No. 813,334. PATENTED FEB. 20, 1906.

A. THOMAS.

REINFORCED CONCRETE CURBING.

APPLICATION FILED SEPT. 7, 1905.

2 SHEETS—SHEET 1.

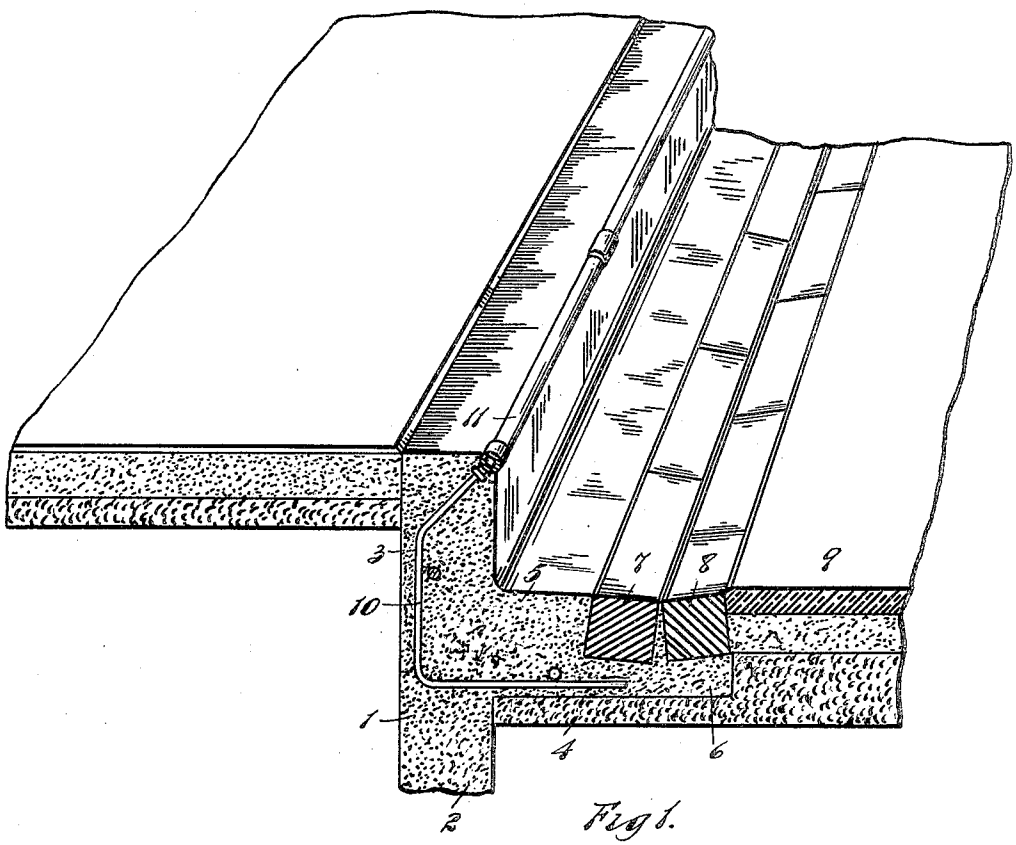


Fig. 1.

WITNESSES

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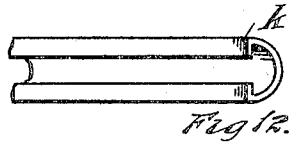


Fig 12.

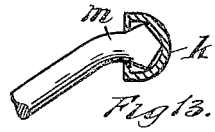


Fig 13.

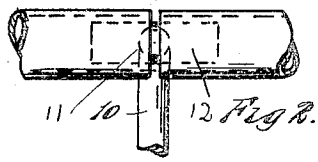


Fig 2.

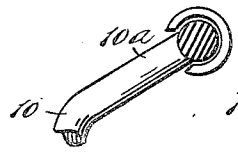


Fig 6.

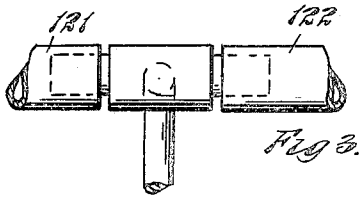
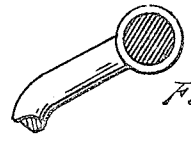


Fig 3.


Fig 7.

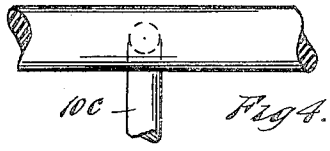


Fig 4.



Fig 8.

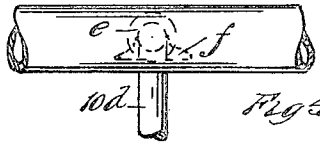


Fig 5.

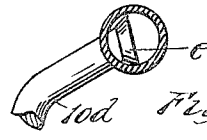


Fig 9.



Fig 10.



Fig 11.

WITNESSES

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UNITED STATES PATENT OFFICE.

AVILA THOMAS, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO EUGENE F. GLOCK, OF DETROIT, MICHIGAN.

REINFORCED CONCRETE CURBING.

No. 813,334. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed September 7, 1905. Serial No. 277,464.

To all whom it may concern:

Be it known that I, AVILA THOMAS, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Reinforced Concrete Curbing; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to reinforced concrete curbing.

It has for its object an improved artificial stone or concrete curbing reinforced with embedded bands or straps of iron and provided with an exposed metallic corner.

In the drawings, Figure 1 is a perspective showing the curb and parts of the paving and sidewalk stone adjacent to the curb. Figs. 2, 3, 4, and 5 show different ways of holding the exposed corner-iron to the concrete curb. Figs. 6, 7, 8, and 9 are cross-sectional views, respectively, of Figs. 2, 3, 4, and 5. Figs. 10, 11, 12, and 13 show split-tube forms of guard and means of securing the tube.

The curb is a mass of concrete made in a T form with that part of the curb which is represented by the stem part of the T extending horizontally into the road-bed and forming a part of the gutter and a support for another part of the gutter. The mass of concrete 1 has a downwardly-extending branch 2, that extends below the road-bed, a rising branch 3, that extends upward to form the curb, and a road-bed branch or stem 4, that extends into the road-bed, one part 5 rising to the surface of the road-bed and forming part of a gutter, and another part 6 extending under paving-blocks 7 and 8, which form another part of the gutter. From the paving-blocks the road-bed 9, made of any suitable material or in any suitable way, finishes the road. The corner of the curb 3, which lies at the top and toward the road-bed, is protected by a metallic guard, preferably made in the form of a tube that is partly inclosed in the concrete of the vertical portion 3 and is held in place securely by anchor-irons 10, secured to the guard-iron 11 at intervals and extending diagonally backward across the curb, inclining downward and extending forward in the horizontal part. The head of the anchor-iron 10 is secured to the guard in any well-known and approved way, of which several ways are shown. For example, in Figs. 2 and 6 the anchor-iron 10 is provided with a head which engages in the interior of the tubular guards 11 and 12. The stem 10^a passes through notches in the meeting ends of the tube.

In Figs. 3 and 7 the middle part of the head is enlarged, and at the ends of the head-bar are parts of reduced diameter that engage inside the ends of meeting tubes 121 and 122.

In the forms shown in Figs. 4 and 8 the anchor-iron 10^c screws into a solid guard-iron.

In the forms shown in Figs. 5 and 9 the anchor 10^d is provided with a head *e*, which is engaged through a key-slot *f* and from which it cannot escape after having been once engaged and turned to the proper angle.

In Fig. 10 is shown a split tube *g*, in which engages the end *h* of the anchor. In Fig. 12 a split tube *k*, half round in shape and having the split on the flat side, is held by an anchor *m*.

The forms shown are all equally adapted to produce the desired result.

The anchor-irons serve not only to hold the guard-irons in place, but they serve to reinforce the concrete and to that end may be placed at frequent intervals along the length of the curb.

What I claim is—

1. A curb having in combination with a concrete body having a horizontal and a vertical portion, a guard-rail of circular cross-section for one corner of the vertical portion, and anchor-irons extending therefrom into both body portions of the curb at intervals along its length, substantially as described.

2. In combination with a concrete curb, a tubular metallic guard for the exposed edge thereof, and anchor-irons each bent at a plurality of points along its length attached at intervals along said guard and extending into the concrete mass, substantially as described.

3. In combination with a concrete curb, a branch of the curb structure extending at right angles to the rising portion thereof, a tubular metallic guard for the exposed edge thereof, anchorage means for the same embedded in the concrete and extending into the branch portion, and paving-blocks sup-

ported by the outer end of said branch portion and forming with the remaining part of the branch portion a gutter, substantially as described.

4. A curb, having in combination with a concrete body portion with a plurality of branches, a metallic guard for the exposed edge thereof, and anchor-irons connected therewith and embedded in the concrete and extending into the other branch from that wherein said guard is located, substantially as described.

5. In combination with a concrete curb, having a tread portion branching from the rising portion, a metallic strengthening-bar therefor, and anchor-irons extending therefrom into the branch of the curb not occupied by said bar, substantially as described.

6. In combination with a concrete curb, a longitudinal guard-bar therefor, and angled anchor-irons, each extending from said bar into the remote portion of the section of the curb at an angle with the portion of itself immediately adjacent to the bar, substantially as described.

7. A curb, having in combination a body portion of T-shaped cross-section, the stem portion thereof being adapted to lie horizontally, a tubular guard-iron for the exposed edge of the upwardly-extending branch, and anchor-irons extending therefrom into the body of the curb and terminating in said horizontal stem portion, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

AVILA THOMAS.

Witnesses:

MAY E. KOTT,

CHARLES F. BURTON.