(No Model.)

D. SMITH.

RAILWAY.

No. 259,726. Patented June 20, 1882.

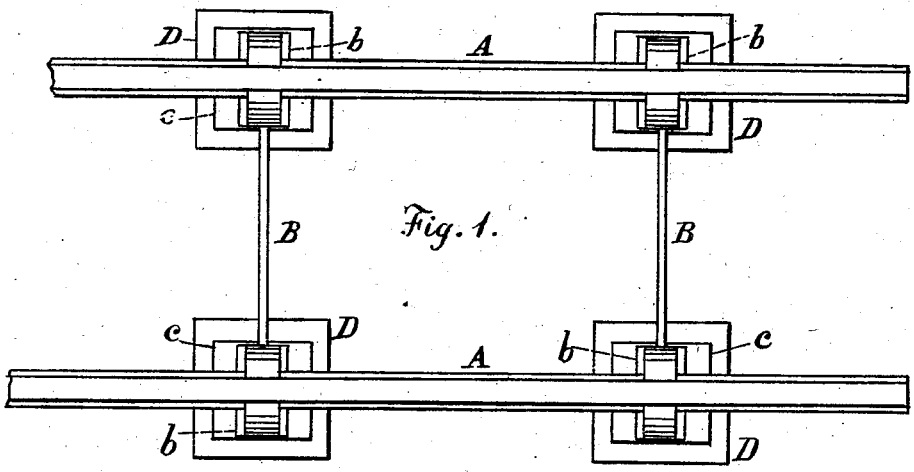
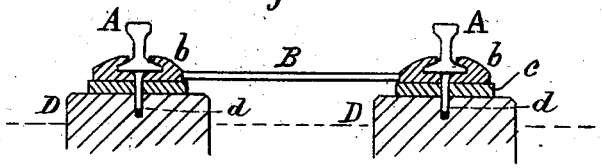


Fig. 1.

Fig. 2.



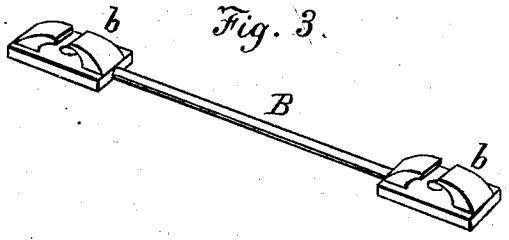


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

DANIEL SMITH, OF MABEL, PENNSYLVANIA.

RAILWAY.

SPECIFICATION forming part of Letters Patent No. 259,726, dated June 20, 1882.

Application filed October 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, DANIEL SMITH, a citizen of the United States of America, residing at Mabel, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to railways; and it consists in certain improvements in the construction of the same, as herein set forth and described, the object being to provide for the rails a firm and durable foundation without the use of wooden sills set in the ground, as in common practice.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a plan of a railway having my improvements. Fig. 2 shows a transverse vertical section of the same. Fig. 3 represents a detached view of a coupling for the rails.

In the said drawings, A designates the rails, which are of ordinary construction, and B indicates the couplings extending transversely from rail to rail, and each consisting of a rod or bar, preferably round in section and about one inch and a quarter in thickness, with a seat, *b*, formed at each end to receive the base of the rail. As shown in the drawings, the seat *b* conforms to the base of the rail, lapping somewhat over the flanges, and when the couplings B are secured in position the rails may be placed by passing each rail along in its line of seats *b*. Each end of a coupling B rests on a block, *c*, of hard wood, preferably white oak, and usually about eight inches square and not less than two inches thick, the said block being usually slightly grooved or recessed to receive the bottom of the seat *b*. The block *c* rests on a stone, D, which may be rough-hewn, but is provided with flat upper and lower surfaces. The stones D, forming the lower part of the foundation of the railway, rest upon the ground, and are usually about sixteen inches square and from six to eight inches in thickness. Each of the seats *b* is secured in place by a bolt, *d*, passing downward through an aperture in the wooden block *c*, and into an aperture in the stone D, as shown, and extending about three inches into the hole in the stone, but not resting on the stone. (See Fig. 2.) After the parts are secured together the rail, being introduced as shown, and overlying the bolt, prevents the displacement of the coupling, and the parts are held firmly in place.

The railway-foundation described has no parts of wood which are set in or come in contact with the ground, so that it is not liable to the rapid decay to which the wooden sills and ties in common use are subject, and the couplings, being of iron, are not liable to destruction by fire falling from passing engines, as are the wooden sills and ties.

The wooden blocks *c* render the foundation sufficiently elastic, and may be readily removed as desired. In case a stone is found to have settled somewhat, the block of wood may be removed and a thicker block substituted, the old block being retained for use elsewhere.

In case a rail-coupling becomes worn or broken, it is a short work to remove the joint-plates of the rails, draw out the latter from their seats, substitute a new coupling, and slide the rails back in place, where they are again secured, the expense and labor in repairing being thus greatly reduced. Furthermore, this construction is very advantageous in many sections of country where there is a scarcity of wood.

Having described my invention, I claim—

In a railway, the rail-couplings B, having seats *b*, and bolts *d*, passing centrally down through said seats, in combination with blocks *c* and stones D, the said bolts extending into apertures in stones D, as herein shown and described.

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

DANIEL SMITH.

Witnesses:

CHAS. HOFFMAN,

JOHN CONNER.