(No Model.)

J. J. MILLER.

RAIL AND ROAD BED FOR TRACTION ROADS.

No. 454,179. Patented June 16, 1891.

Fig. 1.

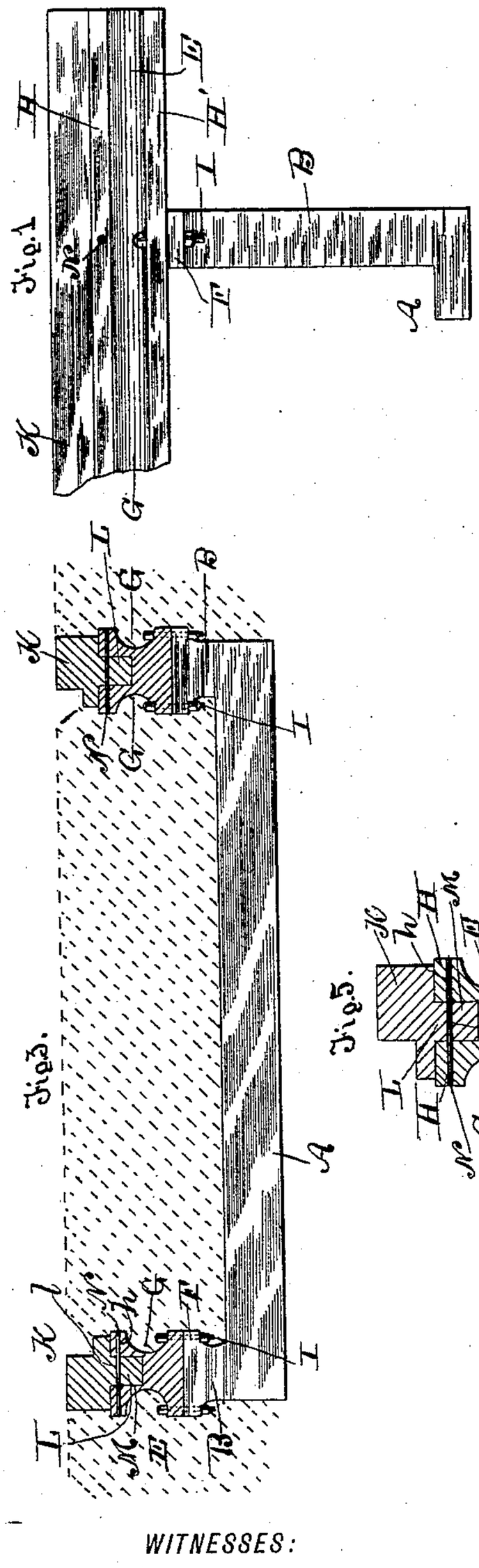

Fig. 2.

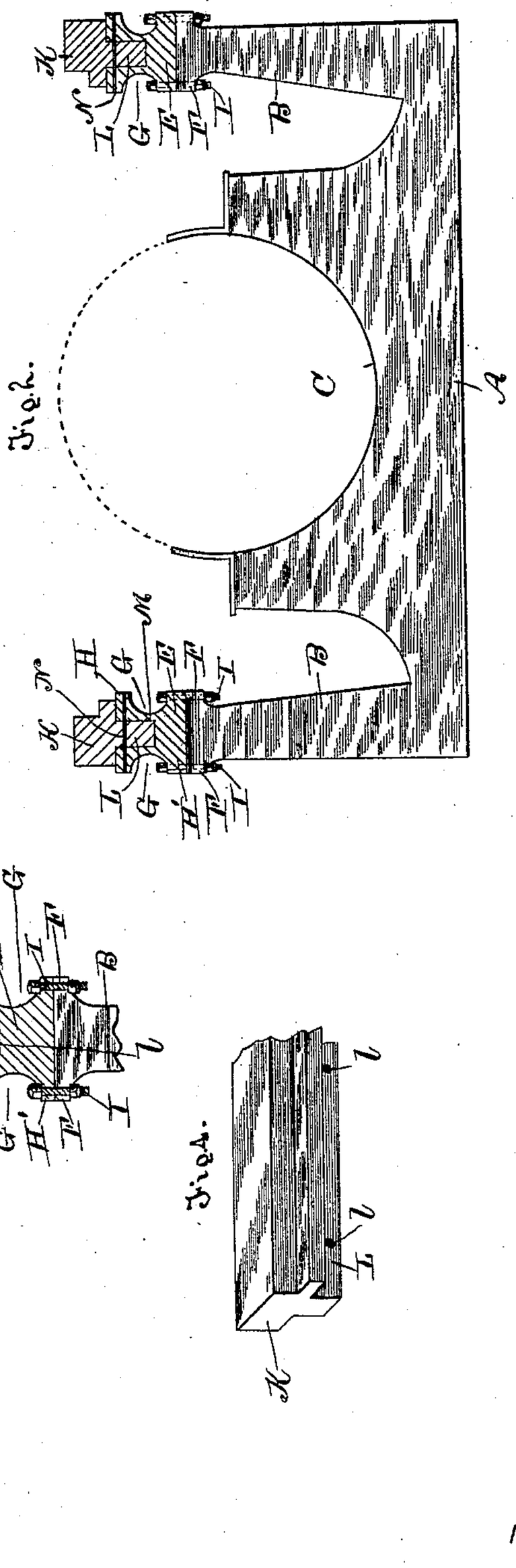

Fig. 3.

Fig. 5.

Fig. 4.

WITNESSES:

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RAIL AND ROAD-BED FOR TRACTION-ROADS.

SPECIFICATION forming part of Letters Patent No. 454,179, dated June 16, 1891.

Application filed February 14, 1891. Serial No. 381,467. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. MILLER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rails and Road-Beds for Traction-Roads; 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, which form a part of this specification.

My invention relates to improvements in track-rails and the means for securing the same in place, and has special reference to tracks for street-railways where the paving is arranged flush with the top of the rail.

My invention has for its object to provide a simple and effective rail which may be readily laid and removed, which will be firm and durable, and which may be cheaply manufactured, and, furthermore, to provide a simple, cheap, and effective sleeper-rail which may be readily put in place and to which the rail may be applied without disturbing the paving.

With these objects in view the invention consists in the construction and arrangement of the sleeper-rail, in the adaptation of the sleeper-rail to the standards of the castings which are employed in the construction of traction-roads, in the construction and adaptation of the track-rail to the sleeper-rail, and in certain details of construction and arrangement, which will be fully described hereinafter in connection with the drawings, wherein—

Figure 1 is a side view showing track-rail, sleeper-rail, and casting. Fig. 2 is a front view of same. Fig. 3 is a similar view showing the standards shortened, as seen when the road is built for traction which does not require an underground conduit. Fig. 4 is a detail view of a portion of the track-rail. Fig. 5 is a detail section.

The casting A is provided at its ends with vertical standards B B and at its center with a saddle C to receive the conduit, which is shown in dotted lines in Fig. 2. The sleeper-rails E E are secured to the upper ends of the standards. The standards are provided at their upper ends on their inner and outer sides with laterally-projecting ears or lugs F F, which are flush with the upper ends of the standards, and the sleeper-rails are provided in their sides with channels G G, thereby forming the upper and lower lateral flanges H and H′, respectively. The lower or base flanges H′, rest on the upper ends of the standards and are secured to the lateral ears or lugs before mentioned by means of vertical bolts I I, which engage registering perforations in said flanges and ears.

The track-rails K rest on the upper flanges H and are provided on their under sides with a depending web L, which fits snugly in a channel or groove M in the upper surface of the sleeper-rail. This web is fitted into the channel or groove by simply placing the track-rail upon the sleeper-rail, and after the former is firmly in place the rails are connected by transverse pins or bolts N, which are passed through registering perforations *h* and *l* in the upper flange and the web, respectively.

It will be seen that in order to replace a broken or damaged rail which is constructed and secured in place in accordance with my invention it is simply necessary to withdraw the retaining pins or bolts N, (which may be accomplished by the removal of a paving-stone opposite each pin,) after which the rail may be raised vertically out of its seat. The road-bed is not disturbed and the adjoining rails are not affected. The perforations in the web may be made slightly elongated in shape to allow for expansion and contraction of the metal, due to changes of temperature.

By forming the sleeper-rails independently of the castings the construction is simplified and the road is more easily built, while at the same time a firm and substantial foundation is formed for the track-rails.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with castings provided with end standards, of the sleeper-rails secured to the upper ends of said standards, and the track-rails provided with depending webs fitting in channels or grooves in the sleeper-rails, substantially as and for the purpose specified.

2. The combination, with castings provided

with end standards having lateral ears or lugs, of the sleeper-rails provided with base-flanges resting upon the upper ends of said standards, the bolts engaging registering openings in the base-flanges and the lugs or ears, and the track-rails provided with depending webs fitting in channels or grooves in the sleeper-rails, all substantially as and for the purpose described.

3. The combination, with castings provided with end standards having lateral ears or lugs, of the sleeper-rails having their sides channeled and provided with base and top flanges, the bolts engaging registering perforations in the base-flanges and the said ears or lugs, and the track-rails resting upon the top flanges of the sleeper-rails and provided with depending webs fitting in channels or grooves in the same, said webs being engaged by transverse pins which are arranged in the sleeper-rails, substantially as and for the purpose specified.

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

JOHN J. MILLER.

Witnesses:
WILLIAM F. ROBB,
WM. B. COX.