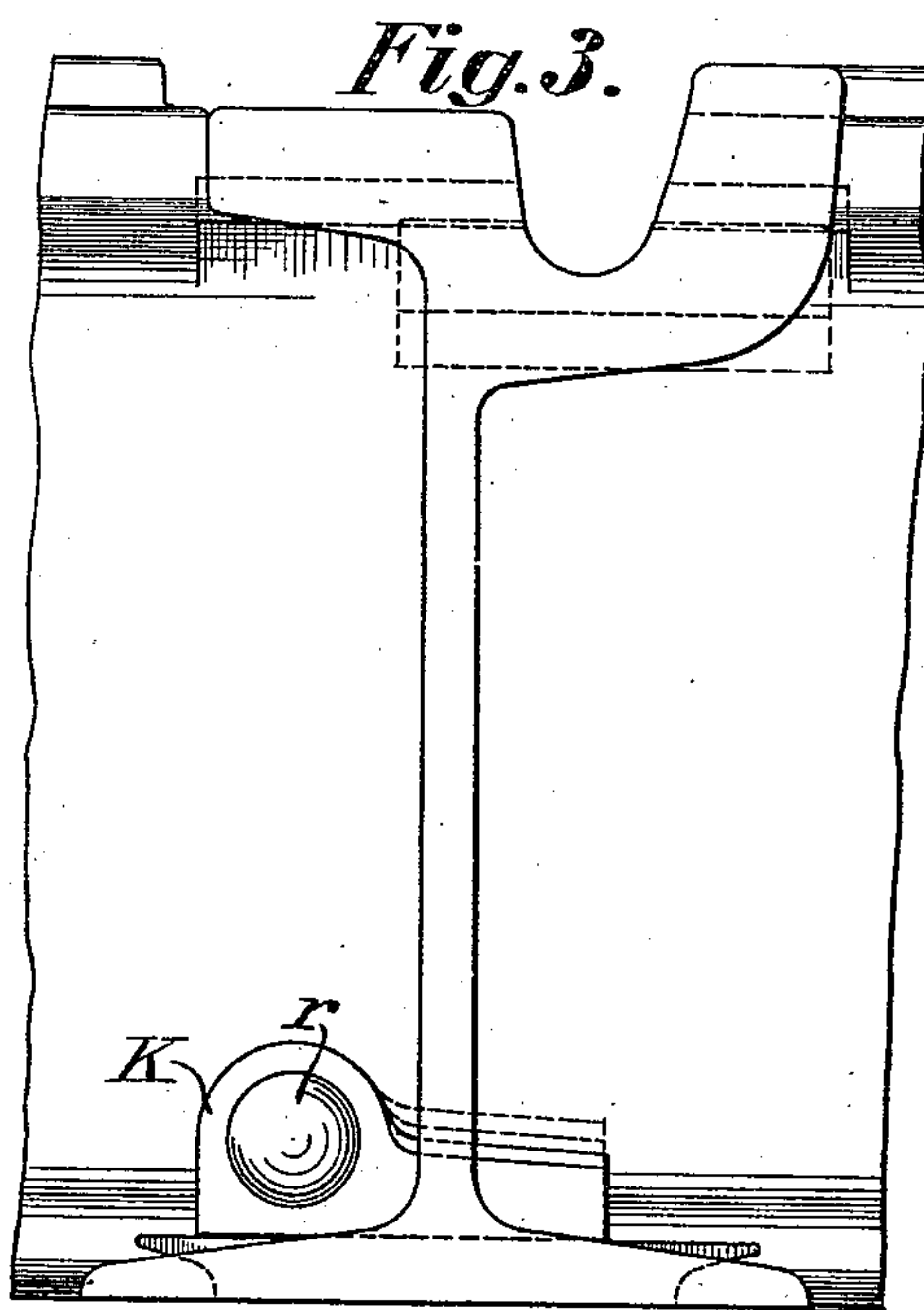
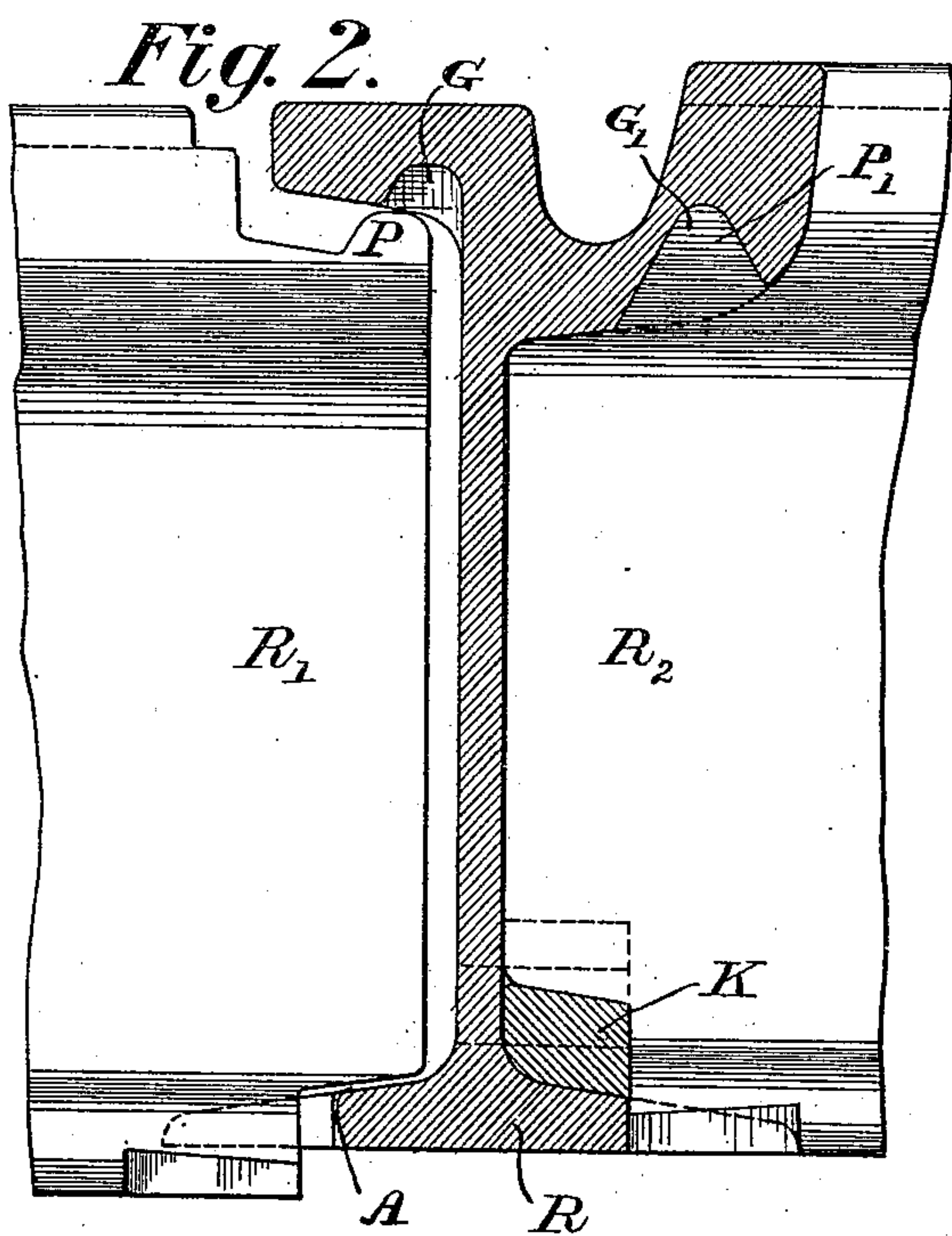
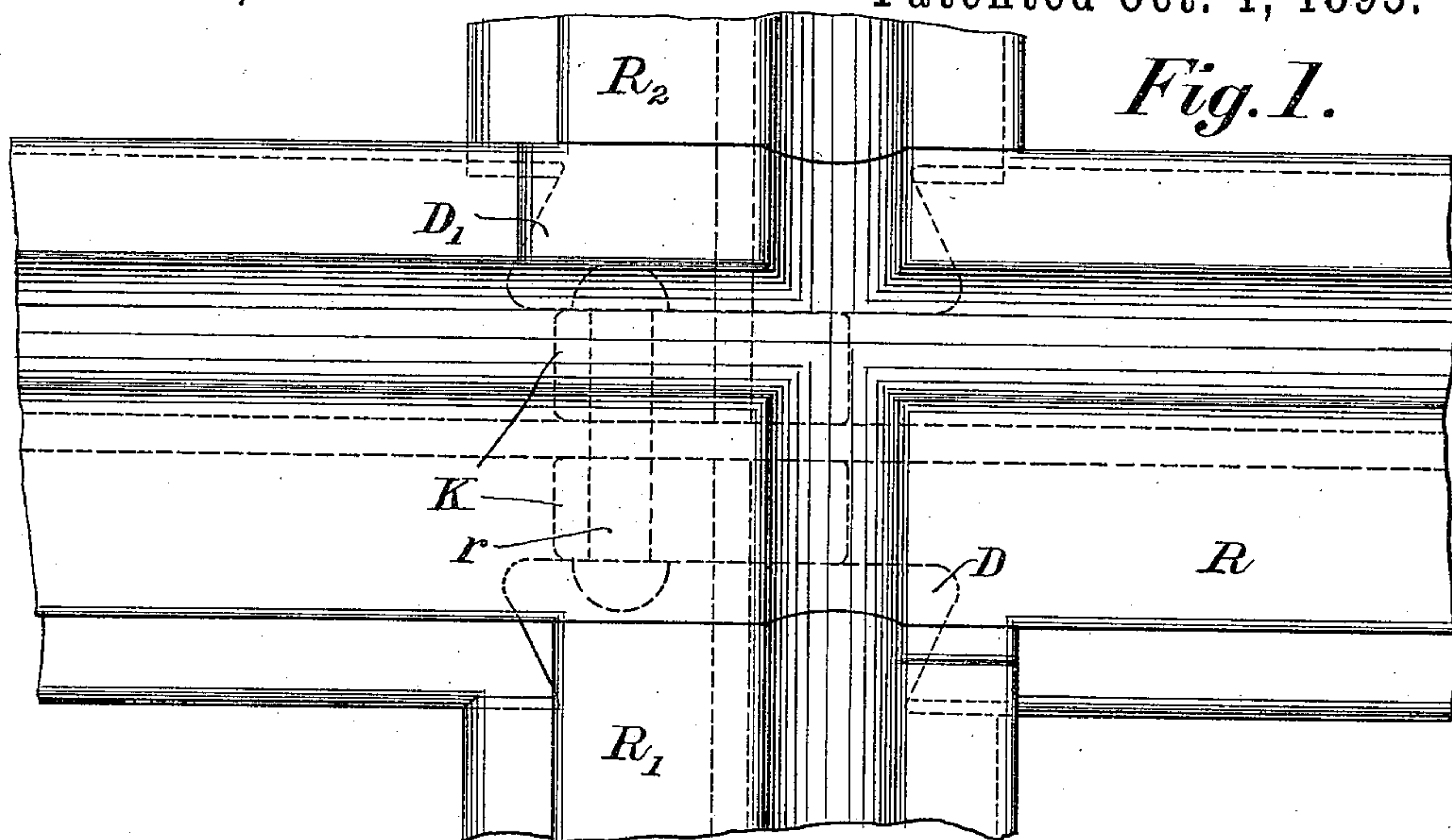


(No Model.)

B. FORD.  
JOINING METAL BARS.

No. 547,144.

Patented Oct. 1, 1895.



WITNESSES:

*L. F. Kress, Jr.*  
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INVENTOR

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BY

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ATTORNEY.



# UNITED STATES PATENT OFFICE.

BRUCE FORD, OF JOHNSTOWN, PENNSYLVANIA.

## JOINING METAL BARS.

SPECIFICATION forming part of Letters Patent No. 547,144, dated October 1, 1895.

Application filed May 27, 1895. Serial No. 550,786. (No model.)

*To all whom it may concern:*

Be it known that I, BRUCE FORD, of Johnstown, county of Cambria, State of Pennsylvania, have invented a new and useful Improvement in Joining Metal Bars, of which the following specification is a true and exact description, due reference being had to the accompanying drawings.

My invention relates to certain improvements in joining metal beams of various shapes having webs and flanges or head members, and has special reference to securing together two or more rails in cases where the ends of one or more rails abut a through-rail at a point intermediate its ends, and in this form I shall describe it.

Referring to the drawings, Figure 1 is a top view of the crossing point of a railway-crossing embodying my invention. Fig. 2 is a side view of Fig. 1, and Fig. 3 is a side view of Fig. 1 at right angles to Fig. 2.

In the drawings, R is the through-rail, and R' and R<sup>2</sup> abutting ones. In the under side of the head and guard are formed recesses or grooves G G', parallel with the line of the rail, while in either flange is formed the dovetailed socket D D'. Upon the rails R' and R<sup>2</sup> are formed the projections P P', which fit in their respective grooves. Likewise the flanges are formed so as to fit the dovetailed sockets D D'. The portion of the web of each of the abutting rails is also removed at A, for a purpose which will be hereinafter seen.

The method of putting the cross together is as follows: In Fig. 2 the rail R' is shown about to be secured to R. It will be seen that it is brought against rail R but a little below it, so that the flanges overlap. When the rails abut, the rail R is brought up to the proper level, which upward movement enters projection P in groove G and the flange of rail R' in the dovetail D. A key K is then driven in upon the flange of rail R, which key supports the web of rail R' and securely locks the whole in position, as shown. When the two keys are driven in, they may be held by any locking device. I have shown a rivet R, passing through them and the web of rail R.

I do not limit myself to the specific form of locking members herein shown, as various shapes of rails or beams might require modifications in the interlocking members.

Having thus described my invention, what I claim, and desire to protect by Letters Patent, is—

1. In combination with a beam, rail or other metal bar, having a web and top and bottom flanges and recesses, or sockets, in said flanges, an abutting beam, rail or other bar also having a web and top and bottom flanges, said flanges being fitted to enter the recesses in said first mentioned flanges and a locking member adapted to be inserted between the two beams when in place and lock them together.

2. In combination with a beam, rail or other metal bar having a web and flange members, and recesses or sockets in said flange members, an abutting beam, rail or other metal bar also having a web and flange members, said flange members being so shaped as to be adapted to enter the recess in said first mentioned beam and a locking member adapted to be inserted between the two beams and prevent withdrawal of the last mentioned beam in the line of its entrance.

3. In combination with a beam, rail or other metal bar having a web and top and bottom flanges and sockets or recesses in said flanges, an abutting beam, rail or bar also having top and bottom flanges, portions of said flanges being so formed as to be adapted to be inserted in the recesses in said first mentioned flanges only in a direction substantially perpendicular to the line of the abutting beam and a locking member adapted to be inserted between the web of the abutting member and the flanges of the first mentioned member.

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

BRUCE FORD.

Witnesses:

WARD RAYMOND,  
I. E. ROBERTS.