

(No Model.)

G. W. DOOLITTLE.
STREET CROSSING.

No. 488,117.

Patented Dec. 13, 1892.

Fig 1

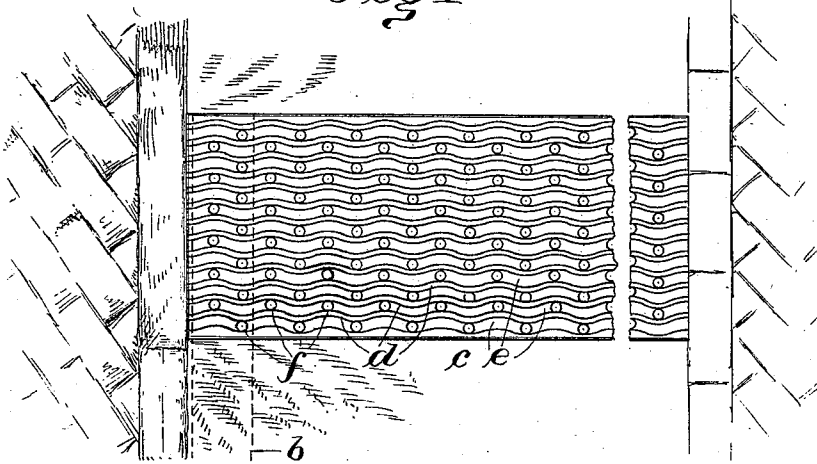


Fig 2

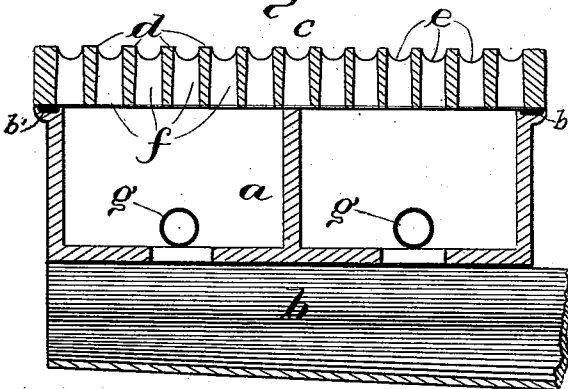


Fig 3

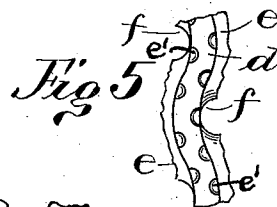
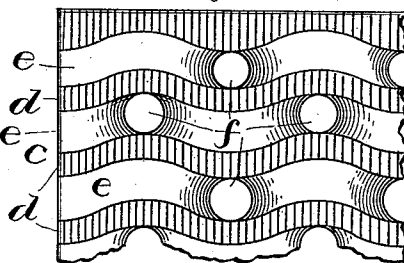
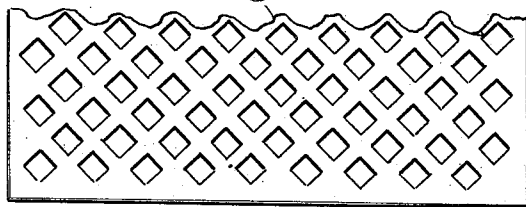


Fig 4



Attest;
C. C. Birding
E. E. Duff

Inventor;
George W. Doolittle
By O. E. Duff Atty

UNITED STATES PATENT OFFICE.

GEORGE W. DOOLITTLE, OF CHICAGO, ILLINOIS.

STREET-CROSSING.

SPECIFICATION forming part of Letters Patent No. 488,117, dated December 13, 1892.

Application filed February 26, 1892. Serial No. 422,832. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DOOLITTLE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Street-Crossings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in street-crossings.

The object of the invention is to provide improved means whereby the walking-surfaces at street-crossings, &c., can be kept dry and clean by cheap, durable, and efficient means.

The invention consists in certain novel features of construction and in combinations of parts more fully described hereinafter, and particularly pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a plan view showing the crossing at a street. Fig. 2 is a sectional view showing the subway beneath the walking-surface and the drain therefrom to the sewer. Fig. 3 is a top plan view of the walking-surface. Fig. 4 is a bottom plan thereof. Fig. 5 is a fragmental plan view of a modification.

In the drawings, reference-letter *a* indicates a suitable subway or conduit extending across the street from side to side beneath the street-crossing. This conduit or subway opens into a drain *b*, extending outwardly to the sewer, so that all wet and moisture is drained from the conduit to the sewer. This conduit is suitably formed of cast steel or iron or other cheap, strong, and durable material, and is provided with a perforated top plate *c*. The top plates and conduits can be formed in sections and suitable joints to form a continuous crossing from sidewalk to sidewalk. The walking-surface of the top plates is formed by raised ribs *d*, which are zigzag or crooked, as shown, and which preferably extend parallel with each other, as shown. These crooked irregular ribs form extended bearing-

surfaces for the feet of pedestrians, and also for the shoes of horses, &c., because of the zigzag or irregular contour or curvature of the ribs. Grooves *e* are formed between the ribs, and transverse apertures *f* extend through the plate from the bottom of said grooves. These apertures are arranged as close together as desired, and the bottom of each groove is inclined toward each aperture, so that the bottoms of the grooves midway between the apertures are elevated or raised, thereby assisting drainage. The top surfaces of the ribs are provided with little transverse cuts or ducts *e'*, inclined from the center of the rib to the side thereof to conduct off moisture and form a roughened walking-surface, as shown. As the transverse apertures are in planes considerably below the walking-surfaces, there is no possibility of horseshoe calks or toes catching or locking in the apertures, and, furthermore, the feet of pedestrians are held elevated above the apertures and grooves containing the moisture, and can thereby be kept dry and clean, all the moisture, slush, &c., passing into the grooves and through the apertures into the conduit underneath, from which it passes off into the sewer. This crossing can be kept clean and dry by application of water, as by an ordinary street hose or sprinkler. If desired, the conduits can be provided with steam-pipes *g*, which in winter will keep the plates warm, so that mud and moisture will not freeze thereon, but will run off into the conduit, and in summer can supply water to clean the conduit.

In order to make the top plates light, yet exceedingly strong and durable, they are cast with the bottom flanges, which may cross each other diagonally, as shown in the bottom plan view, and forming a plate with the intervening openings. The upper edges of the conduit can be provided with grooves or pockets, in which soft metal *b'*—such as lead—is run to form a bearing-surface for the top plates. By this means each plate can be provided with a bearing throughout its entire surface, and all danger of cracking or chipping the plates by sharp contact with the conduit is avoided and the plates are somewhat cushioned.

Many advantages are attained by having the serpentine walking-surfaces and the apertures in the bottom of the grooves.

What I claim, and desire to secure by Letters Patent of the United States, is—

5 The herein-described street-crossing, consisting of the substantially-U-shaped trough extending across a street and the metal plates resting on the upper edges of said trough at
10 or about the level of the street and having the closely-arranged series of serpentine ribs

d, provided with edge notches *e'*, the grooves *e* between the ribs having their bottoms inclined in opposite directions to the transverse apertures *f*, substantially as described. '5

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE W. DOOLITTLE.

Witnesses:

JOHN H. GRANGER,
ALVIN SEYSTER.