

(No Model.)

2 Sheets—Sheet 1.

F. A. BAIER.
STREET CAR.

No. 541,415.

Patented June 18, 1895.

Fig. I

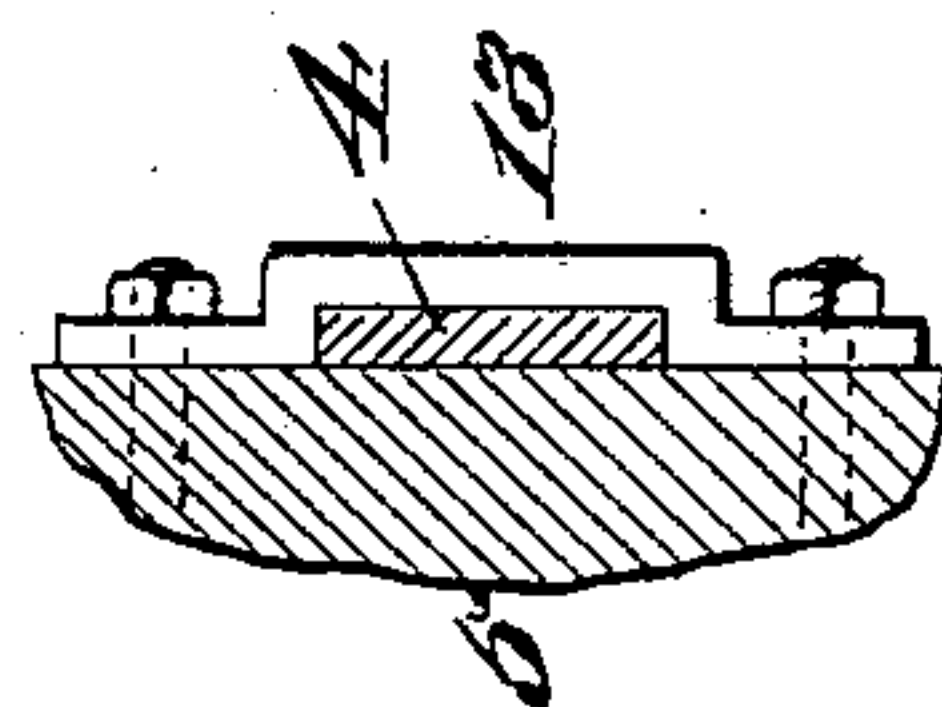
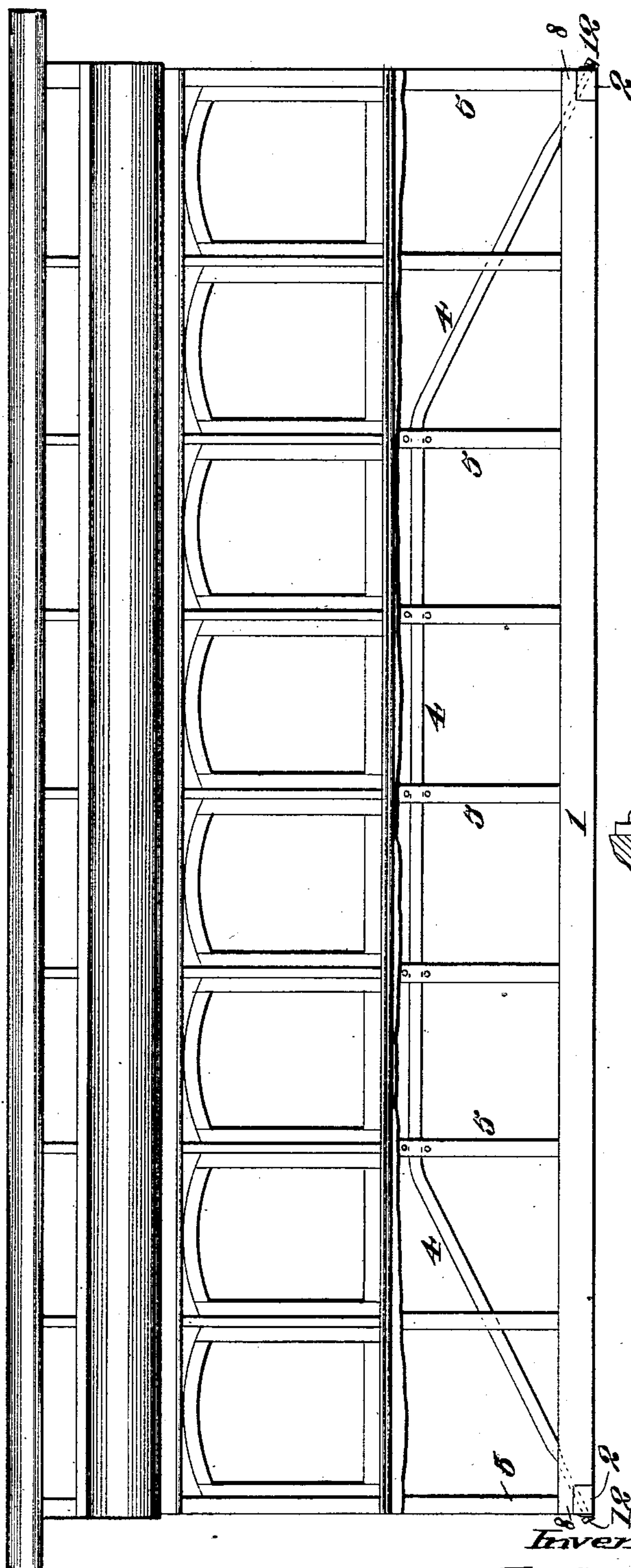


Fig. II

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Fig. III.

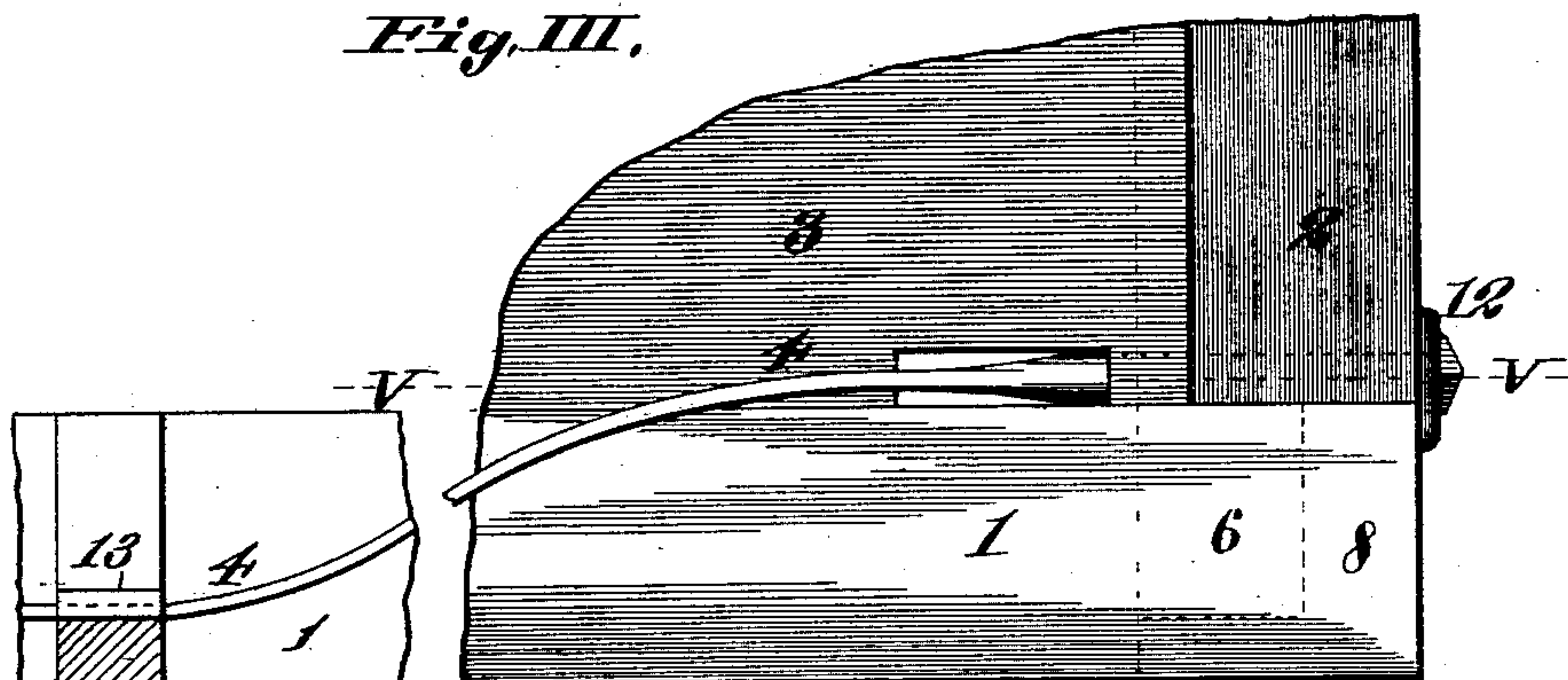


Fig. IV.

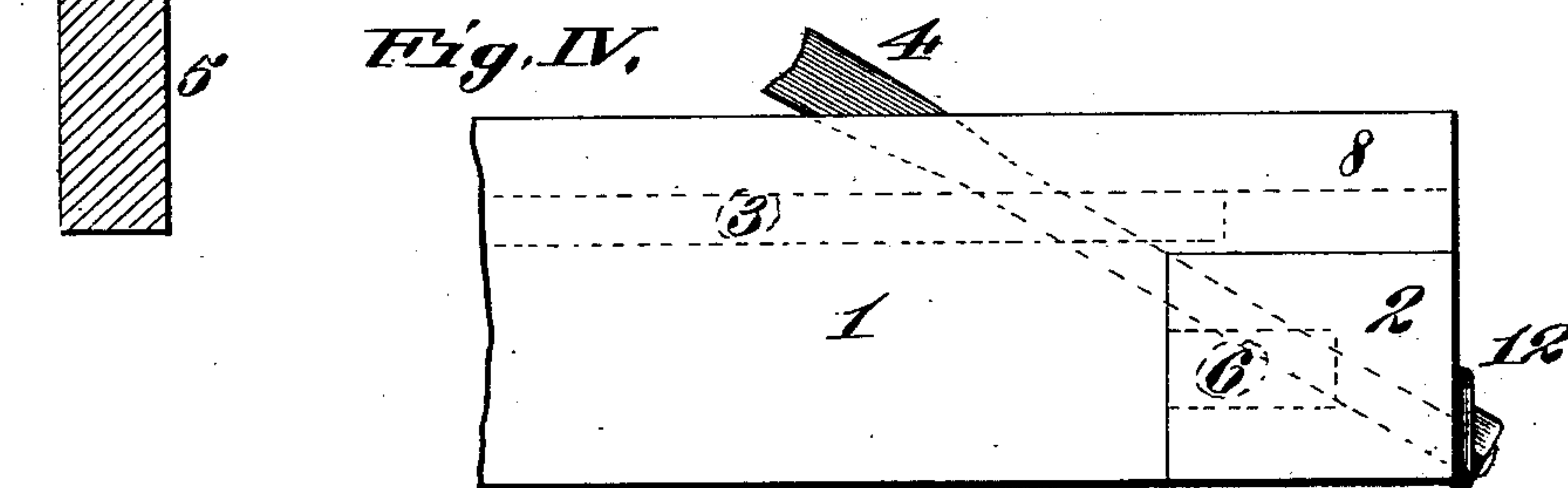


Fig. V.

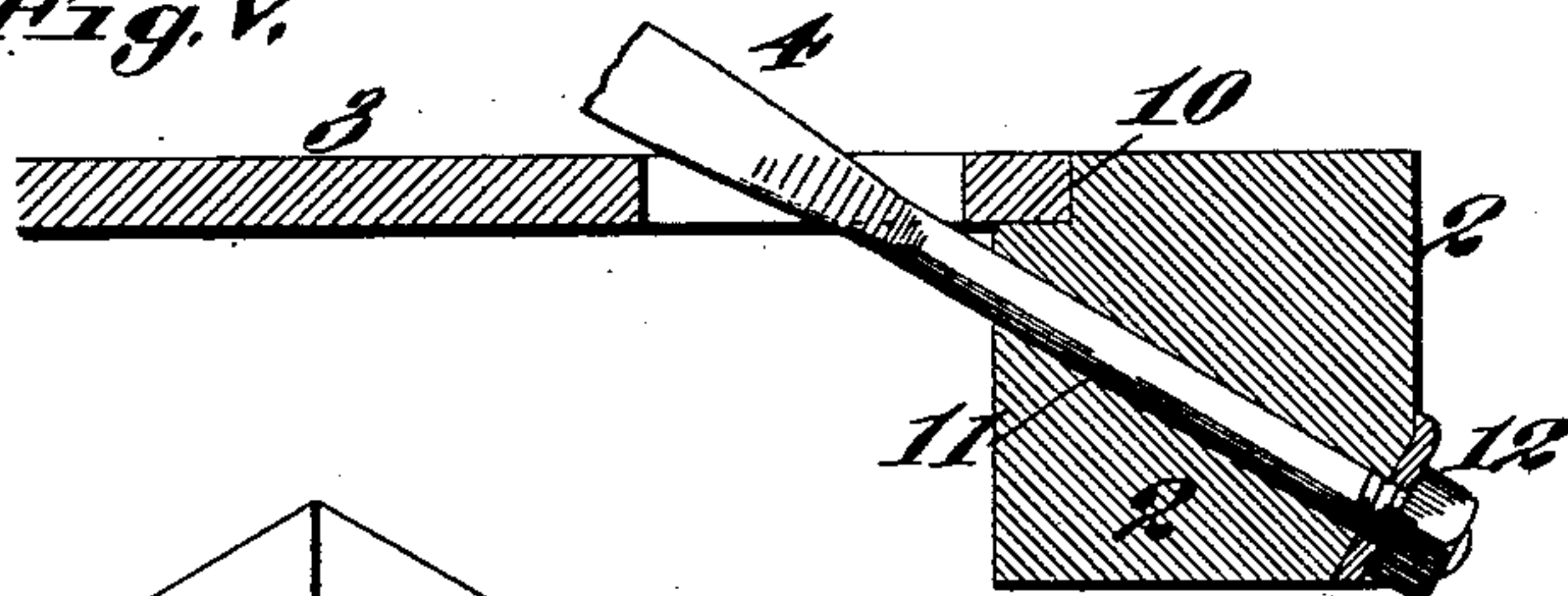


Fig. VI.

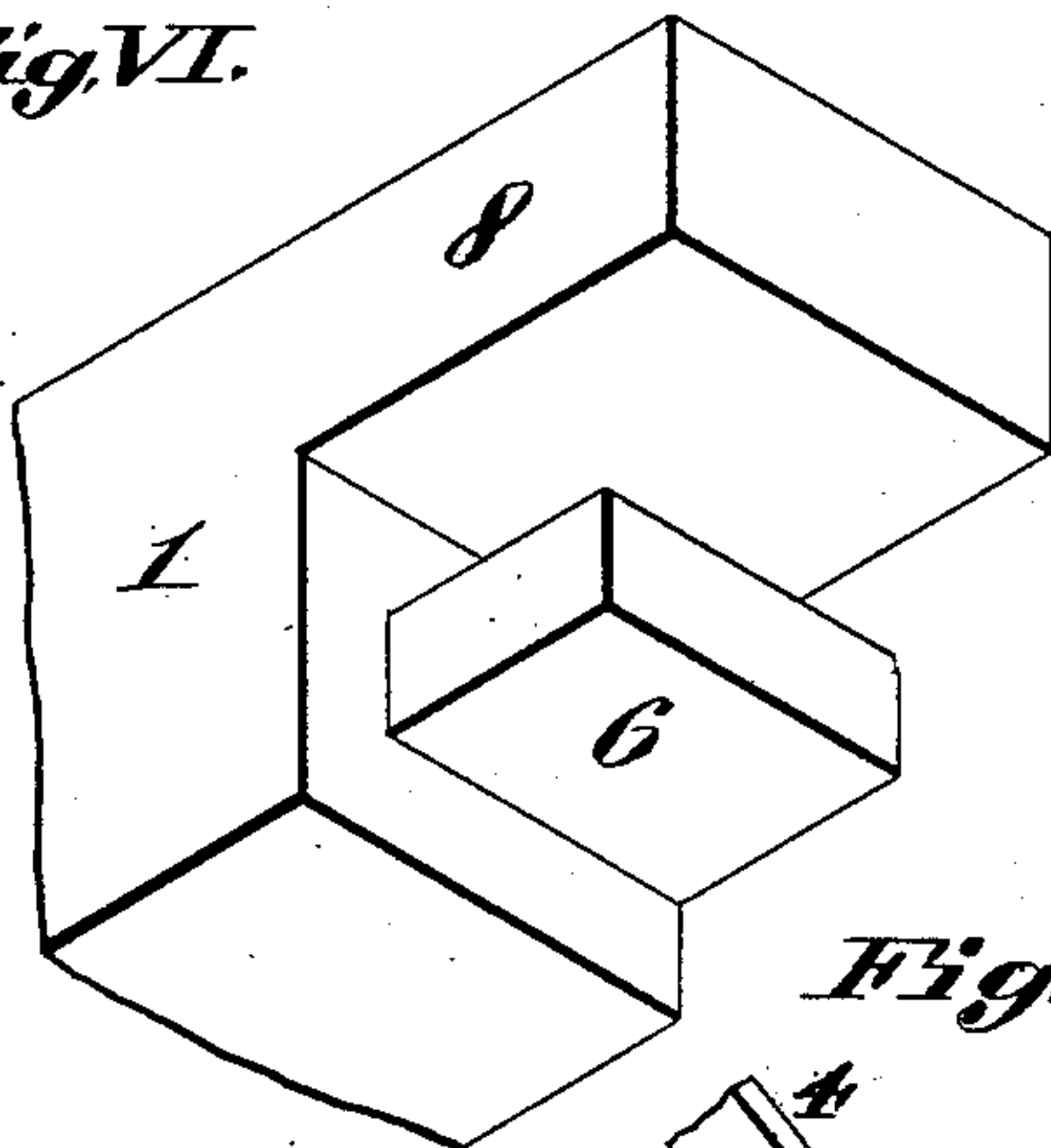


Fig. VII.

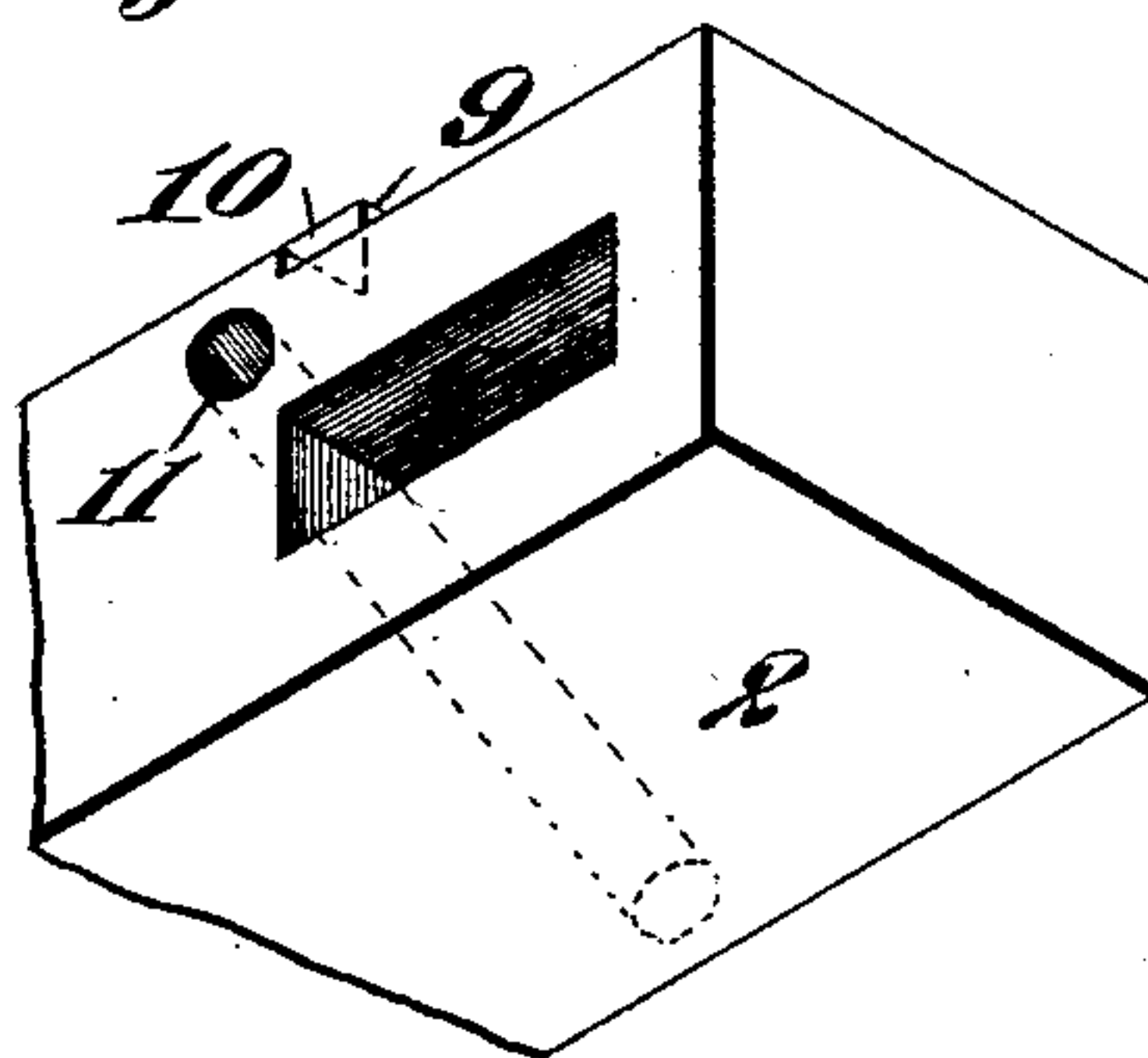
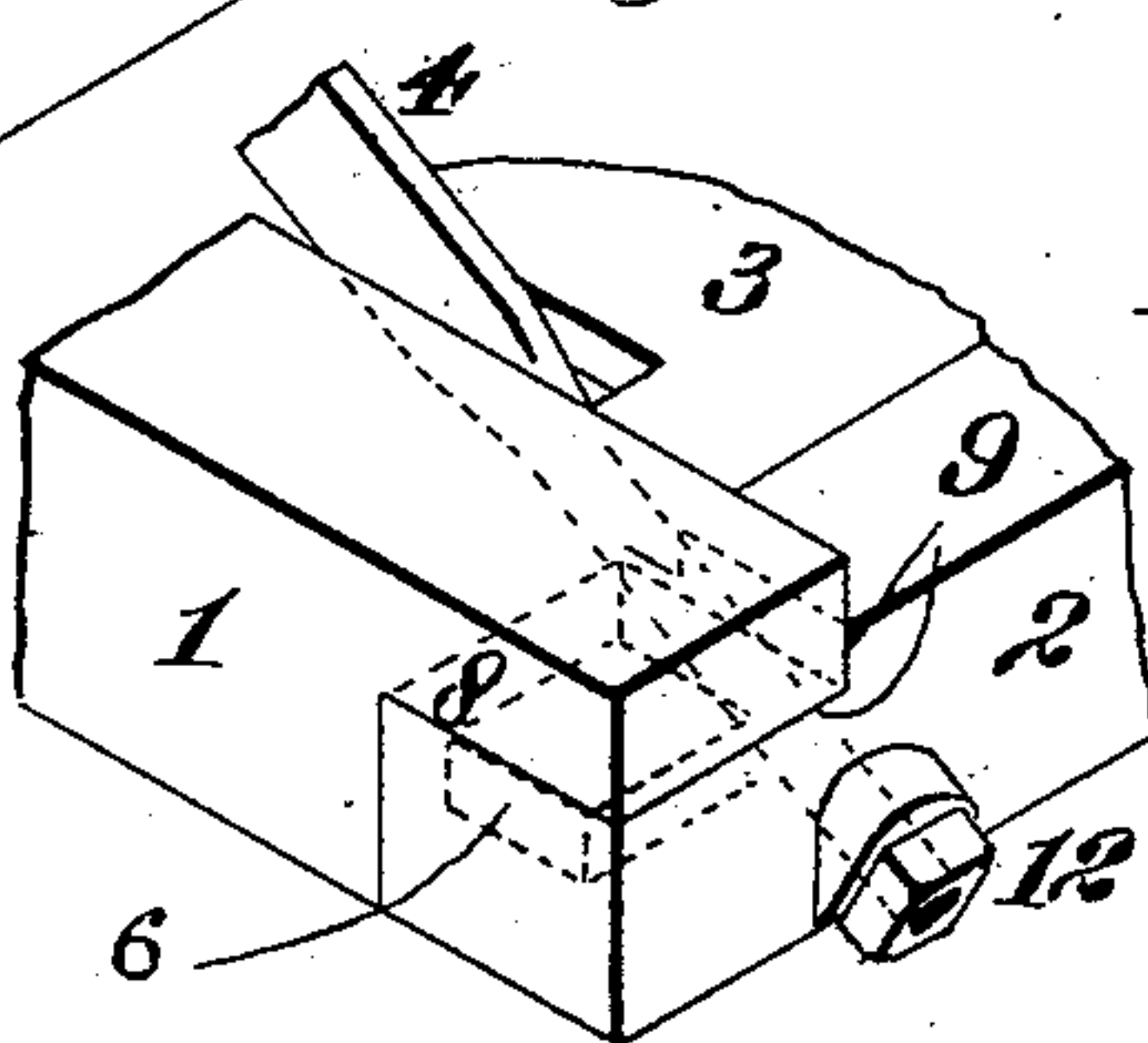


Fig. VIII.



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UNITED STATES PATENT OFFICE.

FREDERICK A. BAIER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE BROWNELL CAR COMPANY, OF SAME PLACE.

STREET-CAR.

SPECIFICATION forming part of Letters Patent No. 541,415, dated June 18, 1895.

Application filed November 13, 1894. Serial No. 528,690. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. BAIER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Street-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved construction for street cars, the object being to provide strength and firmness to the frame work, and to provide against moisture getting between the posts and the sills upon which they rest.

My invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a side elevation of my improved car, part broken away. Fig. II is an enlarged detail section of one of the truss-rods and one of the posts, showing one of the truss-rod brackets in edge view. Fig. III is an enlarged detail top view of one corner of the car, showing the curvature of the truss over the ends of the sill. Fig. IV is a detail side view. Fig. V is a section taken on line V V, Fig. III. Fig. VI is a perspective view of one end of one of the side sills. Fig. VII is a perspective view of one end of one of the end sills. Fig. VIII is a perspective view on a smaller scale, showing the sills jointed together.

Referring to the drawings, 1 represents one of the side sills of the car; 2, the end sills; 3, the floor; 4, one of the truss-rods, and 5 the main posts extending along the sides of the car and resting on the side sills. Each end of each side sill is formed with a tenon 6 that fits in a mortise 7 in the end sill, and each end of each side sill has a tongue 8 that is received by a shallow notch 9 in the end sill, the tongue being somewhat thicker than the notch is deep, so that the upper face of the side sill is slightly higher than the upper face of the end sill and the surface of the floor, see Fig. VIII, and thus moisture is prevented from passing off the floor onto the upper surface of the side sills and rotting the lower ends of the posts where they rest on the side sills.

Each end sill is provided with a rabbet 10 to receive the ends of the floor boards so that they will lie flush with the upper surface of the end sills, as shown in Figs. V and VIII.

The end sills are perforated at points adjacent to the sills so as to provide diagonally positioned holes 11 to receive the ends of the truss rods. The perforations or holes are formed inside of the mortises 7 so that the truss rods do not pass through the side sills but on the inside of them, as shown in Fig. I, so that while the side sills are supported and strengthened by the truss rods they are not weakened by the rods passing through them. The rods are provided with washers and nuts 12 fitting against the lower outside corners of the end sills.

The truss rods extend, in elevation, to a point well up and horizontally under the car windows, as shown in Fig. I, and they extend along inside of the main posts 5 to which they are made fast by straps 13. See Fig. II. By thus extending the rods to a high elevation and making them fast to the posts, the sills are much better supported than with the ordinary low truss rods, and the sills and posts are bound and held together in a very firm and rigid manner.

As shown in Fig. III the truss rods are curved outwardly after rising over the side sills so as to come against the posts, and the result of this is that the rods exert an inward pull on the posts, preventing the latter from being strained outwardly when the car is in use.

I claim as my invention—

1. A car comprising a side sill, the end sills secured to the side sill, the main posts supported on the sills, the truss-rod having its ends extending diagonally through the end sills inside of the side sill, curved outwardly over the side sill, and extending horizontally under the windows, means for securing the truss-rod to the main posts, and means for securing the ends of the truss-rod to the end sills; substantially as described.

2. A car comprising the side sill having a tongue, and a tenon at each end, the end sills having a shallow notch, a diagonal hole, and

a mortise, the main posts supported on the side sill, the truss-rod having its ends extending through the diagonal holes of the end sills inside of the side sill, curved outwardly
5 over the side sill and extending horizontally under the windows, straps for securing the truss-rod to the main posts, and washers and

nuts for securing the ends of the truss-rod to the outer lower corners of the end sills; substantially as described.

FRED. A. BAIER.

In presence of—

GEO. H. KNIGHT,
E. S. KNIGHT.