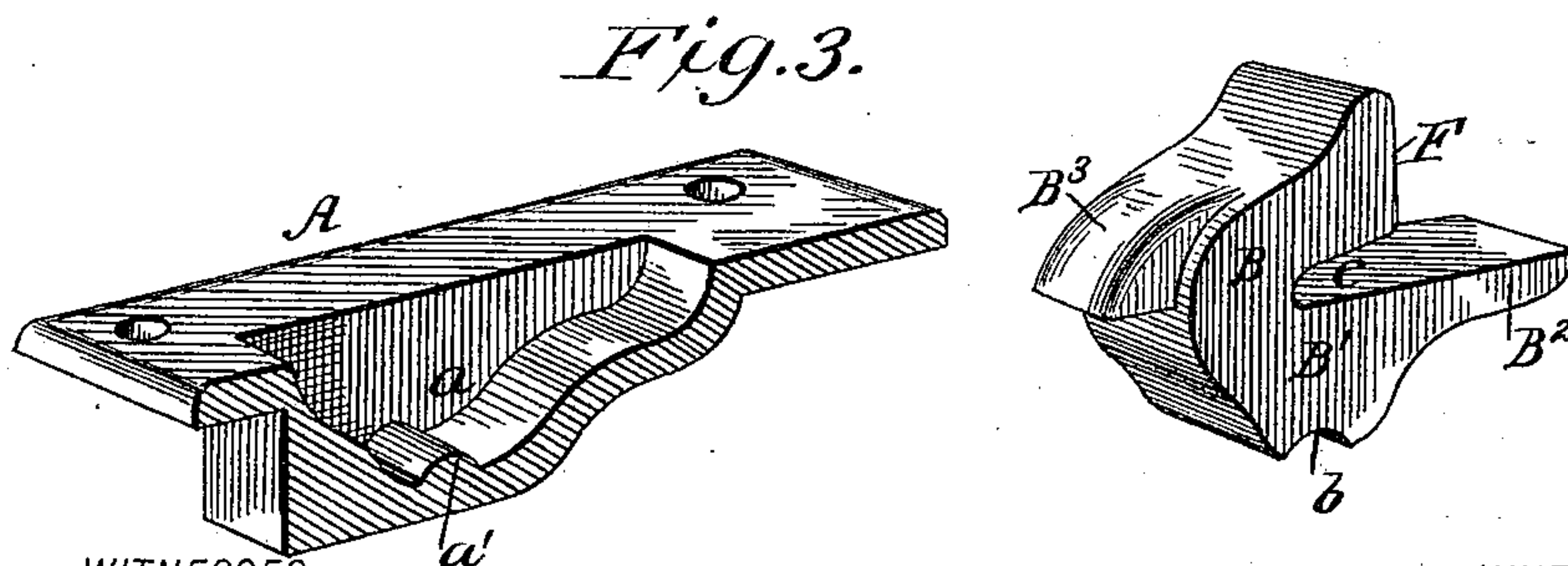
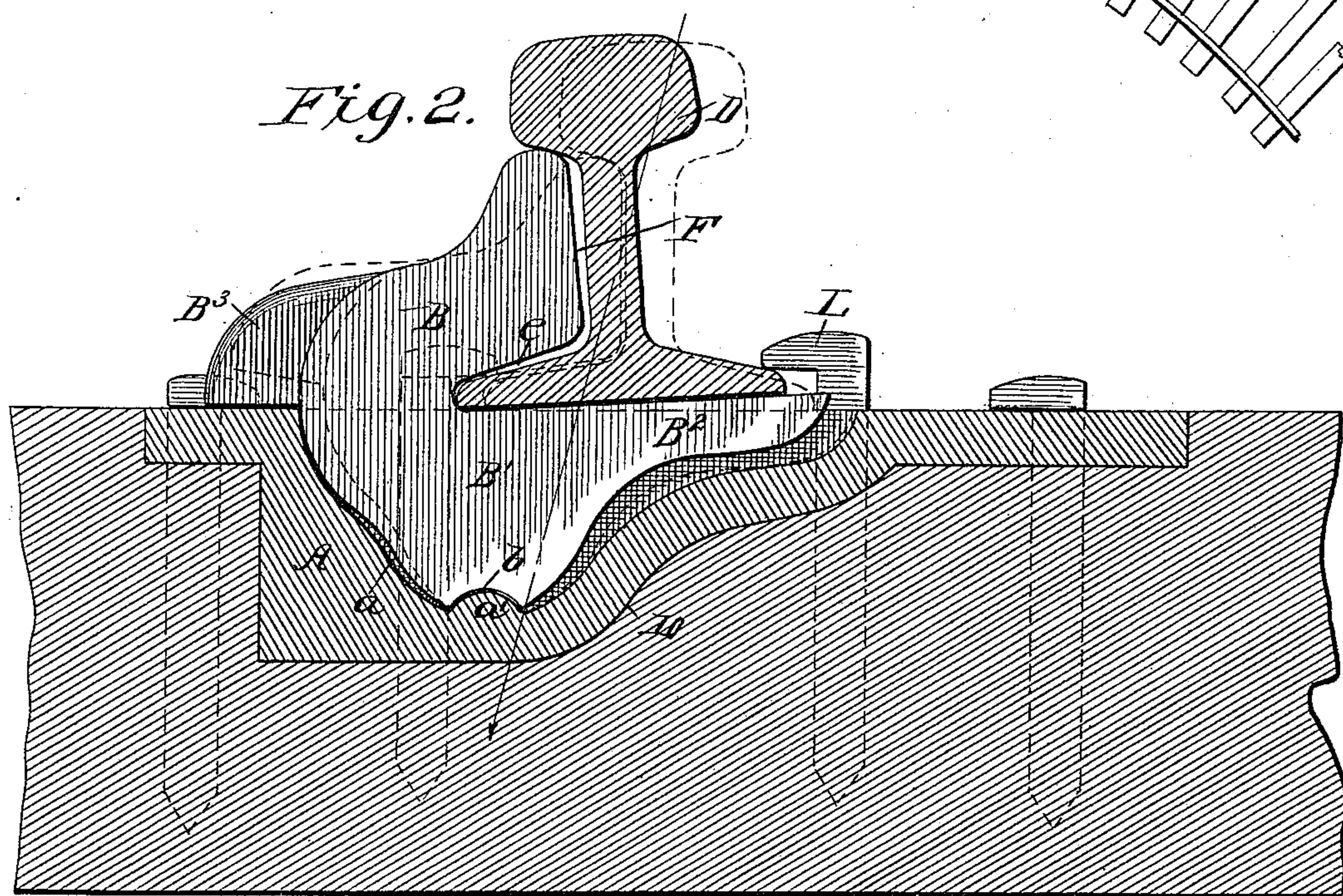
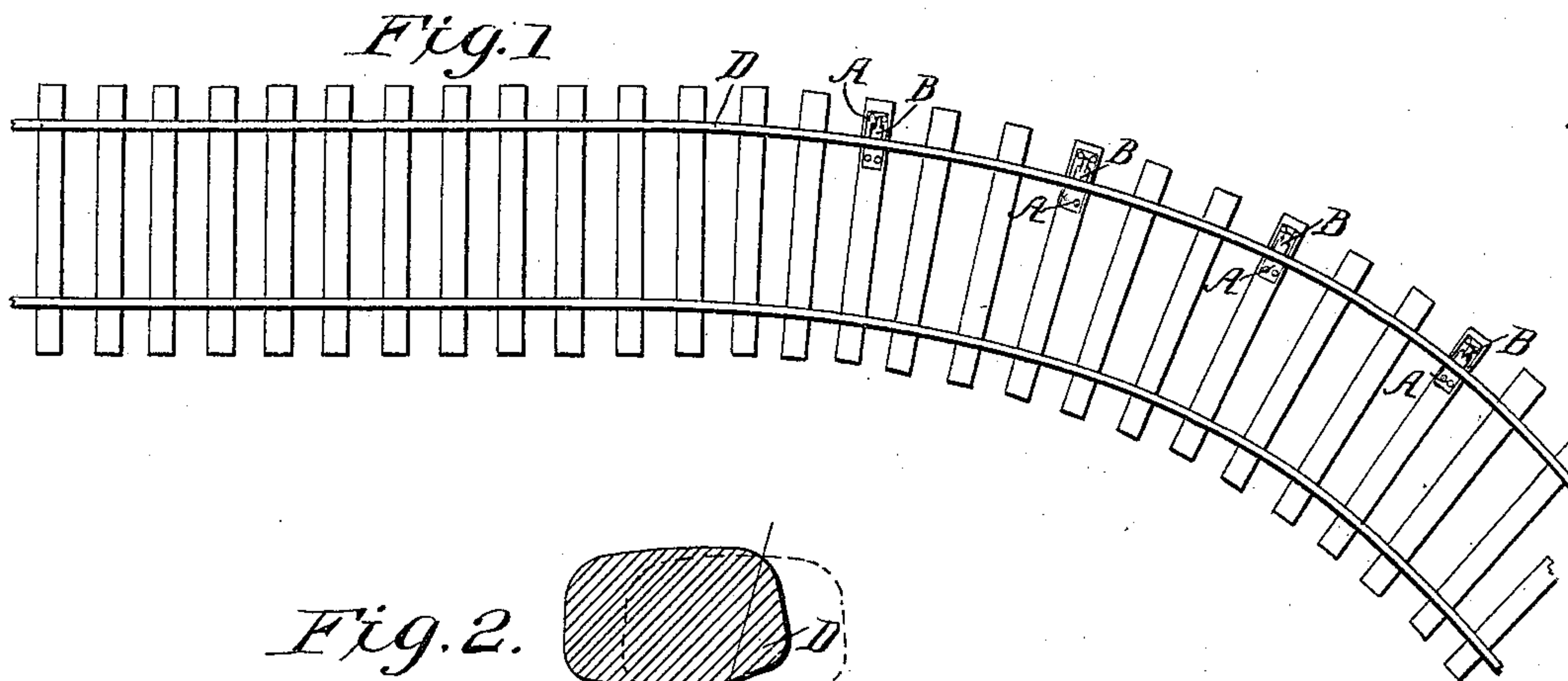


(No Model.)

C. H. SHOWALTER.
RAILWAY CHAIR AND SUPPORT.

No. 439,041.

Patented Oct. 21, 1890.



WITNESSES:

Fred G. Dietrich
M. D. Blondel

INVENTOR:

Curtis H. Showalter
BY *Merrill L.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

CURTIS H. SHOWALTER, OF BROOKVILLE, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO WM. N. VANLEER AND JOHN R. VANLEER, OF SAME PLACE.

RAILWAY CHAIR AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 439,041, dated October 21, 1890.

Application filed April 12, 1890. Serial No. 347,602. (No model.)

To all whom it may concern:

Be it known that I, CURTIS H. SHOWALTER, residing at Brookville, in the county of Jefferson and State of Pennsylvania, have invented a new and useful Railway Chair and Support, of which the following is a specification.

My invention is in the nature of a combined rail chair and support especially adapted for use at curves; and it has for its object to prevent spreading of the rails at such points by the pressure of the truck-wheels against the same.

It is well known to those skilled in the art that the centrifugal force of a swiftly-moving train around a curve causes the flanges of the wheels to bear with great pressure against the outer rail, frequently spreading the rails, and thereby derailing the train.

To overcome this serious fault in the construction of railroads is the object of my invention, which consists in providing a series of combined chairs and supports for the outer rails which are capable of slight rocking movement and which will serve to force the outer rail inward as the train passes over the same, thereby rendering the spreading of rails at the curves impossible.

My invention further consists in the peculiar combination and novel arrangement of parts, all of which will hereinafter be fully described in the annexed specification, and specifically pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a railroad with my improvements applied. Fig. 2 is a cross-section on the line 2 2 of Fig. 1, on an enlarged scale; and Fig. 3 is a detail view of the several parts detached.

In the practical arrangement of my devices I secure the outer rail on the curve to the cross-ties in such a manner that it will have a slight rocking movement in relation to the ties. For this purpose the spikes are driven to project slightly above the flange of the rail, as most clearly shown in Fig. 2 of the drawings. Upon a number of the cross-ties at a point under the said rocking rail I arrange my combined rail chair and support, the number of such chairs employed depending upon the

character of the curve, four being shown in the drawings. Each of the combined chairs and supports consists of a seat-plate A, formed with a socket *a*, a shoe B, having a depending member B' fitting into the socket *a*, such member B' being formed with a knuckle-socket *b*, which fits a bearing *a'* in the socket *a*, such bearing being at a point to one side of the center of gravity of the shoe, whereby when the train passes over the rail it will be swung inward to the position shown in dotted lines in Fig. 2 of the drawings. The inner face of each of the shoes is formed with an abutment portion F, against which the outer face of the web of the rail bears, and with a recess *e*, in which the outer flange of the rail fits, the extension B² of the shoe serving as a support for the rail D, as shown.

When the several combined chairs and supports are secured in position on the ties, the curved rails, owing to their outward spring-pressure, will cause the several supports to be rocked outward to a position shown in full lines in Fig. 2 of the drawings, such outward movement being limited by the inner flange of the rail engaging the spikes L and the projecting lip B³ of the shoe engaging the seat-plate A.

From the foregoing, taken in connection with the drawings, it will be readily observed that when the train passes over the curved portion of the track the weight thereof will cause the outer curved rail and its support to be rocked inward to a position shown in dotted lines in Fig. 2, and owing to the bearing of the shoe being at a point outside of its center of gravity the centrifugal force of the train against the outer rail will be overcome and the pressure thereof be in a downward direction inward of the bearing of the shoe, whereby the weight of the train will serve to force the outer rail inward, and thereby cause the flanges of the truck-wheels to bear closely against both the inner and outer rails of the track, and thus absolutely prevent any possibility of the rails spreading.

The several seat-plates A are secured to the ties by providing said ties with sockets 10, into which the socketed portions *a* of the seat-plates are fitted, such plates being spiked to

the ties, as shown. It will also be observed that by my improved construction the shoes B act both as a bearing for the rail and as a lateral brace, and by attaching the seat-plate to the tie, as shown, danger of the rails spreading in case the outer end of the ties are not properly ballasted will also be avoided, as the weight of the train will serve in pressing the outer rail inward to also throw the entire weight of the train inward, and thereby prevent any undue pressure on the outer end of the ties.

My invention is exceedingly simple, can be manufactured at a small cost, and can be readily applied to any of the road-beds now in use. The several parts are interchangeable and can be easily replaced in case of breakage.

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

1. The combination, with rocking supports, of curved rails supported thereon, the lateral pressure of said rails themselves adapted to rock said supports and rails normally outward, said support and rails adapted to be rocked inwardly by the passing train, substantially as shown and described.

2. In a railway chair and support, the combination of a seat-plate, a shoe adapted to support the rail and pivoted below its rail-seat at a point to one side of its center, whereby said chair and rail will have a rocking motion, and means for limiting such rocking motion, substantially as shown and described.

3. The combination, with rocking supports, of rails supported thereon in a manner to press said rails laterally outward and means for limiting such outward motion, as shown, said rails and supports adapted to be rocked inward by the passing train, substantially as shown and described.

4. The combination, with a cross-tie provided with a recess, the seat-plate A, provided with a socket *a*, adapted to fit the recess in the cross-tie, said plate secured to the tie, as shown, and a shoe adapted to receive and support the rail to rock in said seat, substantially as shown.

CURTIS H. SHOWALTER.

Witnesses:

FRED G. DIETERICH,
SOLON C. KEMON.