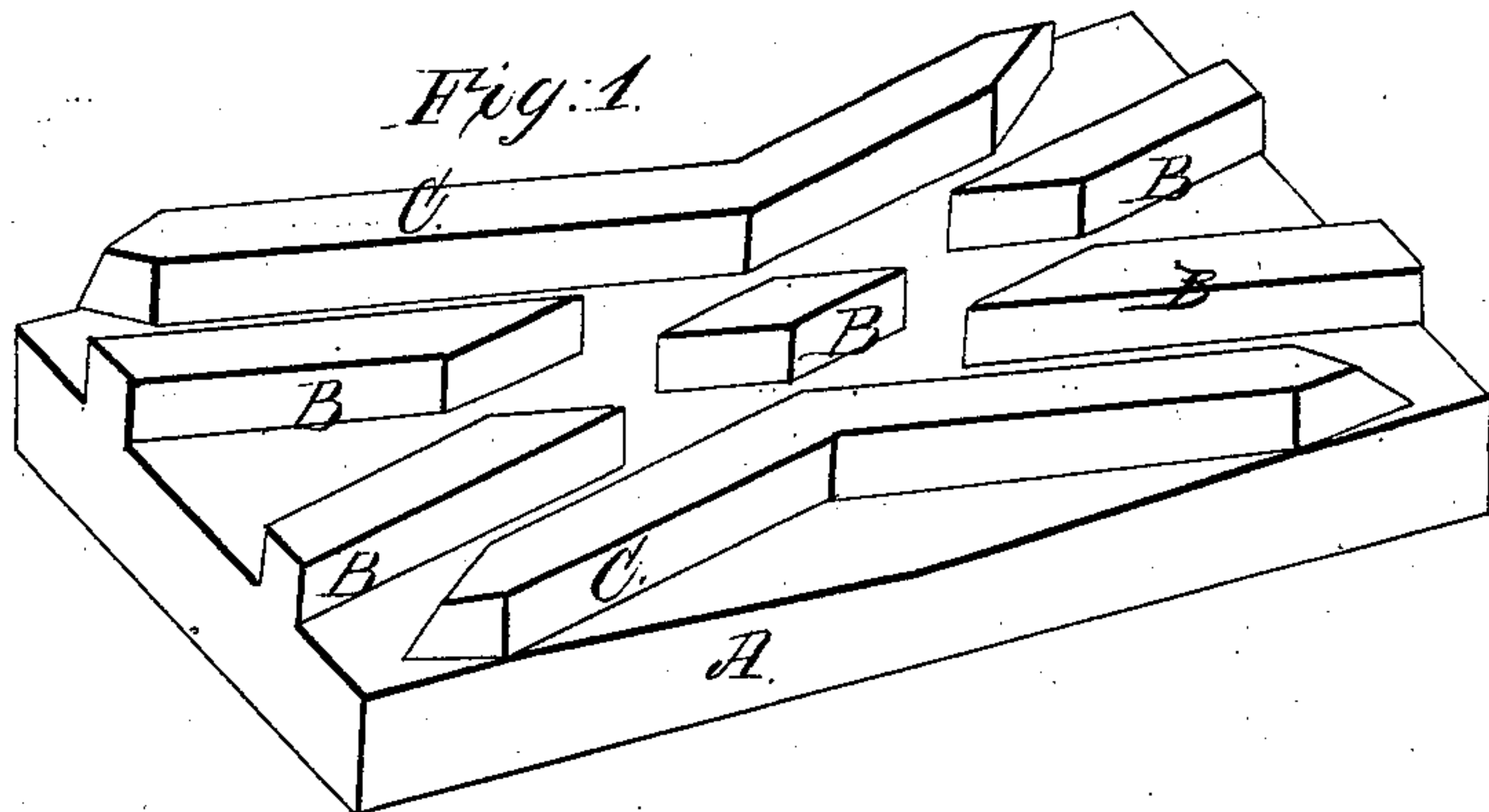
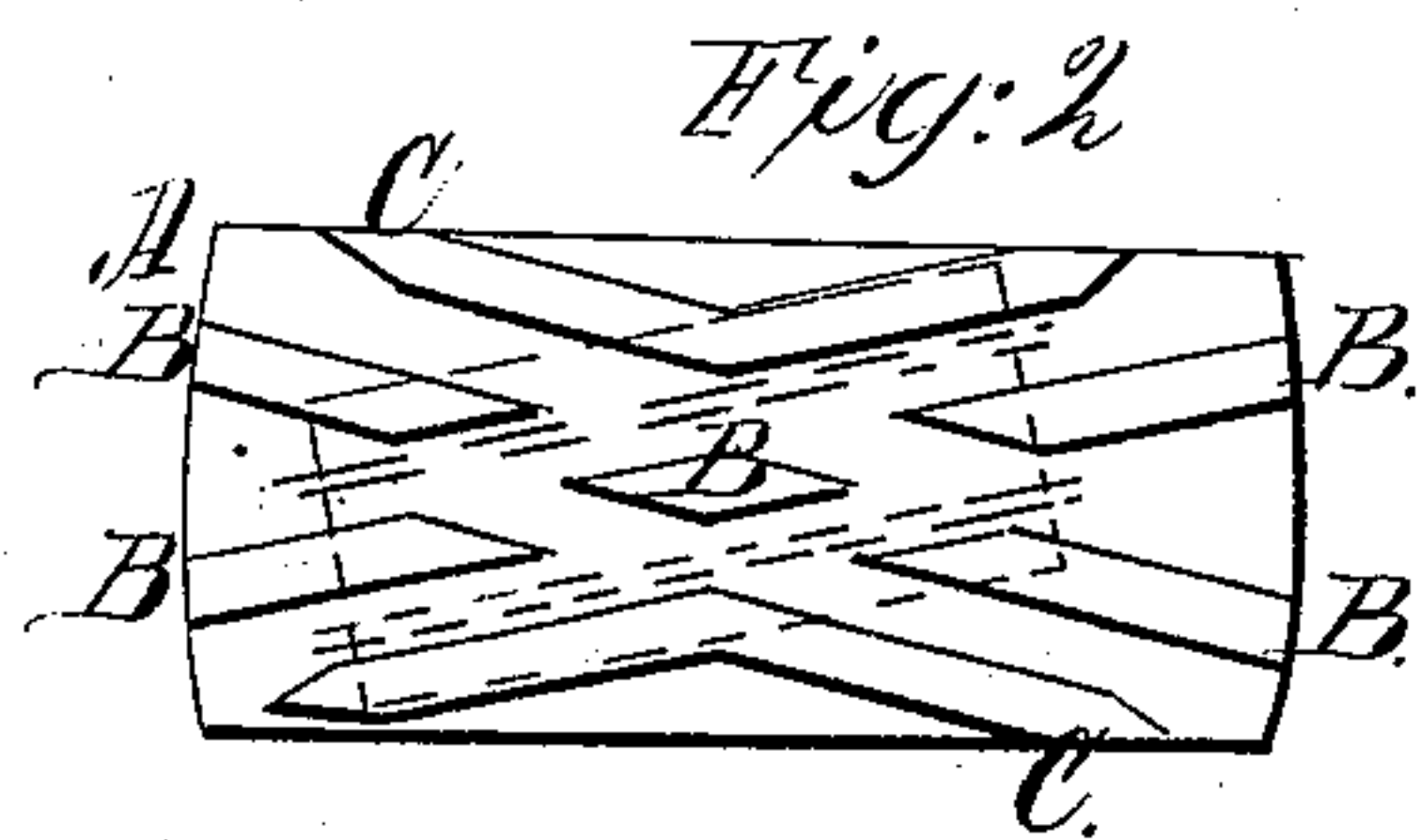


W. H. Nobles,

Railroad Frog,

No 82,977-

Patented Oct. 13, 1868.



Witnesses:

*J. F. Reigart
C. M. Stout & Co.*

Inventor:

W. H. Nobles



WILLIAM H. NOBLES, OF ST. PAUL, MINNESOTA.

Letters Patent No. 82,977, dated October 13, 1868; antedated October 10, 1868.

IMPROVED RAILWAY-FROG.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM H. NOBLES, of St. Paul, county of Ramsey, and State of Minnesota, have invented a new and improved Frog for Crossings and Switches of Railways; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is a railway-frog, constructed with a special adaptation to a wheel having two flanges and a central and two outer treads, the frog being so constructed as to support the wheel continuously on the treads during its passage from one track to another.

In order that those skilled in the art to which my invention pertains may be able to make and apply the same, I will proceed to specify more fully its construction and operation.

Figure 1 shows a perspective view of my improved frog, and

Figure 2 a plain view of the same, showing the wheel in its passage.

The same letters refer to identical parts in both the figures.

A represents the base of the frog, of any ordinary construction.

B B B B are continuations of the rails of the two tracks; and

C C are facings, in structure and size, of substantially the construction of the rail, and bent as shown.

Across the rails B B are the ordinary flange-grooves, which cut one rail so as to leave a piece, B'. The facings C C are so bent and arranged that the bent

ends lie parallel with the rails B B, leaving between the facings and the rails a space sufficient for the passage of the flanges of the wheels. These facings extend only sufficiently far to cover the flange-grooves.

The operation of my improved frog is as follows:

The wheel of my improved construction, having double flanges and treble treads, coming in the direction with the arrow on the right-hand track, will be carried on the right-hand facing C by the outer right-hand flange of the wheel, over the flange-groove of the right-hand rail, and to the point *b*. Immediately upon leaving this point it will be supported continuously by the central piece B' and the left-hand facing, striking the latter at *a*. The process is the same from whatever point or direction the wheel approaches, this being used only for illustration. It will thus be evident that the wheel will pass over this frog without any fall or jar resulting from striking upon the flanges. It is also clear that no guard-rails are necessary. The facings C C, besides their proper function, serve to keep the wheels on the track.

I do not confine myself to any particular manner of making the frog, whether of solid casting, or of parts bolted or otherwise fastened together; but

What I do claim, and desire to secure by Letters Patent, is—

A railway-frog, when constructed with the rails B B, with their flange-grooves and facings C C, all arranged as described, and for the purpose set forth.

W. H. NOBLES.

Witnesses:

E. D. MAYHEW,
EDM. F. BROWN.