(No Model.) 2 Sheets—Sheet 1.

S. B. JEROME.

PAVEMENT.

No. 412,261. Patented Oct. 8, 1889.

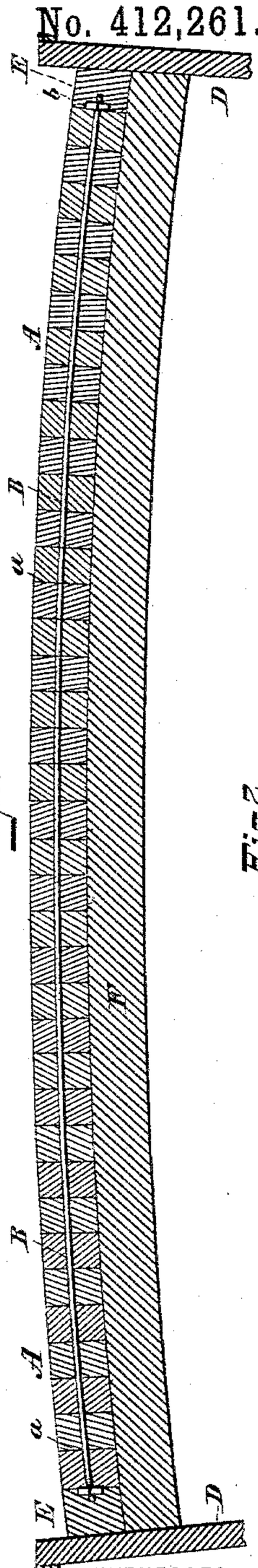

Fig. 1.

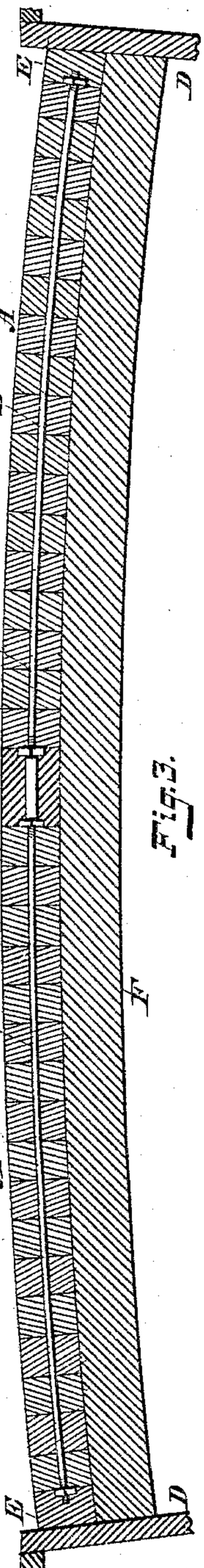

Fig. 2.

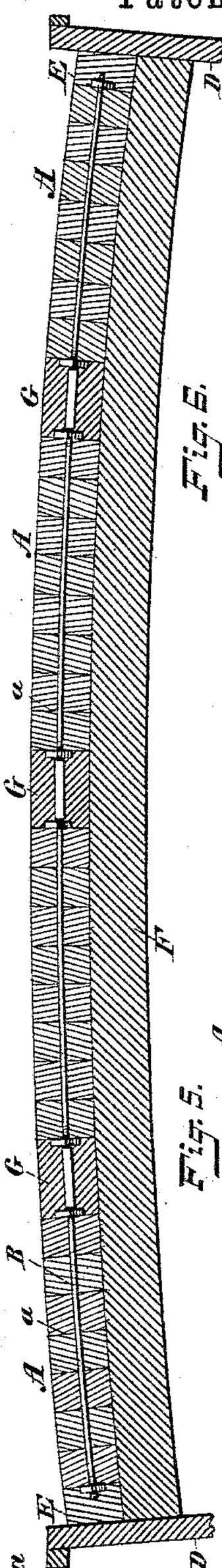

Fig. 3.

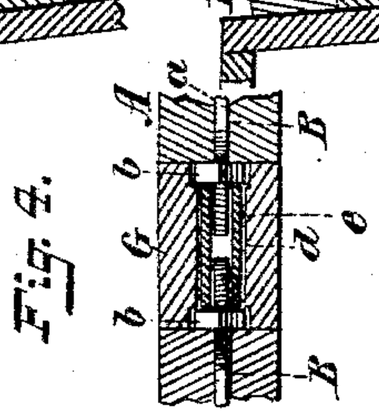

Fig. 4.

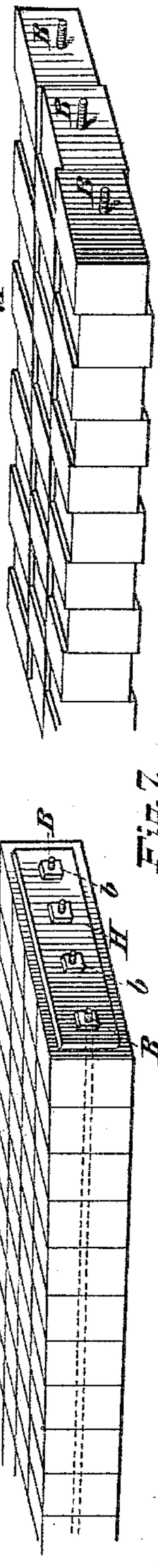

Fig. 6.

Fig. 5.

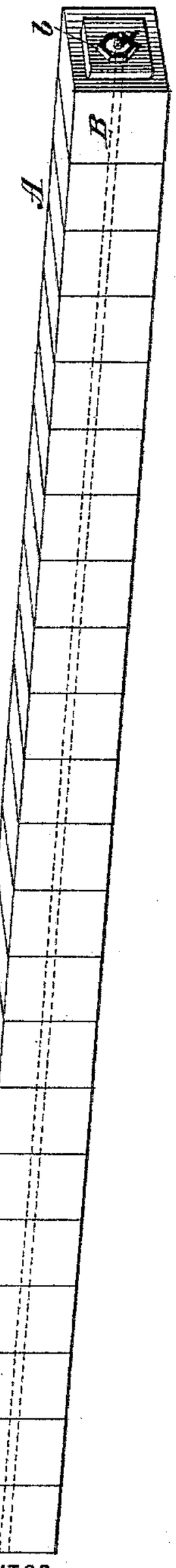

Fig. 7.

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(No Model.) 2 Sheets—Sheet 2.

S. B. JEROME.

PAVEMENT.

No. 412,261. Patented Oct. 8, 1889.

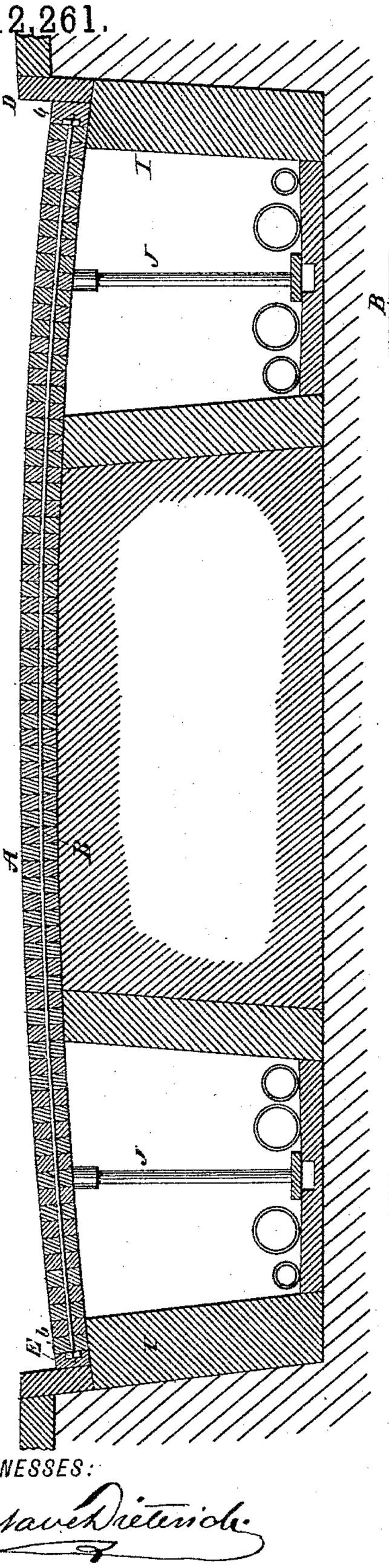

Fig. X.

Fig. 11.

Fig. 9.

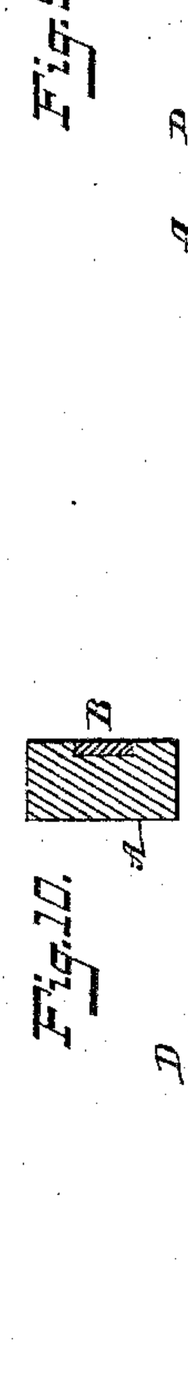

Fig. 10.

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UNITED STATES PATENT OFFICE.

SAMUEL B. JEROME, OF NEW YORK, N. Y.

PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 412,261, dated October 8, 1889.

Application filed November 23, 1888. Serial No. 291,645. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. JEROME, a resident of the city, county, and State of New York, have invented an Improved Pavement, of which the following is a specification.

The object of my invention is to provide a pavement for streets, roads, &c., that will be simple in construction, readily placed in position and removed, and durable in use.

The invention consists in the details of improvement and combinations of parts, that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical cross-section of a road-bed from curb to curb, showing my improved pavement; also in section in position on said road-bed. Figs. 2 and 3 are similar views showing modified constructions of my improved pavement. Fig. 4 is a detail sectional view of the joint connecting the sections of pavement shown in Figs. 2 and 3. Figs. 5, 6, and 7 are perspective views of modified forms of pavement. Figs. 8 and 9 are vertical cross-sections of a street or roadway from curb to curb, showing various applications of my improved pavement. Figs. 10 and 11 are details of modifications.

In carrying out my invention I take blocks A, of wood or other desirable material, of any desired size and dimensions, and perforate them, as at *a*, said perforations extending through said blocks from side to side, as shown, so that these perforations shall be aligned when the blocks are placed one against the other. I preferably make the perforations *a* near the centers of the blocks A. Through the perforations *a*, in a certain number of the blocks A, I pass a rod or bar B. One or more of the ends of the bar B is provided with threads, which receive nuts *b*. When the blocks A are in position upon the bar B, the nuts *b* are drawn up tight until the blocks on said bar are rigidly held together in a compact structure, which I term a "section" of pavement. The rods B may be of such length as to extend nearly across the road-bed about from curb to curb D, as in Figs. 1, 8, and 9, whereby a section of pavement of about the width of the street is obtained.

E are separate blocks similar to the blocks A, that rest against the curb D, and against which the end blocks of the sections abut. The inner face of each block E may be recessed; or instead of the outer end of the section of pavement to receive the projecting end of the rod B, and also the nut *b*, so that the blocks E and the end blocks A of the sections may come close together.

When the sections A B extend across the street from curb to curb, they should have the proper curvature of the road-bed. In order to give this curvature to the sections, I taper the blocks A slightly from their upper edges downward, so that when the nuts *b* on the rods B are drawn up tight and the blocks pressed close together the desired curvature will be given to the section. This is clearly illustrated in Fig. 1.

If preferred, instead of tapering all the blocks A, as stated, some only may be tapered, or matter may be introduced between the blocks A, near their upper ends, to bring their lower ends closer together.

In laying my improved pavement above described upon a road-bed F, said road-bed will first be prepared with the proper curvature, and then the sections of pavement laid upon the road-bed side by side and close together. The road-bed F may be prepared in any suitable manner; but good results will be obtained by first making a layer of broken stones to secure proper drainage, then a covering of coarse gravel, and then a top dressing of smaller gravel, the latter to be "tamped" under each section as laid. The curb of the street will act as an abutment for the sections of pavement, and the sections when curved, as before shown, will act somewhat like a truss in resisting the pressure of heavy loads, &c.

When wood blocks are used, they may be treated with creosote, or in any other suitable manner to withstand the action of the elements.

With my improved pavement the surface of the street will be kept substantially smooth at all times, as one block A will not fall or be pressed below the surface of the adjoining blocks, even if the bed beneath such block should become depressed, because the rod B, passing through the blocks will hold each block in position and up to the level of those adjoining.

Instead of the sections A B extending entirely across the street from curb to curb, said sections may be shorter than the width of the street, two, three, or more sections being used to fill up the distance from curb to curb. This is shown in Figs. 2 and 3 of the drawings. In Fig. 2 two sections A B are shown extending from curb to curb, and in Fig. 3 three sections are shown. When two or more sections A B are used to extend from curb to curb, I provide a separate block G between each section. This block is perforated or recessed from side to side to receive the projecting ends of the rods B and nuts *b* from the adjoining section. I prefer to place in the perforation *d* of the block G an iron or other tube *e*, so as to strengthen the block G and take up any wear that may be caused by the projecting ends of the rods B and the nuts *b*. The above construction is shown in detail in Fig. 4.

In laying my improved pavement in short sections from curb to curb a block E is first placed against one curb. A section A B is next placed in position against said block E. A block G is next placed against the end of the section A B, the projecting end of the rod B being passed within the aperture or recess in the block G. The next sections are then laid in similar manner across the street with blocks G between them until enough have been placed in position to reach the opposite curb D, a block E being placed between the end of the last section and the curb D, as shown clearly in Figs. 2 and 3.

With the construction of pavement shown in Figs. 2 and 3 only a portion of the roadway or pavement need be removed when it is desired to repair or otherwise arrange gas and sewer pipes, telegraph and other wires, &c., beneath the surface of the street—that is to say, the section A B of pavement directly above such pipes, wires, &c., may be removed, leaving the rest of the pavement at the side or sides of such sections intact, so that traffic will not be interrupted.

In Figs. 1, 2, and 3 each section of pavement is described as of the width of only one block A; but these sections may be made in any desired width and length.

In Fig. 5 the section is shown as of the width of four blocks A, which section may be of any desired length. In this section the rods B are passed through the apertures in the blocks A, as described with reference to Figs. 1, 2, and 3, and two or more of these sets or sections of blocks having the rods passed through them are placed side by side, and the ends of the rods B passed through apertures in a metal or other plate or bar H at both ends of the section, and the nuts *b* then drawn up, whereby the blocks A will be held rigidly together along the length of the bars B, as before shown, and will be held side by side to form a wide section by the plates H. This will be clearly understood by referring to Fig. 5 of the drawings.

In the figures of the drawings, heretofore described, the upper ends of the blocks A have been referred to and shown as being flush; but, if desired, the pavement may be made uneven, as in Fig. 6, so that the horses' feet may have points to catch upon, as in ordinary stone pavements for roadways, for the safety and security of horses from injury by slipping.

When preferred or desired, long sections of pavement may be made in straight lines, not having the arched or curved form, and laid lengthwise of the street. This construction is shown in Fig. 7. In this figure the sides of the blocks A are straight and the rod B passed through them, as before stated, so that when the nuts *b* are drawn up the blocks will be held firmly together, but will not take the curved form, the section thereby being made perfectly straight. With this construction of pavement the sections will be laid lengthwise of the street, the sections being laid side by side across the roadway. Between the ends of any two such sections apertured or recessed blocks may be placed to receive the ends of the rods B and the nuts *b*.

Trenches may be dug below the surface of the street to receive gas and water pipes, electric-light wires, and the like, and these will be covered by my improved pavement, as shown in Fig. 8. This pavement will be the only covering necessary for the trenches, as the sections are extremely strong, and by having the form of a low arch, as shown, will support great weights. The ends of the sections of pavements A B may rest upon supports I or embankments at the sides of the trench. Uprights J may be placed in the trenches at proper intervals to assist in supporting the pavement where it crosses the trench. Trenches covered by my improved pavement will be accessible at all times.

If desired, my improved pavement may be used to cover subways for railroad-trains, pipes, wires, and the like, as shown in Fig. 9. In this case the form of pavement having the low arch will be used, extending entirely across the street from curb to curb and resting upon the abutment or supports I, as shown. Longitudinal stringers L, supported by uprights J, may be used to help support the pavement between the curbs D, as shown in Fig. 9. Suspension tie-rods M could also be used extending from the end of the pavement, whereby a truss is formed.

This pavement will be the only essential covering for the subway, and will support heavy loads at all times.

Rails for horse-cars may be laid upon my improved pavement, and grooves cut in the pavement to admit the rail, so that it need not extend above the surface of the pavement.

If one of the blocks A should become broken, or if it is desired to replace a block A for any cause, the section of pavement containing such broken or otherwise damaged block will be lifted from its place, and such block re-

moved from its rod B. The other blocks still remaining on the rod will be pushed along said rod until they are in contact and the new block placed upon the end of the rod, and the nuts drawn up tight to return the section of pavement to its prior condition. The section of pavement will then be placed in position in the roadway.

Instead of the bar B passing through the blocks, it may be sunk into recesses on their sides, as in Fig. 10, or placed against their faces and secured by staples or nails, as in Fig. 11.

Having now described my invention, what I claim is—

1. A pavement consisting of wedge-shaped blocks A A, united into a continuous curved section by a bar B, substantially as described.

2. A pavement, substantially as herein described, consisting of the perforated wedge-shaped blocks A and the bar B, passing through said blocks, said blocks being held tightly together on the bar B in a curved line, substantially as described.

3. The wedge-shaped blocks A, having apertures *a*, said blocks being placed side by side with their apertures aligned, combined with the rod B, having the nut *b*, said rod passing through the apertures in the blocks A, and the nut *b* drawn up to hold the blocks A rigidly together upon the rod B and in a section having a curved line, substantially as described.

4. The blocks A, having apertures *a*, the apertures in the blocks A being aligned, said blocks tapering from their upper edges downward on both sides, combined with the rod B, having the end nut *b*, the rod B being passed through the apertures in the blocks A and the nut *b* drawn up, whereby the blocks A are rigidly held together and formed into an arch, substantially as described.

5. The blocks A, having apertures *a*, that are aligned with each other, and the rod B, passing through said apertures in said blocks and having nut *b* for holding the blocks on the rod, combined with the recessed blocks E, that rest against the curb and receive the ends of the rod B, substantially as described.

6. The two sections of pavement herein described, each consisting of blocks A, placed side by side and having a rod B passed through them, and the nuts *b* holding said blocks on said rods, combined with the intermediate recessed or apertured block G between said two sections of pavement, the ends of the rods B being passed into the aperture in said block G, whereby the sections of pavement are connected together, substantially as described.

7. A pavement consisting of the perforated blocks A, the upper surface of one block being lower than the upper surface of an adjoining block, and the bar B, passing through said blocks, said blocks being held tightly together on said bar, substantially as described.

SAMUEL B. JEROME.

Witnesses:
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T. FRED. BOURNE.