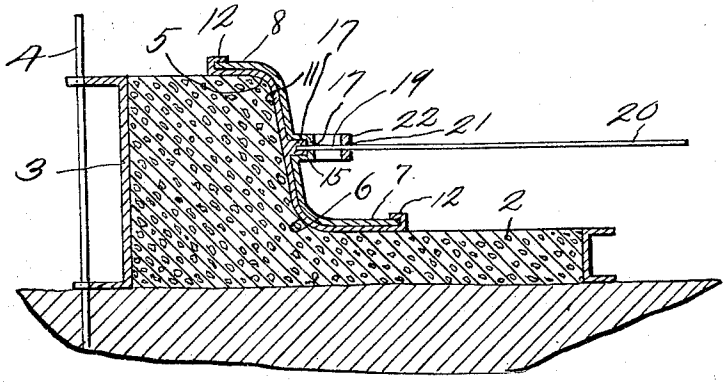


Fig. 3.

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Patented July 21, 1925. 1,547,036

UNITED STATES PATENT OFFICE.

BURL V. HEDRICK, OF SALISBURY, NORTH CAROLINA.

CONCRETE-CURB FORM.

Application filed February 19, 1925. Serial No. 10,275.

To all whom it may concern:

Be it known that I, BURL V. HEDRICK, a citizen of the United States, residing at Salisbury, in the county of Rowan, State of North Carolina, have invented a new and useful Concrete-Curb Form; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to forms for forming concrete curbs particularly of the type where the gutter is formed integral with the curb, and has for its object to provide means in connection with the form and slidably connected thereto whereby the outer side of the curb and the adjacent portion of the gutter may be easily and quickly smoothed with the form in position, thereby obviating the necessity of smoothing these parts with a trowel after the form is removed which is now the common practice, and which troweling or smoothing operation involves placing a layer of cement on the parts which quickly crumbles or does not set uniformly with the body of the curb and gutter, consequently the curb quickly deteriorates.

A further object is to slidably connect to the inner sides of the outer form sections members shorter than the form sections, and which members may be reciprocated as desired for smoothing the side of the curb and adjacent portion of the gutter. Also to provide interengaging lugs and recesses in the adjacent abutting ends of the form sections for maintaining said sections in accurate alinement.

A further object is to form the form sections with compound bends longitudinally, and the trowel section similarly shaped and to provide the trowel section with flanges overlying the longitudinal edges of the form sections for accurately guiding the trowel sections during their reciprocation and preventing foreign matter from getting in between the trowel sections and the form sections.

A further object is to provide the form sections with alined outwardly extending longitudinally disposed ribs U-shaped in cross section, and the trowel sections with elongated members disposed in said U-shaped members and adapted to receive the end of a lever extending through a bracket carried by each form section and the form sections, and by means of which lever the trowel sections may be reciprocated. Also to provide elongated blocks having their ends extending into the ends of the channels and overlying the ends of the trowel sections for preventing concrete during the pouring operation from getting into the channels.

A further object is to provide adjusting screws threaded into the trowel sections and extending through the form sections and through elongated slots therein, and which adjusting screws maintain the adjacent sides of the trowel sections and the form sections in sliding engagement during the reciprocation of the trowel sections.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—

Figure 1 is a perspective view of the form showing the same in position for use.

Figure 2 is a horizontal sectional view through the form and the curve.

Figure 3 is a vertical transverse sectional view taken on line 3—3 of Figure 1.

Figure 4 is a vertical transverse sectional view taken on line 4—4 of Figure 1.

Referring to the drawing, the numeral 1 designates a concrete curb, which curb is formed integral with the gutter forming portion 2. Disposed on the inner side of the curb 1 are form sections 3, which may be of any construction desired, and may be held in position by means of stakes 4. The outer corner of the curb is rounded at 5, and the gutter groove 6 is also rounded, and to form these rounded portions has involved considerable labor and difficulty where the gutter is to be of a finished character. The present practice is to remove the forms after the concrete has partially set, and finish these parts and the outside face of the curb with a trowel and other tools, however this operation has not been successful to any great degree, as it is necessary to supply the same with a layer of cement, which easily fractures and crumbles,

and in the gutter groove it is extremely difficult, with hand tools, to get a uniform angle of inclination, especially where the grade is very slight and consequently all of water will not drain out of the gutter. To obviate all of the above difficulties, and not only form but trowel the outer face of the curb 1 and the upper face of the gutter, the outer form sections 7 are provided which sections are provided with horizontally disposed flanges 8 and 9, which are connected together by vertically disposed flanges 10, and where the flanges 8 and 9 join the vertically disposed flanges 10 curves are formed. Slidably mounted on the inner faces of the form sections 7 are similarly shaped trowel sections 11, which sections are provided with flanges 12 which overlie the upper faces of the flanges 8 and 9, therefore it will be seen that the trowel sections 11 are slidably connected to the form sections 7, and the trowel sections, when reciprocated on the form sections 7 will smooth a portion of the upper side of the curb 1, the outer face of the curb, the curved portions 5 and 6 of the curb, and the upper side of the gutter, thereby obviating the necessity of removing the form sections and finishing these parts by hand.

The adjacent ends of the form sections 7 are provided with lugs 13 which interengage in recesses 14 in adjacent ends of the form sections and positively maintain the sections in accurate alinement at all times.

The form sections 7 are provided with outwardly struck channel members 15, the ends of which are in abutting engagement and which channel members are U-shaped in transverse cross section, thereby forming longitudinally disposed alined channels 16 on the inner sides of the form sections 7, and in which channels 16 elongated members 17, carried by the troweling sections 11, are disposed and guided. Members 17 are provided with slots 18, which receive the ends 19 of a lever 20 and which lever, when it is desired to smooth the parts of the curb and gutter, is passed through the opening 21 in the bracket 22 carried by each form section. It will be seen that when the lever 20 is grasped by the operator and oscillated with the ends of the opening 21 forming fulcrum points, the troweling members 11 will be reciprocated for finishing the portions of the curb engaged thereby. The above operations can be repeated as often as desired and in sequence or not as desired, however the operation is preferably performed by starting at one end of the curb that is formed and working towards the other. The form sections may be of any length desired and applicant does not limit himself as to the use of any particular kind of templet plate or to any particular number. When the form sections 7 are in position as shown in Figure 1 with their adjacent ends in interengaged alinement, and before the pouring operation, elongated blocks 23, preferably of wood are placed with their ends in the adjacent ends of the channels 16, and which blocks prevent concrete during the pouring operation, or during the smoothing operation with the trowel sections 11, from entering the channels 16 and accumulating therein, or from working between the adjacent faces of the trowel sections 11 and the form sections. To further insure a close sliding engagement of the trowel sections 11 with the inner faces of the form sections 7 bolts 24 are provided, which bolts extend through elongated slots 25 in the channel members 15 and are threaded at 26 into the trowel sections, and it will be seen that by adjusting these bolts a close sliding engagement may be maintained between the trowel sections and the form sections, or if desired the trowel sections may be held against movement. It will be noted the members 17 carried by the trowel sections are slidably mounted in the channels 16, and the same will not interfere with the reciprocation of the trowel sections or the assembling of the trowel sections on the form sections telescopically when the bolts 24 are removed. The bolts 24 also form an additional function of maintaining the trowel sections and form sections in telescopic engagement for use during handling and transporting and consequently the sections may be easily transported in quantities and set up with a minimum amount of labor, and without assembling these parts.

Conventional forms of templates 27 may be used at the junction of the form sections, however it is to be understood that applicant does not limit himself as to a template structure, however the template shown extends through the curb 1 and the gutter as clearly shown in Figures 1 and 2 and is provided with lugs 28 which engage in registering recesses 29 in the adjacent ends of the form sections.

From the above it will be seen that a concrete form is provided particularly adapted for forming gutters and curbs, and finishing the adjacent surfaces thereof without removing the form from position, thereby obviating the necessity of manually troweling the surfaces of the curb and gutter after removing the form, consequently the cost of forming a gutter and curb is materially reduced as the use of highly skilled labor for troweling is obviated, as the device can be operated by relatively cheap common labor. It will also be seen that the troweling sections are accurately guided in true alinement with each other during their reciprocation, consequently the flow line of the gutter at the curved portion 6 is formed

true and free from depressions or valleys which is particularly hard to eliminate where the flow line is finished by hand.

The invention having been set forth what is claimed as new and useful is:—

1. The combination with a concrete form section, of a troweling device carried by the inner side thereof and slidably mounted thereon and forming a single unit.

2. The combination with a concrete form section, of a troweling device slidably connected to the inner side thereof and forming a single unit and means whereby said troweling device may be reciprocated on the form section.

3. The combination with a concrete form section, of a troweling device carried by the inner side thereof and slidably mounted thereon, of means extending through the form section and cooperating with the troweling device whereby said troweling device may be reciprocated on the form section.

4. The combination with a concrete form section, said section comprising substantially horizontally disposed flanges, said horizontally disposed flanges being connected together by a vertically disposed flange, of a trowel section similarly shaped as the form section, said trowel section being provided with flanges overlying the upper faces of the horizontally disposed flanges of the form section and means whereby said trowel section may be reciprocated on the form section through the form section.

5. The combination with a concrete form section, said section having slidably mounted on the inner face thereof a trowel section, an outwardly extending longitudinally disposed channel carried by the form section, a guide member carried by the trowel and disposed within the channel, a lever extending through an elongated slot in the channel and into a socket of the guide member, and bolts carried by the trowel section and extending through elongated slots in the channel and forming means whereby said trowel section and form section are maintained in close sliding engagement.

6. The combination with adjacent form sections in abutting engagement, abutting alined channels carried by said form sections, of slidable troweling members slidably connected to the inner faces of the form sections and forming means whereby an adjacent plastic face may be smoothed said form sections and troweling members forming independent units.

7. The combination with adjacent form sections in abutting engagement, abutting alined channels carried by the form sections, slidable troweling members carried by the inner faces of the form sections, of elongated members disposed in the adjacent ends of the channels and overlying the rear faces of the adjacent ends of the trowel sections.

In testimony whereof I have signed my name to this specification.

BURL V. HEDRICK.