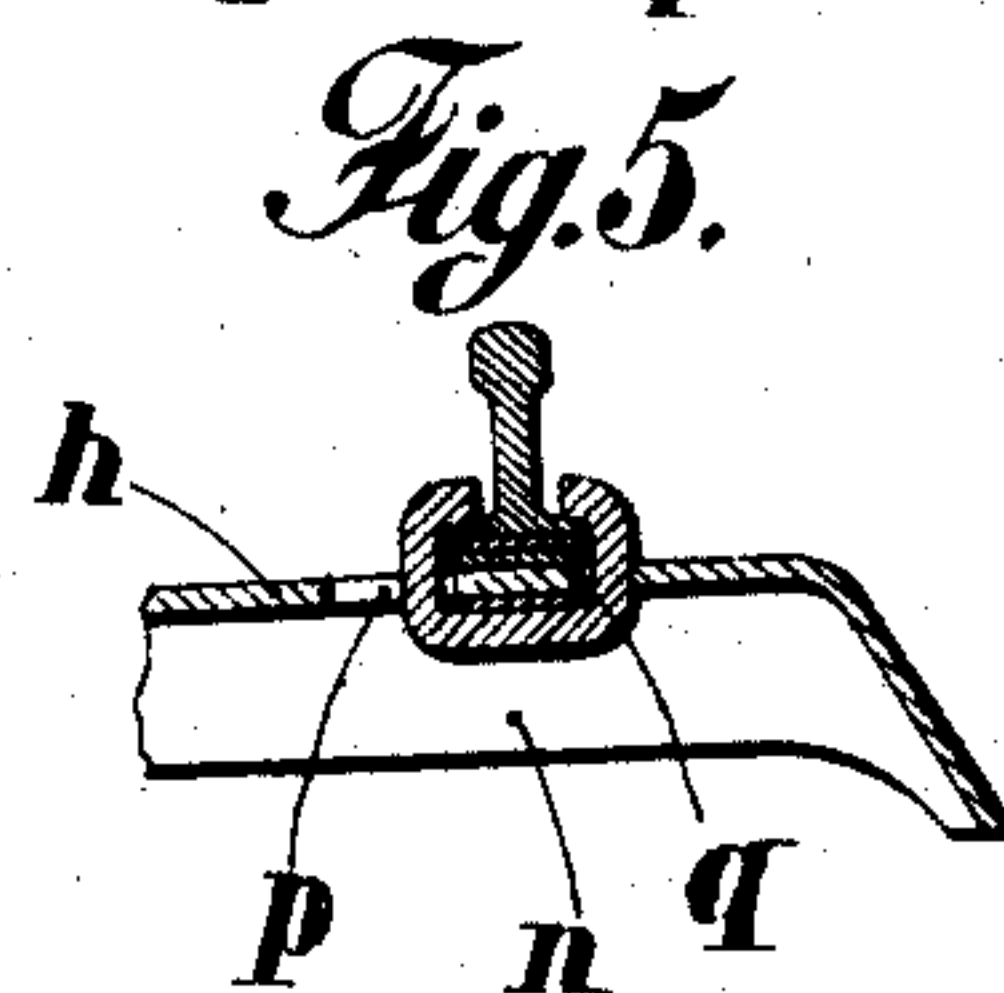
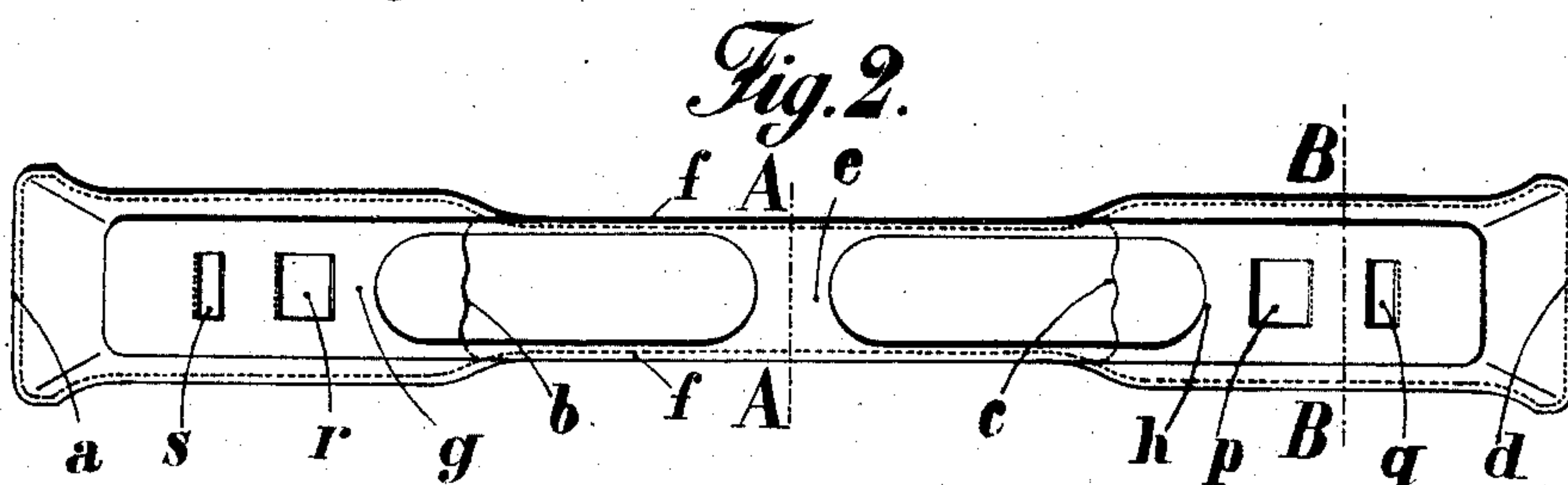
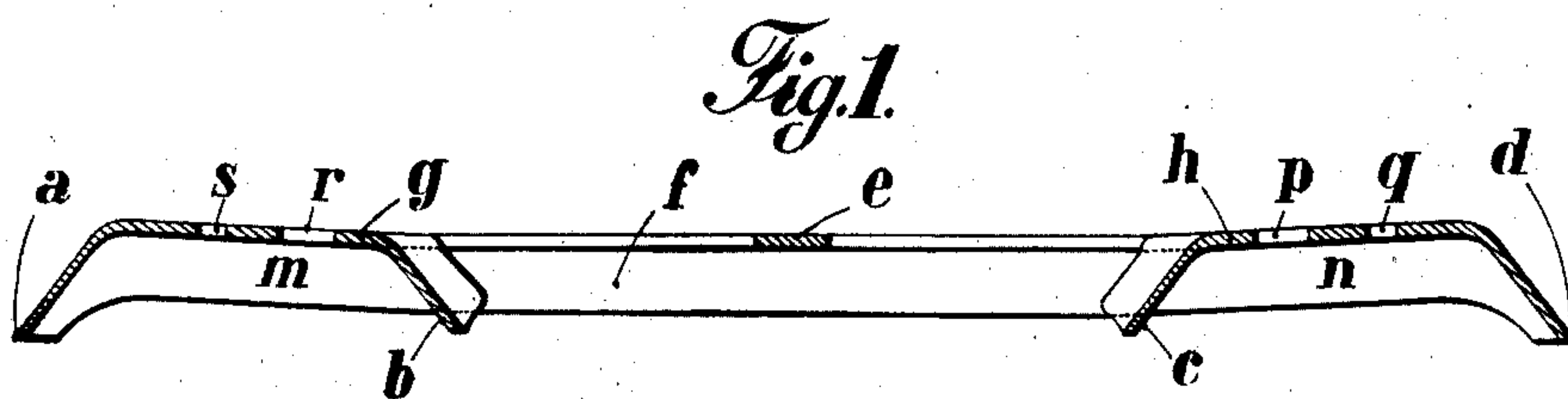


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METAL SLEEPER FOR RAILWAYS AND THE LIKE.
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905,624.

Patented Dec. 1, 1908.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALEXANDRE AMBERT, OF LYON, FRANCE.

METAL SLEEPER FOR RAILWAYS AND THE LIKE.

No. 905,624.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed January 3, 1908. Serial No. 409,105.

To all whom it may concern:

Be it known that I, ALEXANDRE AMBERT, citizen of the French Republic, residing at Lyon, Department of the Rhône, in France, have invented certain new and useful Improvements in Metal Sleepers for Railways and the Like, of which the following is a specification.

The invention has for its object a metal sleeper for railways and the like, the form of which has been devised with the object of imparting great stability to the track while at the same time it is simple and economical in construction.

In the accompanying drawings: Figure 1 is a longitudinal section of the sleeper. Fig. 2 is a plan view. Figs. 3 and 4 are sections of the sleeper through A—A and B—B of Fig. 1. Fig. 5 shows a fixing device of the rails given by way of example.

The sleeper presents the general appearance of two truncated quadrangular pyramids united by two vertical cheeks. The extremities *a* and *d* are turned over in such a manner as to form outwardly and downwardly inclined walls projecting below the side members or vertical cheeks *f* of the sleeper and providing penetrating and holding projections and at distances inwardly from the walls *a* and *d* of the body of the sleeper two other walls *b* and *c* are arranged near the first named walls *a* and *d* but sloping in opposite directions; these four walls serve to prevent transverse movement or spreading of the track. The walls *b* and *c* are formed by turning down a portion of the metal of the plate. Their addition doubles the effect of the support ordinarily obtained, renders it very efficacious and constitutes one of the features of the invention. In this manner between the two walls at each end of the sleeper there are formed two boxes *m* and *n*, and which retain the ballast and beneath which the ramming takes place. A considerable capacity is given to these boxes owing to the obliquity or flare of the side and end walls forming the said boxes.

The vertical cheeks *ff* are united as at *e* by one or more stays serving to increase their strength. The verticality of the cheeks serves to overcome the rocking movement of the sleepers around their middle point, which movement takes place whenever the sleepers bear firmly on the ballast at their middle. In fact the cheeks, acting as blades,

cut the ballast when the sleepers descend under the influence of the rolling loads and the middle of the sleeper cannot find a firm support on the ballast thus divided; in addition to this the slotting of the plate of the sleeper in the neighborhood of its middle permits of the free descent of the sleeper as the ballast passes through the slots; consequently the rocking movement termed the dancing or trembling of the sleeper is avoided.

Rails may be fixed upon the sleepers by means of any one of the devices heretofore employed, but the method of attachment which is most advantageous consists in the C-shaped bonds which form the object of U. S. A. Patents Nos. 728,652 and 771,692. This attachment is shown in Fig. 5. Appropriate openings *p q r s* are formed in the plate of the sleeper.

The inclination of the rail may be obtained by a slight inclination given to the upper faces *g* and *h* of the boxes *m* and *n*. In the case of the C-shaped bonds the inclination of the rail may also be obtained by sloping the tightening wedges suitably.

In electric tracks it is usual to unite the two rows of rails electrically at intervals by means of a conductor. For the sleeper which forms the object of the present invention electrical communication may readily be established between the two rows of rails. With this object it is only necessary to polish partially the faces *g* and *h* of the boxes and the underside of the feet at the places at which the rail rests upon the sleepers and also to polish the large faces of the wedges, in order to constitute a single conducting block.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. As an improved article of manufacture, a metallic sleeper of approximately U-shaped form in cross-section and having the opposite ends of box-like form inclined downwardly and outwardly below the lower side edge portions of the body, the boxes at the opposite extremities being completed by inner downwardly projecting walls at angles reverse to the outer ends and also having their lower ends extending below the lower side edge portions of the body.

2. As an improved article of manufacture, a metallic sleeper of approximately U-shaped

form in cross-section and having the opposite
ends of box-like form inclined downwardly
and outwardly below the lower side edge
portions of the body, the boxes being com-
5 pleted at the opposite extremities by inner
downwardly projecting walls at angles re-
verse to the outer ends and also having their
lower ends extending below the lower side
edge portions of the body, the top surfaces
10 formed with openings between the outwardly

inclined ends and inner downwardly project-
ing walls to receive rail fastenings.

In testimony whereof I have hereunto set
my hand in presence of two subscribing
witnesses.

ALEXANDRE AMBERT.

Witnesses:

THOS. N. BROWNE,
MARIN VACHON.