J. F. BROOKS AND L. E. GINN.

TOOL FOR SHAPING OR FORMING CEMENT CURBS AND GUTTERS.

APPLICATION FILED JUNE 28, 1918.

1,334,483. Patented Mar. 23, 1920

Fig. 4.

Fig. 1.

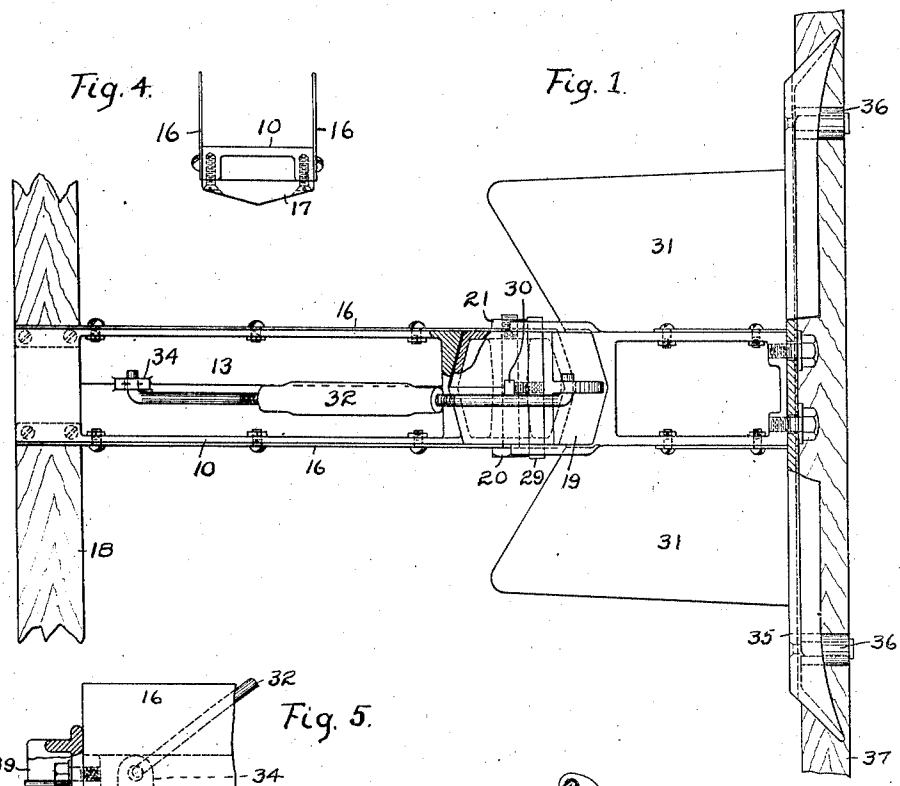


Fig. 5.

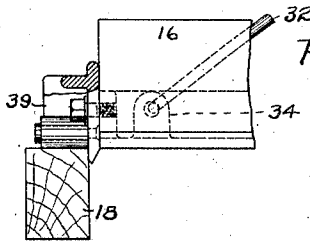


Fig. 2.

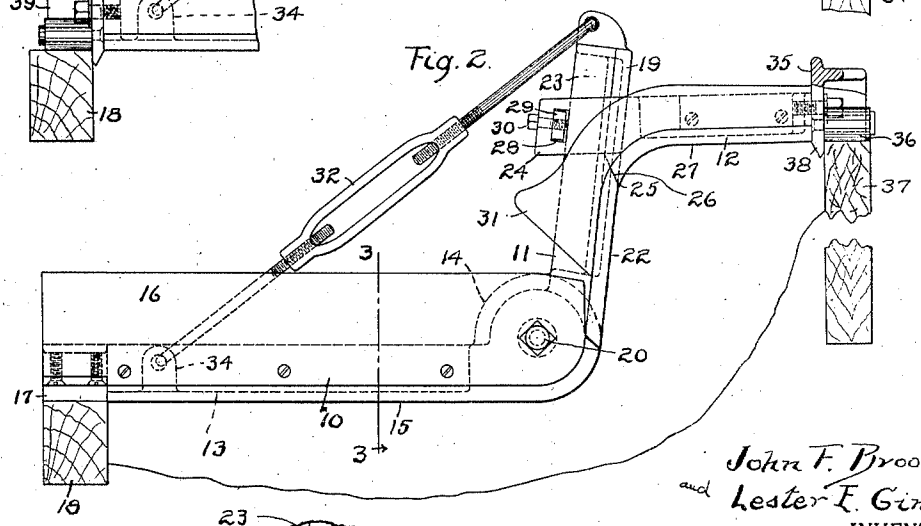
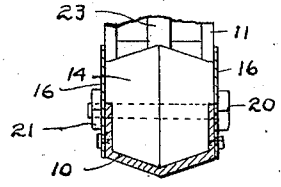


Fig. 3.



John F. Brooks
and Lester E. Ginn
INVENTORS.

BY Edwin D. Hulse
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN F. BROOKS AND LESTER E. GINN, OF FORT WAYNE, INDIANA.

TOOL FOR SHAPING OR FORMING CEMENT CURBS AND GUTTERS.

1,334,483. Specification of Letters Patent. Patented Mar. 23, 1920.

Application filed June 28, 1918. Serial No. 242,384.

To all whom it may concern:

Be it known that we, JOHN F. BROOKS and LESTER E. GINN, citizens of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented new and useful Improvements in Tools for Shaping or Forming Cement Curbs and Gutters, of which the following is a specification.

The invention relates to tools for shaping or forming curbs and gutters constructed of a plastic composition, and its object is to provide a simple and easily operated tool which shall be highly effective in operation and which shall be adjustable to form various heights of curb and various inclinations in the face of the curb and surface of the gutter.

In the accompanying drawings we have illustrated an embodiment of the invention in which—

Figure 1 is a plan view of a tool constructed in accordance with the invention; Fig. 2 is a side elevational view of the same; Fig. 3 is a cross-section on line 3—3 of Fig. 2; Fig. 4 is an elevational view of the forward end of the tool; and Fig. 5 is a fractional side elevational view of the rear end of the tool illustrating a modification thereof.

Referring to the drawings the tool consists, preferably, of three sections 10, 11 and 12 which are removably and adjustably connected together. Section 10 is the gutter shaping member, section 11 the shaping member for the face of the curb and section 12 the shaping member for the top surface of the curb. Section 10 consists of a casting 13 having its rear end extended upwardly, as to substantially one-half its width, to form one-half of a hinge 14. The lower surface of the casting is beveled off on both sides to form an edge 15 extending from end to end of the casting and in the middle of said surface. Plates 16 are secured to the opposite sides of the casting and extend upwardly therefrom. At the forward end of the section the lower portion of casting 13 is cut away and a removable section 17 is attached to the casting in said cut-out portion, the lower surface of the removable section being beveled to correspond to the beveled surface of the casting. This removable section is intended to rest and slide on the form board 18 of the mold and when worn out, it is readily removed and a new section substituted for it.

Section 11 consists of an upright casting 19 having at its lower end the other half of hinge 14. Bolt 20 passes through both hinge portions and through plates 16 and both castings 13 and 19 are movable upon the bolt when nut 21 on the bolt is loosened, so that the angle between the two castings may be adjusted as desired. The rear face of casting 19 is beveled off to form edge 22 similarly to casting 13 and said edge is continuous with edge 15 on casting 13. Casting 19 is in the form of a channel with partition 23 extending from end to end of the channel, and the opposite ends of the channel being closed by end walls as shown in Fig. 2.

Section 12 consists of a casting 24 having its lower surface beveled similarly to castings 13 and 19 to form an edge 27. The lower portion of the casting adjacent casting 19 is rounded downwardly to meet casting 19, as shown at 25, Fig. 2, the meeting faces of the two castings being beveled as shown at 26 in Fig. 2. The edge 27 is therefore continuous with the corresponding edge 22 on casting 19. The forward end of casting 24 is extended forwardly and bifurcated to engage casting 19. Apertures 28 are formed in the bifurcations of the casting to receive bar 29. Bolt 30 is threaded through bar 29 and is adapted to abut the forward face of partition 23 for locking section 12 to section 11 in adjusted position according to the height of curb to be formed. When bolt 30 is released section 12 may be adjusted to various heights relatively to section 10. Wings 31 are secured to opposite sides of casting 24 rearwardly of its bifurcated end and they flare outwardly and upwardly from or curve downwardly and extend forwardly of the upright section 11 along the opposite sides of section 11.

Turn buckle 32 is attached at one end to an apertured lug formed on the upper side of casting 13 and at its other end it is attached to an apertured lug 34 projecting upwardly from casting 19. By turning the turn-buckle in the proper direction the angle between sections 10 and 11 is changed according to the desired inclination of the face of the curb and the inclination of the top surface of the gutter.

At the rear end of casting 24 is secured a

frame 35 having rollers 36 mounted thereon adapted to roll on the rear form board 37 of the mold. A wedge shaped rib 38 depends from the frame and is adapted to round off the rear upper edge of the curb.

In Fig. 5 we have substituted for removable section 17 at the forward end of section 10, the frame and rollers 39 similar to frame 35 and rollers 36, the rollers of the substituted frame being adapted to roll on form board 18; but we prefer the removable section 17 since a worn out section may be replaced by a new one.

In use the mold for the curb and gutter is first set, the mold usually consisting of front and back form boards, a face board for the face of the curb and templets connected to the boards and extending across the spaces between them. After the mold is set up concrete of the specified mixture is poured into the mold and thoroughly tamped; the face board and templets are removed and while the concrete is still soft or unset a thin "sloppy" mixture of sand, cement and water is poured over the surface of the concrete and the trowel is used to work the mixture into all depressions and over all elevations in said surface to provide a seal or binder for the coats to follow. Immediately after the sealing or binding coat has been applied a second coat of mortar of the specified mixture and of a consistency suitable for plastering is applied over the surface of the curb and the tool is placed on the form boards and slid or moved along the same. The beveled faces of sections 11 and 12 strike off the surface of the second coat to produce a smooth surface on the curb, the surplus material dropping down onto the gutter surface where section 10 moves the surplus over the surface of the gutter and more or less coats said surface with said mortar. The active surfaces of the sections perform the functions of a trowel in advancing a portion of the mortar while smoothing down that remaining, as the tool is moved along the mold. A third coat of mortar of the specified mixture and of a consistency which will fill the surface of the previous coat is then applied to the core. In this operation the mortar is applied in front of the tool as it is moved along the form boards. The mortar in this operation rolls up in front of the tool and under the beveled surfaces and under the wings and the final shaping or forming of the curb and gutter is thereby accomplished.

Since the tool is identically constructed on both sides it may be moved in either direction on the mold boards without removing it from the boards, and since each section is adjustable with reference to each of the other two, they may be adjusted to produce any desired inclination of gutter and face of the curb as well as inclination of the top of the curb and height of curb. The tool is highly efficient in operation and by its use a great saving in time is accomplished.

What we claim is:

1. A tool of the class described consisting of a gutter-shaping section carrying a support at one end thereof, an upright section hinged to the opposite end of the gutter-shaping section, revoluble means having connection at opposite ends with both said sections and adapted to adjust the angularity of the upright section with respect to the gutter-shaping section, a third section having one end straddling the upright section and adjustable thereon in a vertical plane and carrying a support at its rear end, means to secure the third section in any adjusted position to the upright section, laterally projecting wings secured to the third section on opposite sides thereof and having their forward ends curved downwardly and extended forwardly of the upright section, each of said sections having a surface adapted to smooth or shape plastic material and which is substantially continuous from end to end of the tool in all adjusted positions of the sections and being adapted to perform its said function in opposite directions of movement of the tool.

2. A tool of the class described consisting of a gutter-shaping section, an upright curb-shaping section hinged at one end to the rear end of the gutter-shaping section, means to adjust the angularity of the upright section with respect to the gutter-shaping section, a third section having its forward end straddling the upright section, a bar loosely carried by the forward end of the third section and on the forward side of the upright section, a bolt in threaded engagement with the bar and adapted to abut the upright section in any vertically adjusted position of the third section on the upright section for securing the same together, and laterally flaring wings on opposite sides of the third section having downwardly curved forward ends which project forwardly of the upright section, the said sections having a surface adapted to smooth or shape plastic material in either direction of lateral movement of the tool and being substantially continuous from end to end of the tool in all adjusted positions of the sections.

In witness whereof we have hereunto signed our names this 20th day of June, 1918.

JOHN F. BROOKS.
LESTER E. GINN.