

M. S. HOTCHKISS.
FORM FOR LAYING CONCRETE CURBS AND GUTTERS.
APPLICATION FILED APR. 15, 1909.

955,801.

Patented Apr. 19, 1910.

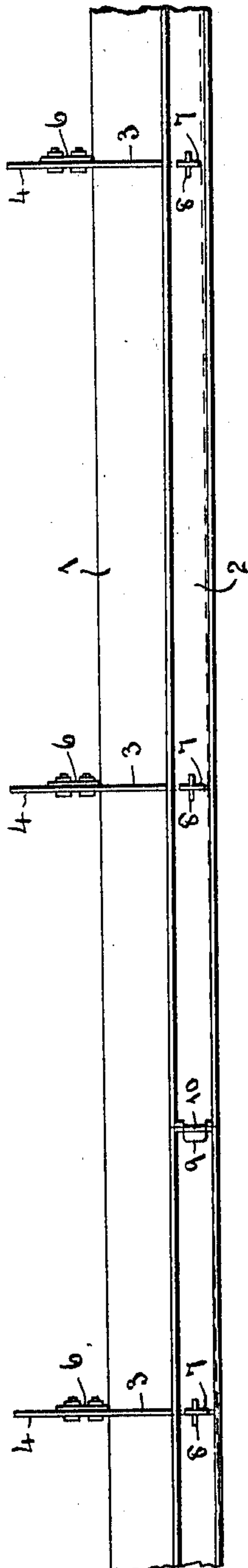


Fig. 1.

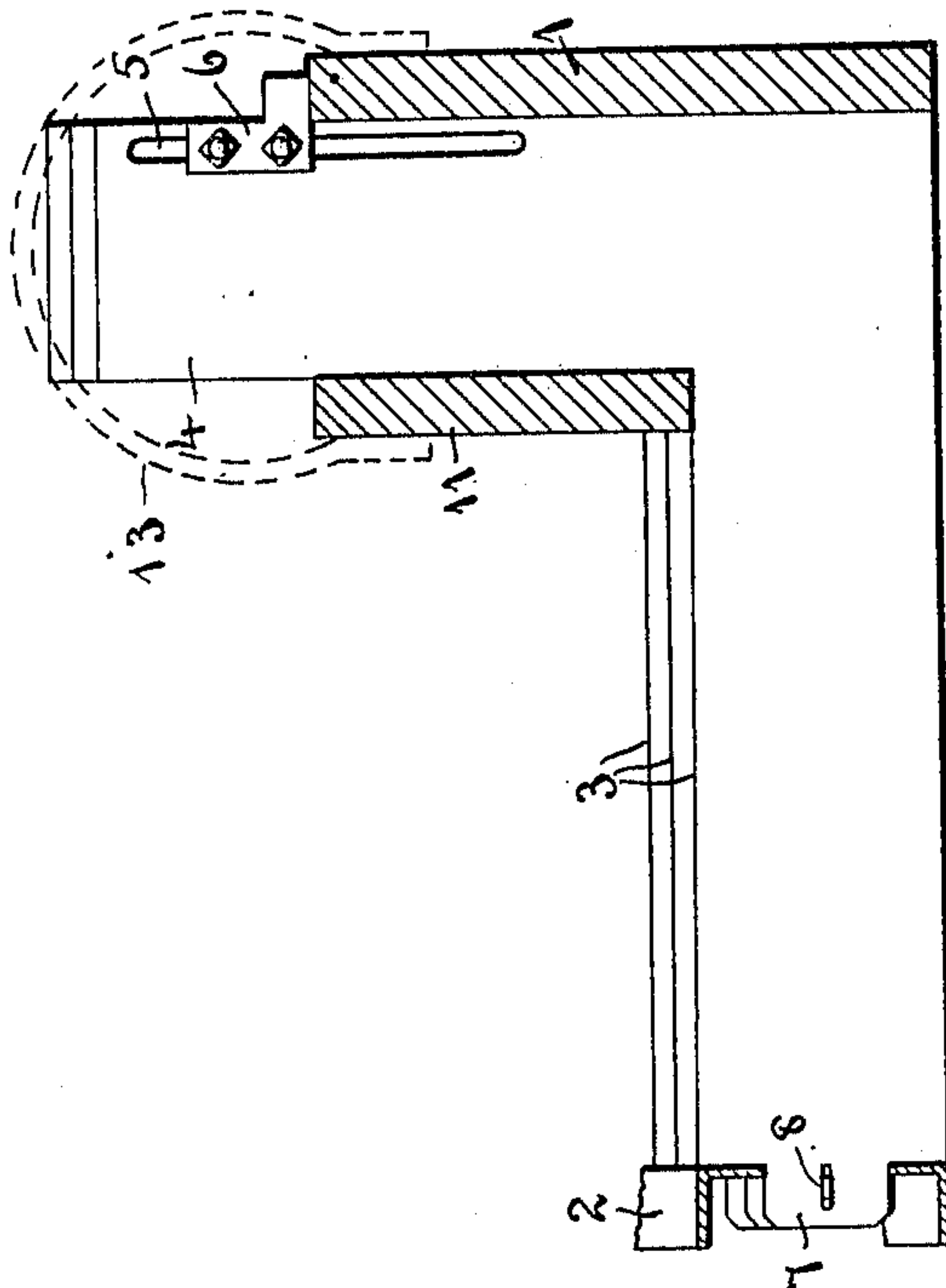


Fig. 2.

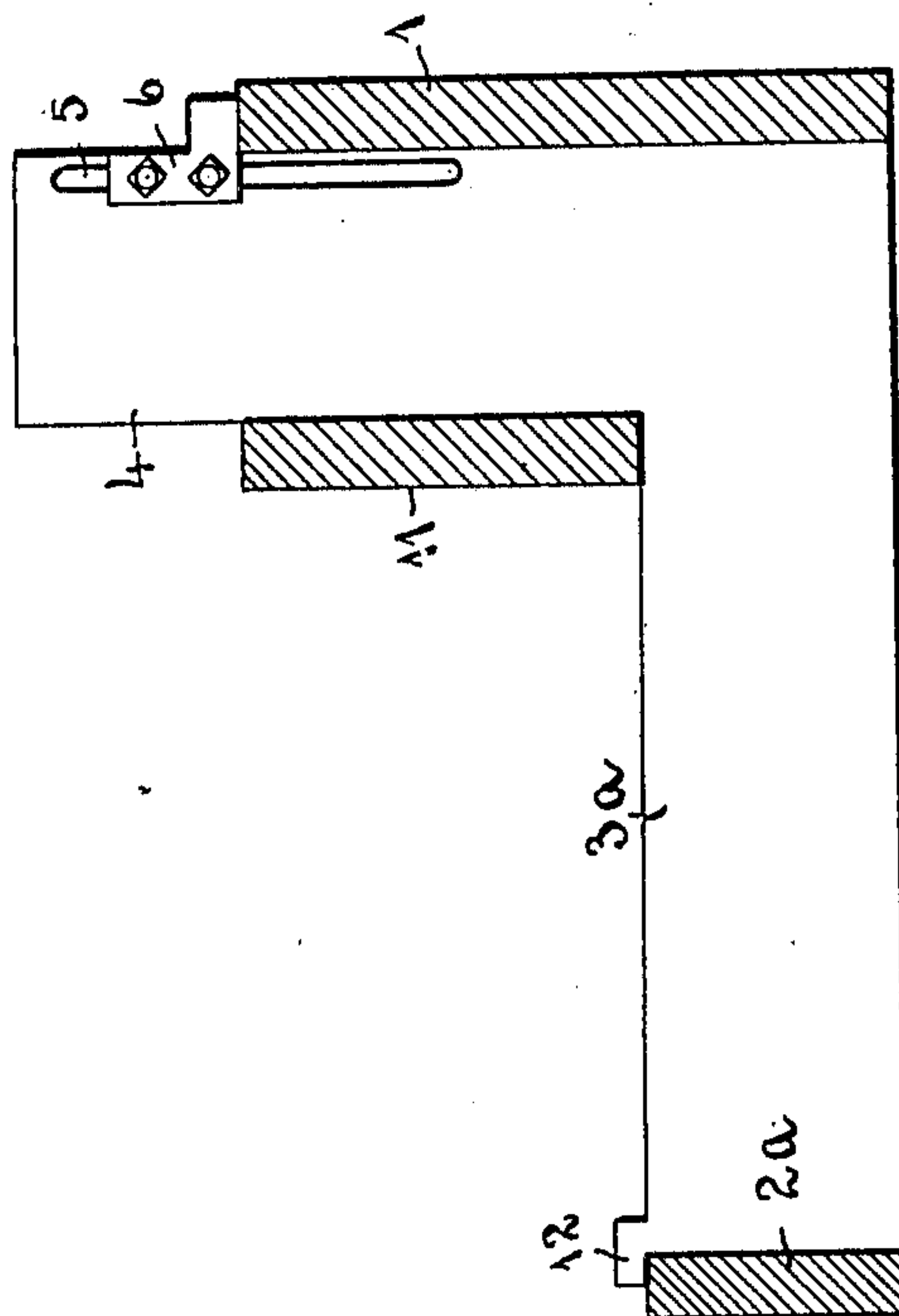


Fig. 3.

WITNESSES:

M. E. Verbrick
Louis Diven

INVENTOR

Mark S. Hotchkiss
BY
Eugene Diven
ATTORNEY

UNITED STATES PATENT OFFICE.

MARK S. HOTCHKISS, OF LESTERSHIRE, NEW YORK, ASSIGNOR TO HOTCHKISS LOCK METAL FORM COMPANY, OF BINGHAMTON, NEW YORK.

FORM FOR LAYING CONCRETE CURBS AND GUTTERS.

955,801.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed April 15, 1909. Serial No. 490,114.

To all whom it may concern:

Be it known that I, MARK S. HOTCHKISS, a citizen of the United States, residing at Lestershire, in the county of Broome and State of New York, have invented certain new and useful Improvements in Forms for Laying Concrete Curbs and Gutters, of which the following is a specification.

This invention relates to an improvement in the construction of the forms employed in laying composite concrete curbs and gutters; my object being to provide a form with division plates, whereby expansion joints of proper width will be made at proper intervals, throughout the line of curbing, said joints extending completely through the curb and gutter so as to divide the concrete into blocks of suitable length; and to so construct the division plates that they will be susceptible of adjustment to any height of the curbing above the gutter, and serve also as guides for surfacing the gutter and curb.

I attain my object by constructing the curb and gutter forms and expansion joint plates in the manner illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation of a curb and gutter form set up to embody my improvements; Fig. 2, a cross section thereof upon an enlarged scale; and Fig. 3, a corresponding sectional view in a slightly modified form.

Like numerals designate like parts in the several views.

In setting up my form I employ back bars 1 for the curb form, which may be of wood or metal, the top edge of said bars being set on the line of the top of the curb and the depth of the bars corresponding to the height of the curb plus the thickness of the gutter. The street side of the form, or front gutter bars 2, I preferably construct of sheet metal strips flanged along the top and bottom edges, said strips corresponding in depth to the thickness of the gutter, and being made in interlocking sections in the same manner as the side bars described in my co-pending application for forms for laying concrete walks, filed March 31, 1909, Serial No. 486,884. In fact, the side bars for said walk forms may be used in connection with my curb forms without change. These front bars 2 are spaced from the back bars 1 by means of metal angle plates 3,

which are cut to conform to the thickness of the gutter and curb blocks, the upright members 4 of these division plates being set up against the back bars 1, and being provided at 5 with vertical slots to receive bolts by which supporting arms 6 are fastened in place, said arms where they project to the rear resting upon the top of the bars 1, to hold the division plates at the proper height. At their outward ends these division plates, in my preferred construction, are provided with tongues 7, which project through corresponding slots in the front bars 2, said bars being fastened to the plates by means of wedges 8 driven into slots in the tongues 7. The bars 2 are fastened together, where their ends abut, by means of a tongue 9 projecting from one bar and inserted in a slot in an outturned flange 10 at the end of the next bar, as described in my said co-pending application. When thus set up, with the division plates at suitable intervals, the form is completed by setting up the outside curb bars 11, (see Fig. 2), against the vertical portions 4 of the division plates, and clamping the bars 1 and 11 against the opposite edges of said upward extensions 4, by means of any suitable form of clamp, as indicated by the broken lines at 13 in Fig. 2. The members of the form are thus all securely fastened together, and independent of stakes or other holding devices for maintaining them in place while the concrete is filled in and surfaced off.

As the curb, on level streets, must have its upward edge on the level, while the gutter must be slanted more or less to the catch basins, the back bars 1 will be level, while the front gutter bars 2 must be set at the angle of inclination toward the catch basins. The upper edges of the back bars and the front bars will, therefore, recede from one another, and the division plates must be dropped to correspond, this drop being allowed for by the adjustment of the arms 6 on the several plates. This difference in adjustment is shown at Figs. 1 and 2. When so set up, the concrete will be filled into the form and the upper surface of the gutter will be struck off by means of a straight edge passed over the top edges of the division plates 3, said top edges lying flush with the top edge of the front bars 2, so that the gutter blocks will be left with

true and perfect outward edges, when the straight edge is passed over the division plates and out across the top of the front bars. The curb will be formed by filling in the concrete between the bars 1 and 11, and striking off the top surface by a straight edge passed along the top edges of the bars. After the concrete has been filled in and surfaced in this manner, the front bars 2 will be removed from the division plates, and also the form bars 1 and 11, after which the division plates will be drawn out, thereby leaving the concrete blocks with spaces between of a suitable width to allow for expansion and contraction. For this purpose I propose to make the division plates 3 of metal plates one-eighth of an inch in thickness. Where wood forms are to be used in connection with these division plates, as shown in Fig. 3, (2^a in said figure representing a front bar of wood), I provide the division plates 3^a with upwardly and outwardly projecting arms 12, adapted to rest upon the upper edge of the bars 2^a. In other respects the forms will be the same as already described. In this modification the gutter cannot be so well surfaced as in my preferred form; inasmuch as the arms 12 interfere with the movement of the straight

edge over the division plates in striking the surface. The surface between plates on the outward edge of the gutter must in this case be finished after the division plates are removed; or while they are in place by working up to the arms 12 along the upper edge of the bars 2^a. Moreover, stakes are required to hold these front bars in place.

What I claim as my invention and desire to secure by Letters Patent is—

In a form of the character described, the combination, with front and back bars, of an angled division plate having a horizontal member provided with means for engaging the front bar and a vertical member extending above the back bar and provided with a vertical slot adjacent its rear end, an arm movably mounted on said member and adapted to rest upon the top of the back bar, and means passing through said slot above the back bar for clamping the arm in adjusted position.

In testimony whereof I have affixed my signature, in presence of two witnesses.

MARK S. HOTCHKISS.

Witnesses:

W. D. EDMISTER,
CASSIE A. ROE.