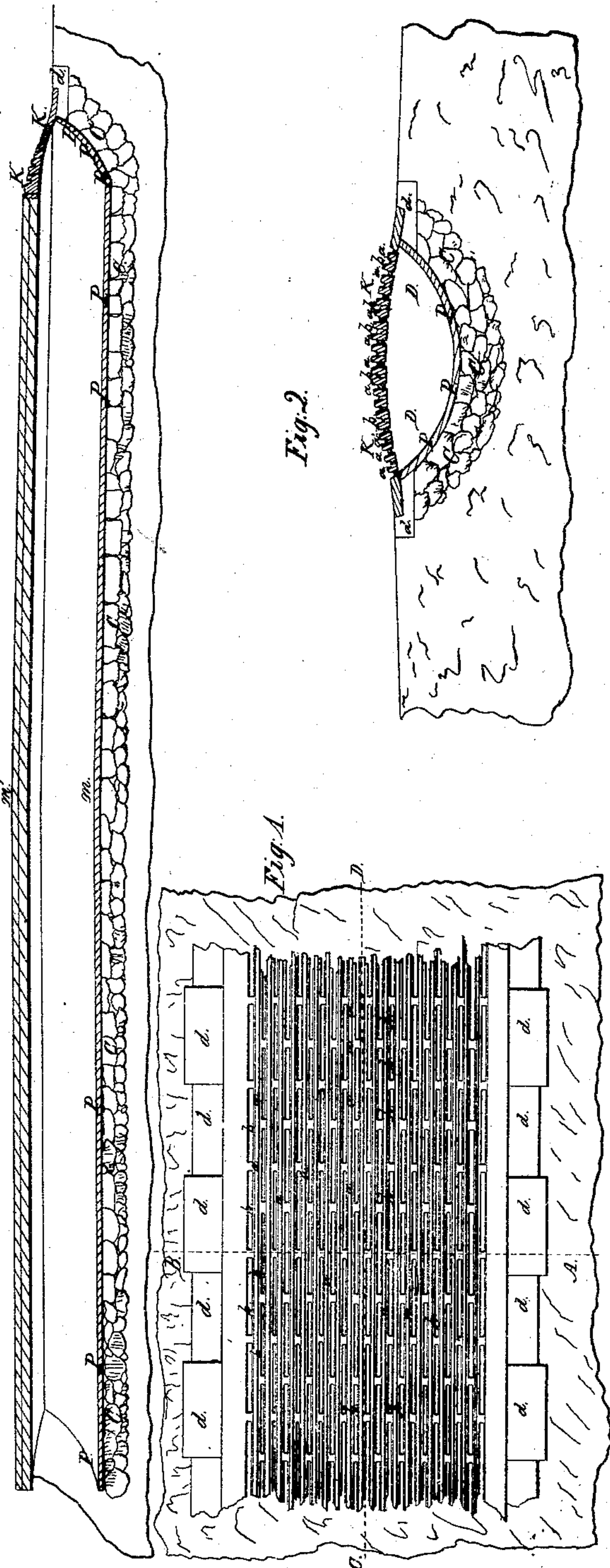


*D'Epineuil & Letts.*

*Iron Pavement.*

*N<sup>o</sup> 38,568.*

*Patented May 19, 1863.*



*Witnesses:*

*J. W. Munroe  
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*Inventor:*

*James M. Letts*

# UNITED STATES PATENT OFFICE.

LIONEL JOBERT D'EPINEUIL, OF PARIS, FRANCE, AND JAMES M. LETTS,  
OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN IRON STREET-CROSSINGS.

Specification forming part of Letters Patent No. 38,568, dated May 19, 1863.

*To all whom it may concern:*

Be it known that we, LIONEL JOBERT D'EPINEUIL, of Paris, France, and JAMES M. LETTS, of Washington, District of Columbia, have invented a new Mode of Self-Cleaning Iron Crossings for the Streets; and we do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawings, and to the letters of reference marked thereon.

The nature of our invention consists in providing the crossings with a ditch made across the street from one sidewalk to the other, and made of masonry, covered or lined with thin iron plates. The ditch is closed on the top by plates of cast-iron, holes managed in it to let the mud or rain, &c., fall into the ditch underneath, and of a sufficient thickness to carry all wagons or loaded cars running across the said crossing.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

We dig our ditch, Figure 2, section on A B, letters D D, from three to five feet wide and from one and a half to two feet deep, across the street from one sidewalk to the opposite one, and we make it communicate on both ends with the street-kennels. The ditch is made of strong cement masonry *c c c*, Figs. 2 and 3, entablated, *d d d d*, Figs. 1, 2, 3, with wide, flat, hard stones. The middle point of the bottom of our ditch, *m*, Fig. 3, is higher than the two ends of it, in order to secure a

declivity of one-fourth of an inch per foot, to facilitate the self-running-out of the mud or rain, &c., falling into the ditch. We then line the said masonry with thin iron plates *p p*, Figs. 2, 3, (carefully galvanized, to prevent oxidation,) those plates intended to prevent the masonry to be injured by a constant running of mud on it. When the ditch is finished, as above described, we then cover it with cast-iron covers *k k*, Fig. 2, provided with longitudinal grooves *a a a a*, Figs. 1, 2, about one and a half inches distant from each other, and with longitudinal holes *b b b b*, Figs. 1, 2, one inch wide and twelve inches long, through which the mud or rain is to fall into the ditch underneath. In the sense of the length of the crossing the cast-iron covers have the same declivity toward both ends of the ditch—viz., one-fourth of an inch per foot—and in the sense of the breadth the declivity is, from the center toward both borders, two inches per foot, Fig. 2.

What we claim as our invention is—

The construction of street-crossings, combining for that purpose the ditch D D and the grooved and perforated metal plates *p p*, in the manner and for the purpose herein described.

LIONEL J. D'EPINEUIL.  
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Witnesses:

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