

(No Model.)

A. L. BARBER.  
CONCRETE PAVEMENT.

No. 338,381.

Patented Mar. 23, 1886.

Fig. 1.

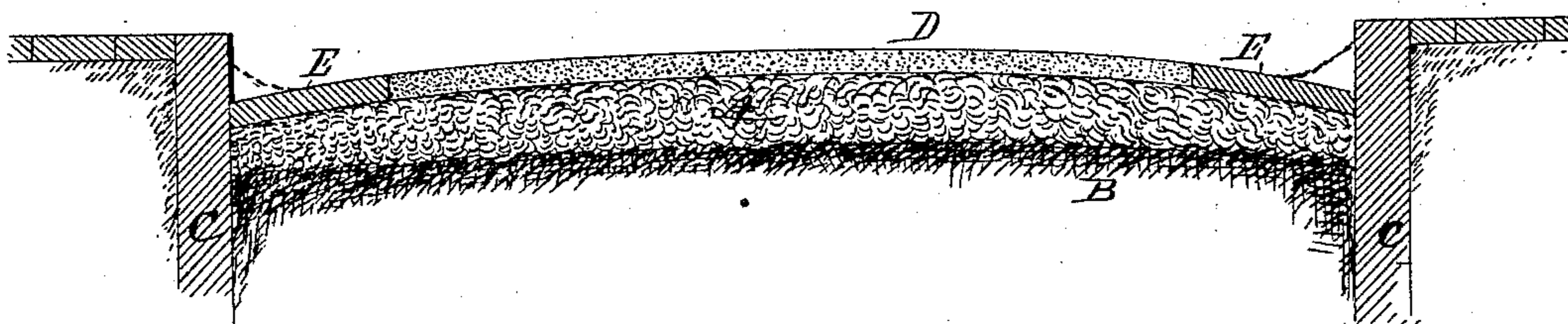
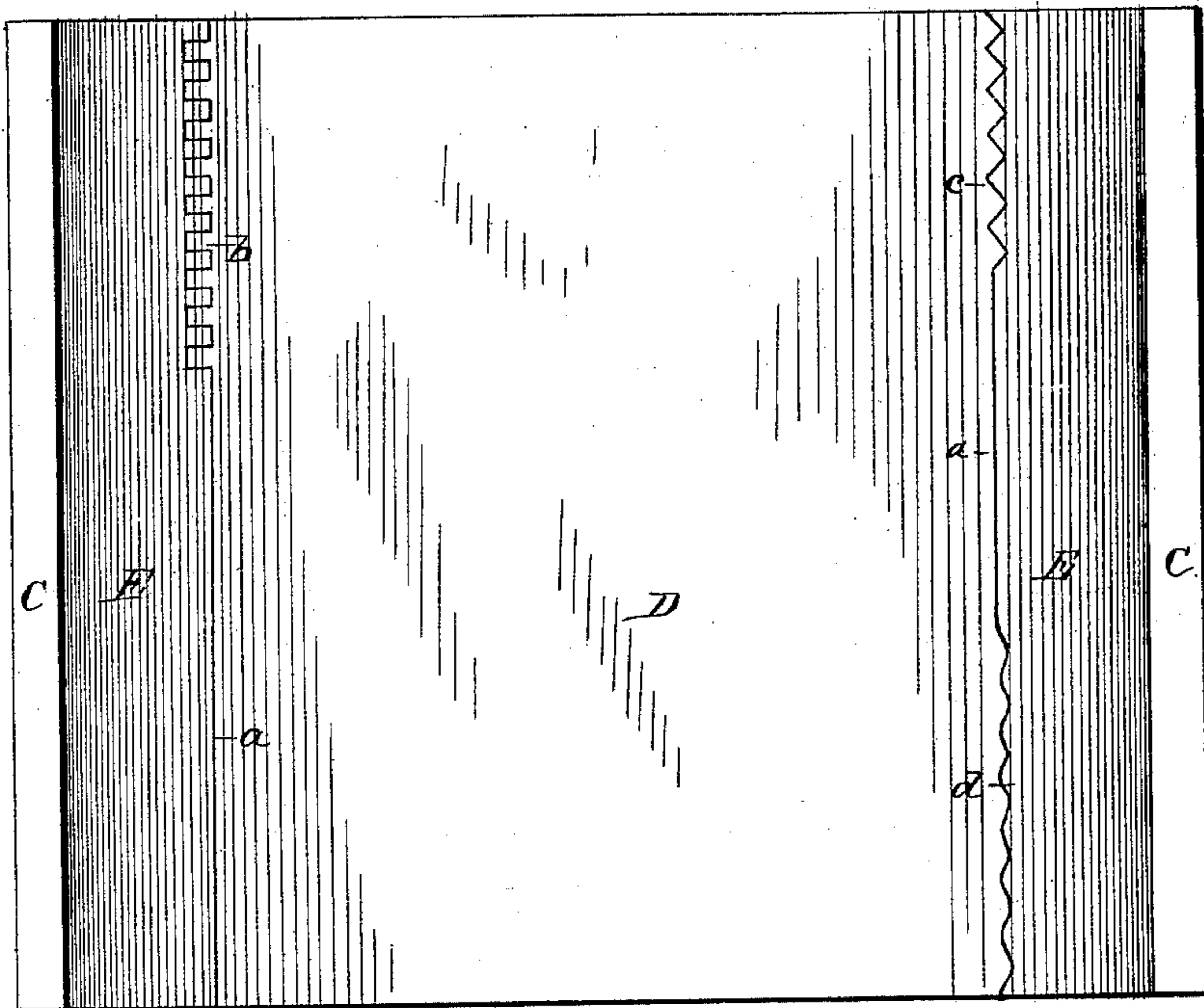


Fig. 2.



WITNESSES

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## CONCRETE PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 338,381, dated March 23, 1886.

Application filed October 7, 1885. Serial No. 179,178. (No model.)

*To all whom it may concern:*

Be it known that I, AMZI L. BARBER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented  
5 certain new and useful Improvements in Concrete Pavements, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in  
10 concrete pavements, and more particularly to that class known as "bituminous" or "asphalt" pavements.

The object of my invention is to protect the edges of the pavement where it joins the curb  
15 from the deteriorating effect of water and the urine of animals and other causes.

My invention consists in placing a continuous strip of hydraulic concrete or artificial stone next to the curb, and then laying the  
20 asphaltic concrete, which forms the wearing-surface of the main body of the pavement, so as to be flush with the top of and joined to the outer edge of the hydraulic concrete, thus forming a continuous gutter of artificial stone  
25 next the curb.

Referring to the drawings, Figure 1 is a sectional view of a pavement or roadway embodying my improvement. Fig. 2 is a top or  
30 plan view.

Much difficulty has been experienced in keeping asphalt and bituminous pavements in repair, especially in the gutters next the curbstones. This is due, mainly, to the absence of sufficient compression to keep the  
35 particles which compose the wearing-surface compacted at all times, as is the case with other portions of the pavement, by passing vehicles. This, together with the wearing effect of running water, tends to impair, if not  
40 destroy, the pavement at the edges. Various expedients have been resorted to to obviate this defect. Stone blocks of different lengths have been laid to form the gutters, thus presenting an uneven edge for the reception of the  
45 asphalt surface. Stone slabs have also been laid to form the gutters; but in both instances numerous cracks and joints are formed, which admit the water under the surface, and in neither case is the remedy complete. It has

also been proposed to paint or coat the gutters  
50 with hot asphalt; but this has proved inadequate to accomplish the results required.

A indicates the base of hydraulic concrete, composed of hydraulic cement, sand, gravel, or broken stone, which is laid in the ordinary or  
55 well-known manner on the previously prepared and graded road-bed B.

C C are the curbstones, and D the top layer or wearing-surface of asphalt concrete, laid in the usual manner.  
60

E E are continuous strips of hydraulic concrete or artificial stone, of any desired width, but by preference from twelve to twenty-four inches wide, which is laid in a plastic mass close against the curbstones, and is composed  
65 of Portland, Rosendale, or other good hydraulic cement and sand, or compounds of the same, with or without other ingredients to form an artificial stone impervious to moisture, it being understood that the hydraulic concrete  
70 is laid in a plastic or semi-plastic condition, so as to form continuous strips or gutters. In paving new streets, these strips of hydraulic-concrete or artificial-stone gutters may be put  
75 down before the asphalt surface E is laid, said asphalt surface being rolled compactly against the outer edge of the hydraulic concrete portions, so as to form a tight joint; or they may  
80 be put down after the asphalt surface has been laid. In this case a hot roller or tamping-iron should be used to cement the edges of the asphalt surface to the strips E, so as to form tight joints. This plan or method is specially  
85 adapted for the putting down of gutters on streets which have already been paved with asphalt concrete, and all that is necessary to be done is to cut out a portion of the surface D, next the curb, and fill in with the plastic hydraulic concrete, which, after becoming set or hard, is cemented to the asphalt portion in  
90 any suitable manner. The portion which forms the gutter or strip E may, however, be laid at the same time the hydraulic-concrete base A is laid, and thus form a part of said base without seams or joints between them, care being  
95 taken to build the strips or gutters up to the proper level or grade for the balance of the pavement before the asphalt portion D is laid.

The gutters may be formed in the manner shown in full lines in Fig. 1—*i. e.*, the convexity of the street may be carried down to the curbstone—or the hydraulic-concrete strip may  
5 be made thicker next the curbstone, as shown in dotted lines in Fig. 1, so as to form the gutter or channel a short distance away from the curbstone.

The edges of the strip E next to the asphalt  
10 surface D may be made plain, as shown at *a*, or provided with square notches *b*, with serrations *c*, or scalloped, as shown at *d*.

This hydraulic-concrete strip E may be found  
15 useful on other portions of the street aside from the gutters—for example, in forming tight joints between the asphalt portion and the rails of railroad-tracks, also around sewer-traps, man-holes, &c.

Having thus described my invention, what I  
20 claim, and desire to secure by Letters Patent, is—

1. An asphalt-concrete pavement the edges of which are joined to hydraulic-concrete or artificial-stone strips, as set forth.

2. An asphalt-concrete pavement having 25 the gutters formed of hydraulic concrete, as described, with tight water-proof joints between the gutters and the main body of the pavement, as set forth.

3. A concrete pavement composed of the 30 hydraulic-concrete base A, asphalt-concrete surface D, the hydraulic-concrete strips or gutters E, and the curbstones C, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AMZI L. BARBER.

Witnesses:

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R. M. RICHARD.