

(No Model.)

P. BARGION.
STREET RAILWAY RAIL AND PAVEMENT.

No. 452,333.

Patented May 12, 1891.

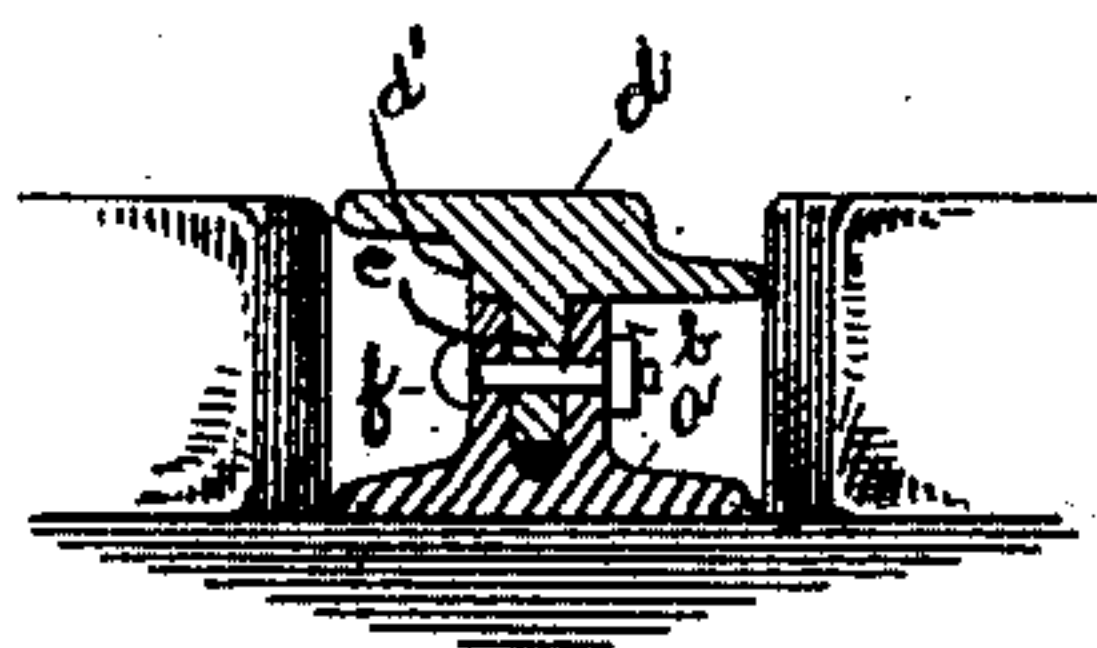


Fig. 2.

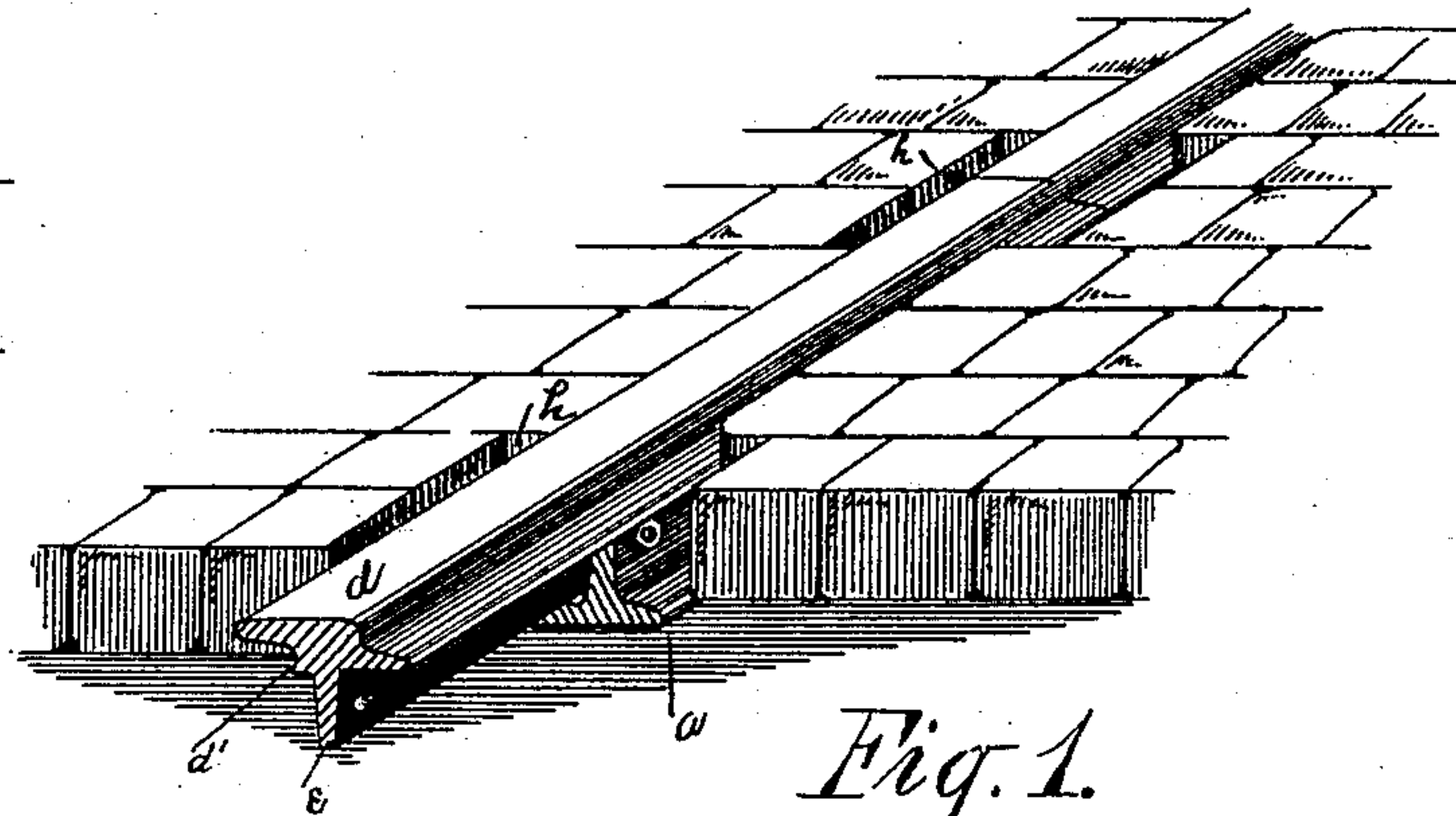


Fig. 1.

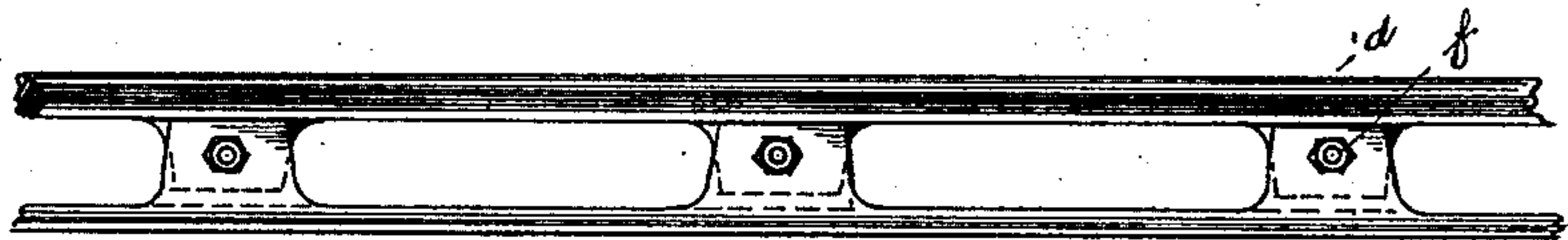


Fig. 3.

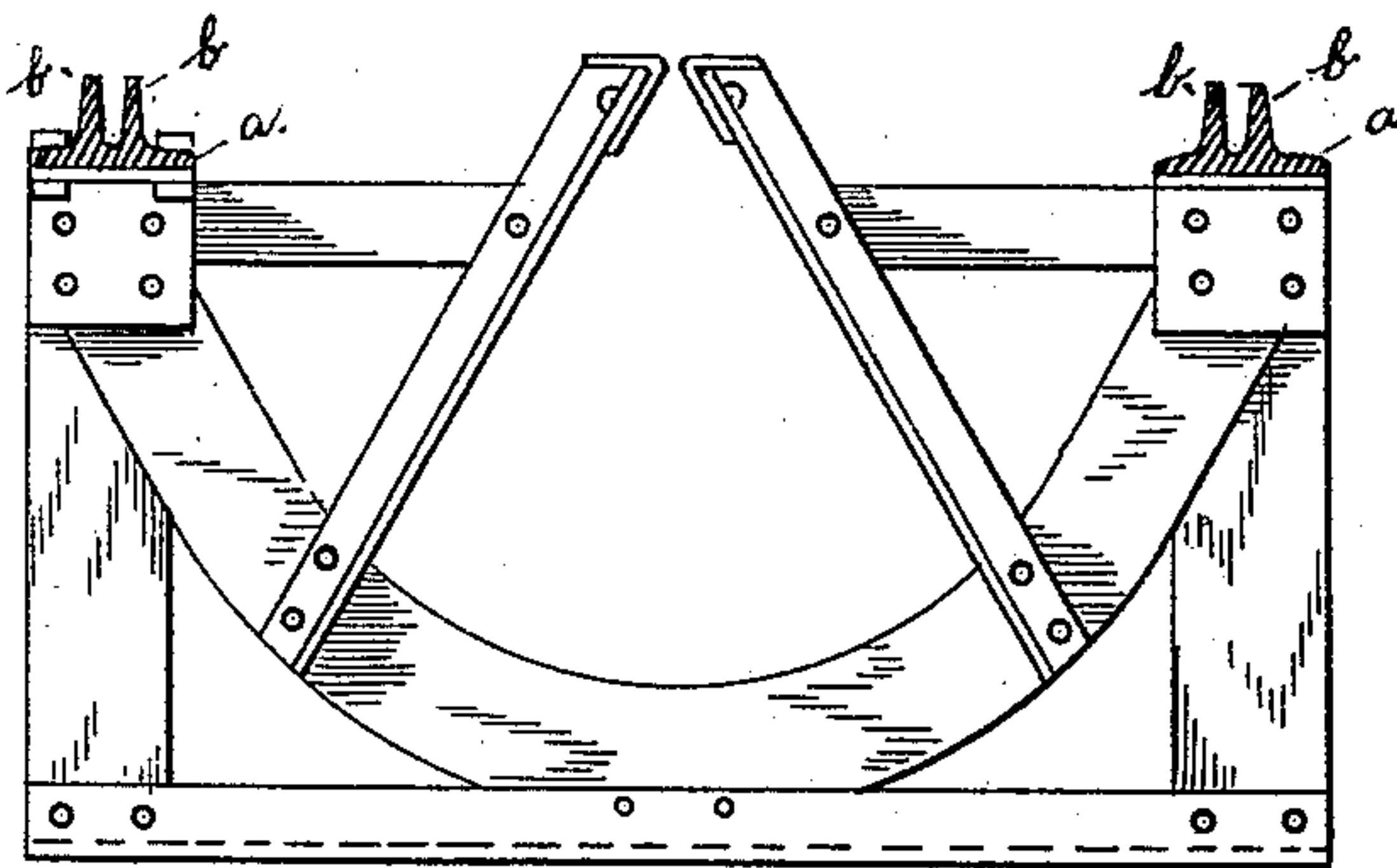


Fig. 4.

Witnesses.

P. H. Antwerpe

A. B. Starbird

Inventor.

Peter Bargion

By Boon & Tacker

UNITED STATES PATENT OFFICE.

PETER BARGION, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE
BARGION COMPOUND RAIL COMPANY, OF CALIFORNIA.

STREET-RAILWAY RAIL AND PAVEMENT.

SPECIFICATION forming part of Letters Patent No. 452,333, dated May 12, 1891.

Application filed November 8, 1890. Serial No. 370,749. (No model.)

To all whom it may concern:

Be it known that I, PETER BARGION, a citizen of the United States, residing at the city and in the county of San Francisco and State of California, have invented certain new and useful Improvements in Street-Railway Rails and Pavements; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

The old style of solid rails is found objectionable owing to their liability to the wear of all the traffic passing over the street in which they are laid, in addition to the proper wear resulting from the traffic of cars over them, so that they soon wear out or become loose and unstable, and consequently require frequent repairs and replacement. In cities this is a great source of trouble and annoyance, as it requires that the street-pavement adjoining the rails be taken up and disturbed in order to repair or replace a worn-out rail, and the pavement when once taken up or disturbed cannot be again restored to its original condition unless at a heavy expense.

My invention relates to a compound rail consisting of a sub or base rail which can be permanently laid and secured in place in a pavement, and which will never need to be disturbed, and a top or bearing rail adapted to be supported upon and fastened to the sub or base rail, so that it can be removed or repaired without disturbing either the adjoining pavement or the sub or base rail.

Referring to the accompanying drawings, Figure 1 is a section of street-pavement in perspective showing the sub-rail and bearing-rail in place and the pocket-openings in the pavement, and Fig. 2 is a cross-section of same. Fig. 3 is a side elevation of a compound rail, showing the portion between the bolt-fastening cut away. Fig. 4 is a cross-section of a cable-road foundation, showing lower or sub rail forming a part of foundation.

The rail which I use is a two-part rail, consisting of a sub or base rail and a bearing or wearing top rail. The sub or base rail consists of a broad base *a* and two vertical flanges *b b*, extending upward from the base at a short

distance apart on each side of its central line, leaving a slightly-tapering space or groove between them. This base-rail I secure, by means of spikes or bolts, to the pavement foundation or bed-piece of the road. If the road is a cable road in which metallic yokes are used to form the tunnel for the cable, I secure these sub or base rails to the ends of the yokes, so that they form a permanent part of the road structure, as shown at Fig. 4. The bearing or wearing rail consists of a flat head *d*, such as is used for street-car service, having a deep rib or flange *e* projecting downward from its under middle line and adapted to enter and fit the groove of the base-rail. This flange or rib is not as deep as the groove in the lower rail, thus leaving a space underneath it which can be used for containing a telegraph-wire or for other such purpose. It will also be seen that the head is formed upon one side with a shoulder *d'*, adapted to be seated upon one of the vertical flanges of the base-rail, hereinafter referred to. Upon the upper surface the head upon one side is depressed to form a shoulder for the flange of the wheel. From this it will be noticed that the head is formed with two side flanges, one arranged on a plane below the other. The head or upper part of the rail is secured to the sub or base rail by bolts *f*, which pass transversely through the two uprights or flanges *b b* of the lower and the rib or flange *e* of the upper part at proper intervals. The bolt-holes in the rib or flange of the upper part are elongated or slotted lengthwise of the rail to accommodate the expansion and contraction of the rail. When the bearing-rail is in proper position within the base-rail, as clearly indicated in Fig. 2, it will be seen that the shoulder *d'* rests upon the vertical flange on one side of the base-rail, while the under surface of the depressed side flange of the head rests upon the opposite vertical flange of the base. The side flanges of the base and of the head of the rail extend outward to the same distance on each side of the compound web or connection of the rail, as shown at Fig. 2. This is very important, because in laying the pavement on the street, especially a block pavement, the blocks when laid up close to the track will abut against both the upper and lower flanges, and thus

not only keep the pavement in proper condition, but also support and bind the rail itself.

In order to provide for easy access to the bolts which secure the parts of the rail together, I leave a block or section of the pavement opposite each bolt free to be easily taken up without disturbing the adjoining pavement. This forms in the pavement what I call "pockets," (marked *h* in the drawings,) which are filled with a removable section of pavement when it is not required to get at the bolts, thus avoiding the necessity of breaking or disturbing the pavement when the bolts are being tightened or the upper or bearing rails replaced or repaired when worn out.

The ribs or flanges which interlock to connect the two parts of the rail may be cut away at points between the bolt-holes, as shown at Fig. 3, thus effecting quite a saving in the amount of metal without materially affecting the strength of the rail.

I am aware that a compound railway-rail

composed of a base-section having two upright flanges and a head or upper section with a downwardly-projecting interlocking flange is not broadly new, such a rail being described in Letters Patent No. 217,766, which were issued to me on the 22d day of July, 1879.

What I claim as new is—

In a compound railway-rail, the combination, with a base provided at intervals along its length with vertical flanges, whereby side openings are left between the series of flanges, of a bearing-rail similarly provided at intervals with a central stem fitting in the space formed between the inner side walls of the flanges of the base, substantially as set forth.

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

PETER BARGION.

Witnesses:

G. L. PIERCE,
S. M. HOLDREDGE.