

W. FERGUSON, JR.
SPIKE FOR RAILWAY AND LIKE USES.
APPLICATION FILED JUNE 3, 1909.

944,725.

Patented Dec. 28, 1909.

Fig. 1

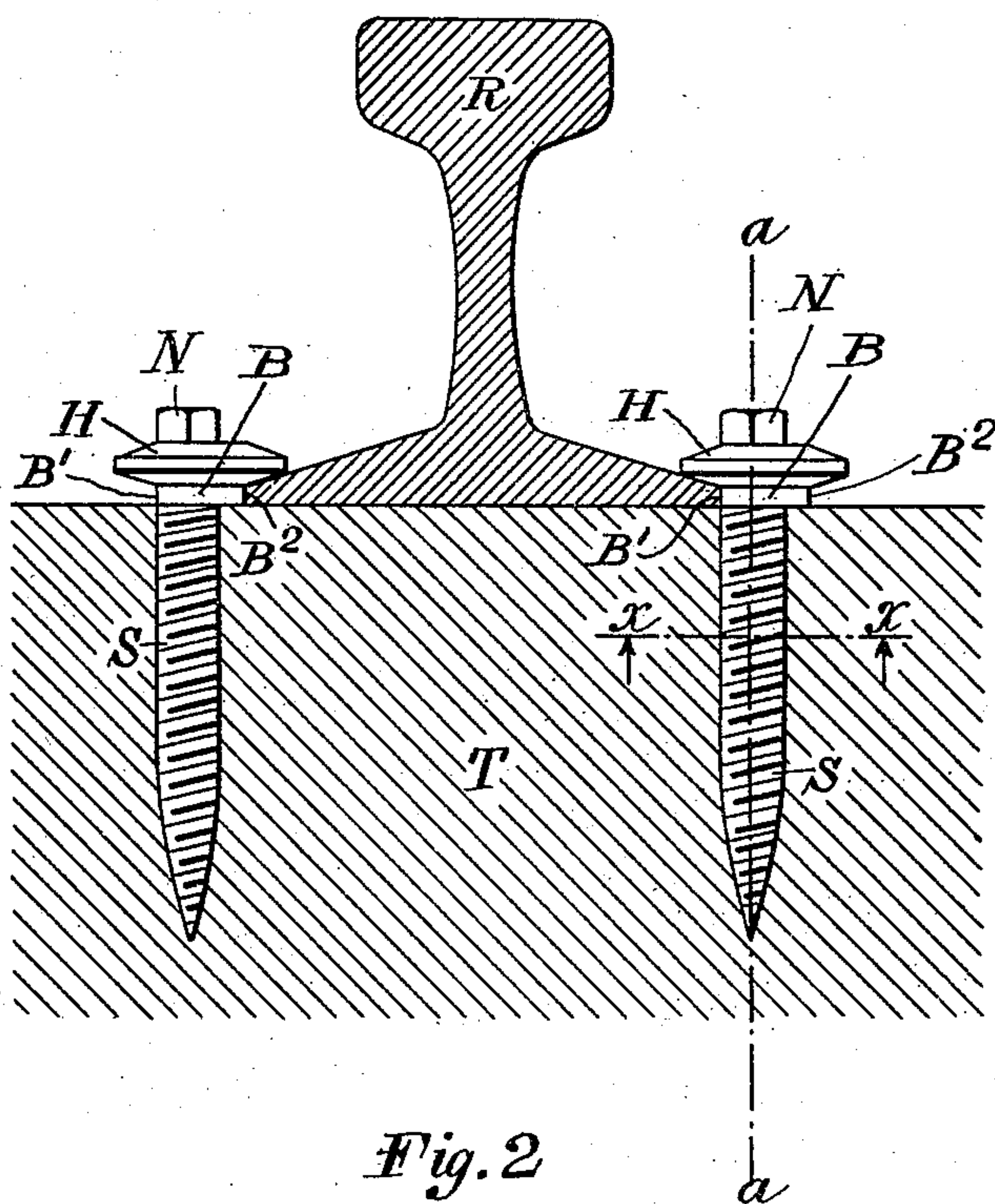


Fig. 2

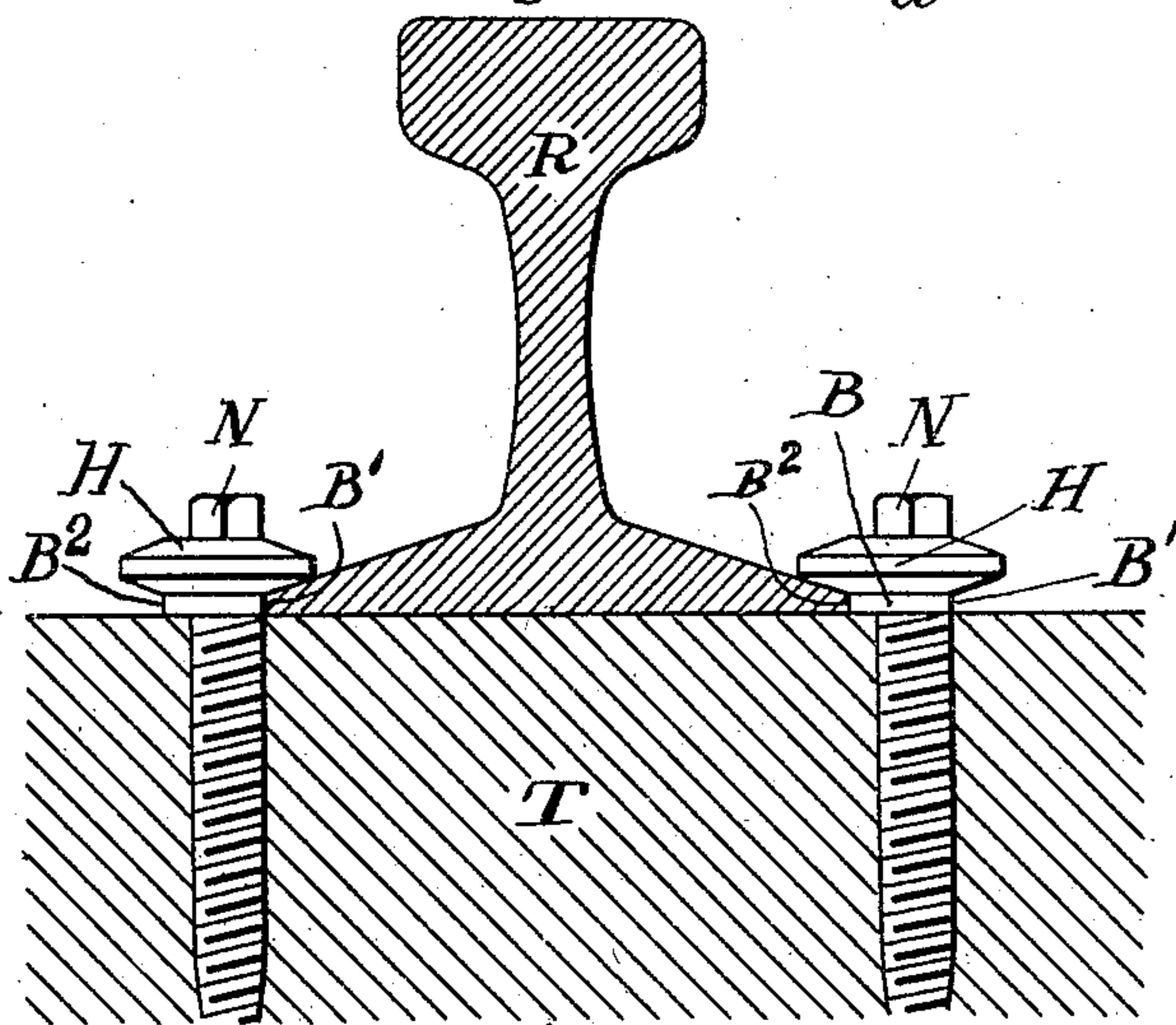


Fig. 3

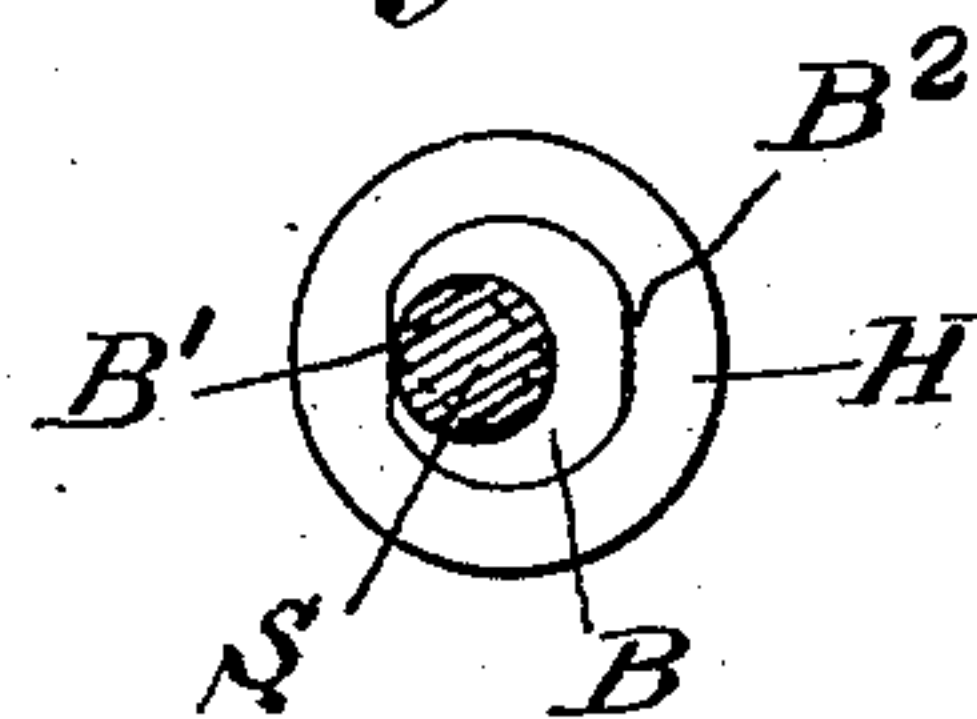


Fig. 4

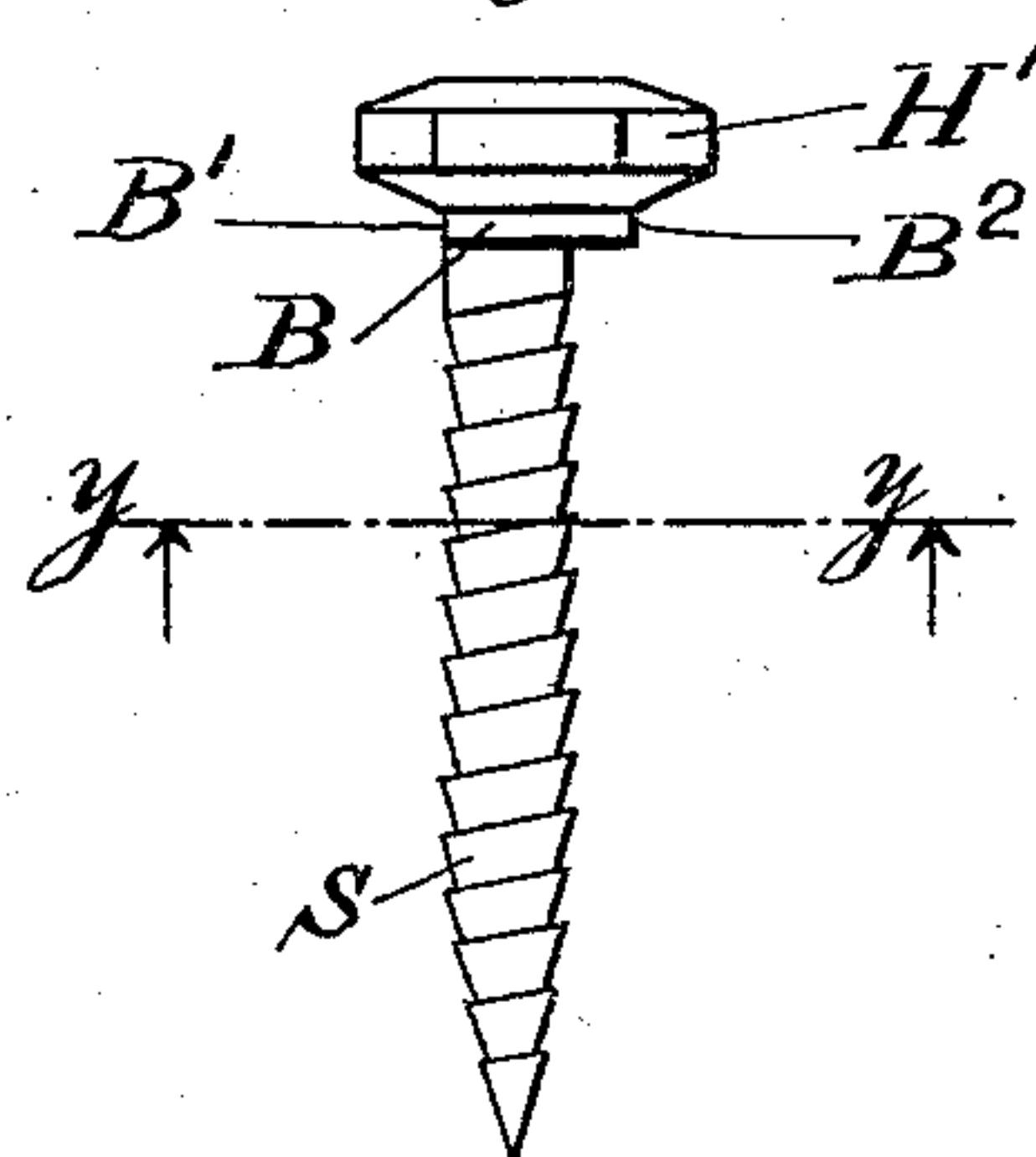
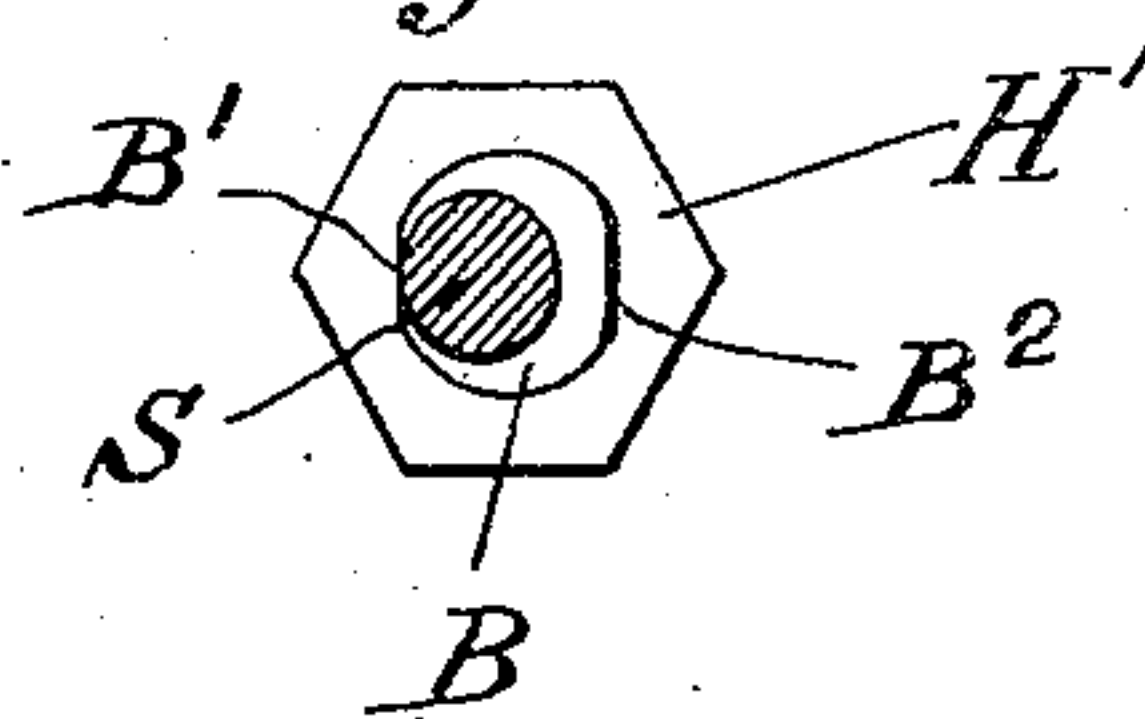


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

WALTON FERGUSON, JR., OF STAMFORD, CONNECTICUT.

SPIKE FOR RAILWAY AND LIKE USES.

944,725.

Specification of Letters Patent.

Patented Dec. 28, 1909.

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To all whom it may concern:

Be it known that I, WALTON FERGUSON, Jr., a citizen of the United States, and a resident of Stamford, Connecticut, (post-office address 15 William street, New York city, New York,) have invented certain new and useful Improvements in Spikes for Railway and Like Uses, of which the following is a specification accompanied by drawings.

The invention is designed particularly for a railway spike and its object is to provide a spike which will not only hold the lower flange of the rail securely to the tie, but will afford provision by rotation of the spike for holding the rail in a different position laterally to compensate for the lateral wear of the rail head and the widening of the track from that or any other cause. With ties of very hard wood, for example, it is an advantage not to have to make new holes in shifting and re-aligning the rails slightly to take up wear, and this the invention provides for in a very simple manner.

In the drawings I have shown the invention in two modifications and I will describe these without meaning to limit myself to the details of description.

Figure 1 is a sectional elevation of a rail and tie showing two of my improved spikes applied thereto. Fig. 2 is a similar view showing the spikes turned to hold the same rail in a position after it has been adjusted toward the left-hand to take up wear. Fig. 3 is a bottom view of the portions of the spike above the section plane $x-x$, Fig. 1. Figs. 4 and 5 are elevation and sectional view looking upward from the plane $y-y$, Fig. 4, showing another form of the invention.

In the drawings like references indicate like or similar parts.

R is a cross section of a rail; T the tie; and S the spikes. The spike is preferably screw-threaded so that even though it is driven in, as customary, a rotation in the right-hand direction will tend to draw it downward into its hole. The head of the spike shown in Figs. 1, 2 and 3 comprises a head proper H for overlying and holding down the flange of the rail, as shown, and an abutment B for laterally bearing against and laterally holding the flange of the rail. The abutment has preferably flattened portions for abutting flatly against the edge of the rail flange and preventing any danger of the spike being rotated by the vibration of the rail. I have shown two such flat faces

B^1 and B^2 in Fig. 3, and these, it will be seen, lie at different distances from the axis of rotation of the spike as a whole. Between the flat faces B^1 and B^2 the contour of the abutment is preferably a smooth curve, though this is not essential. If it be a smooth curve it facilitates the turning of the spike in its hole to change from one abutment face to the other.

As seen in Fig. 1, the two spikes at either side of the rail are placed so that the longer side of the abutment of the left-hand spike and the shorter side of the abutment of the right hand spike engage the flange. If now the left-hand side of the head of the rail becomes worn and it is desired to set the rail over to the left, this may be done by turning around the spikes, first the left-hand one and then the right-hand one, to the position shown in Fig. 2, thus causing or allowing the shifting of the rail to the left a distance equal to the difference between the shorter and longer sides of the abutments measured from the axis of rotation of the spike in its hole. The axis of rotation is shown in Fig. 1 at $a-a$. In order to allow the spikes to be readily turned by a wrench they are provided with nut-shaped ends N in Figs. 1 and 2.

The invention is susceptible of considerable variation and in Figs. 4 and 5 the nut shaped end N of Fig. 1 is omitted and the periphery of the head H^1 made hexagonal so the wrench may be applied directly to it. Another change is shown in these Figs. 4 and 5 in that the threads of the spike are not standard screw-threads but are of a form to permit the more easy driving in of the spike, as will be well understood from the drawing.

I have shown only two abutment faces B^1 and B^2 on each spike because two are sufficient and are probably best in practice, as it is not necessary to compensate for very slight wear of the rail.

Without describing many variations which will readily occur to those skilled in the art, I claim and desire to secure by Letters Patent the following:

1. A rotatable spike having a head adapted to overlie a rail flange and an abutment for laterally shifting and holding the rail flange, said abutment having abutting portions at different distances from the axis of rotation of the spike for holding the rail at different positions.

2. A rotatable spike having a head adapt-

ed to overlie a rail flange and an abutment for laterally shifting and holding the rail flange, having abutting portions at different distances from the axis of rotation of the spike for holding the rail at different positions, said abutting portions being flattened to prevent accidental rotation of the spike.

3. A rotatable spike having a head adapted to overlie a rail flange and an abutment for laterally shifting and holding the rail flange, having abutting portions at different distances from the axis of rotation of the spike for holding the rail at different positions, said abutting portions being flattened to prevent accidental rotation of the spike, said spike having faces for engaging a wrench.

4. A rotatable spike having a head adapted to overlie a rail flange and an abutment for laterally shifting and holding the rail flange, having abutting portions at different distances from the axis of rotation of the spike for holding the rail at different positions, said abutting portions being flattened to prevent accidental rotation of the spike, said spike being screw-threaded.

5. A rotatable rail spike having an abutment projecting laterally and presenting abutment portions at different distances from the axis of rotation, whereby the same may bear against and laterally shift or hold a rail flange at different positions of alignment of the flange, for substantially the purposes set forth.

6. A rotatable rail spike having an abutment projecting laterally and presenting abutment portions at different distances from the axis of rotation, whereby the same may bear against and hold a rail flange at different positions of alignment of the flange, said abutment faces being flattened and said spike having a head overhanging the said flattened faces, for substantially the purposes set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WALTON FERGUSON, JR.

Witnesses:

HAROLD BINNEY,
K. G. LE ARD.