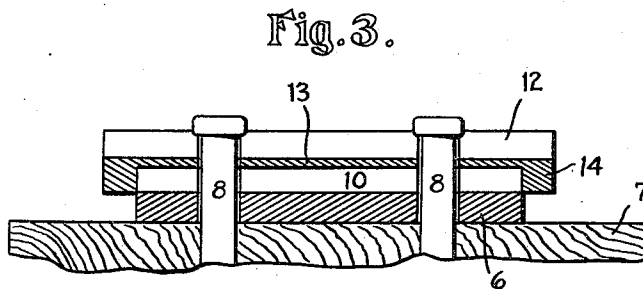
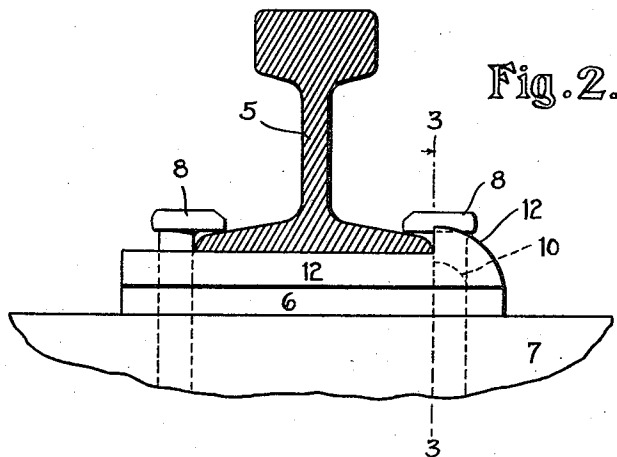
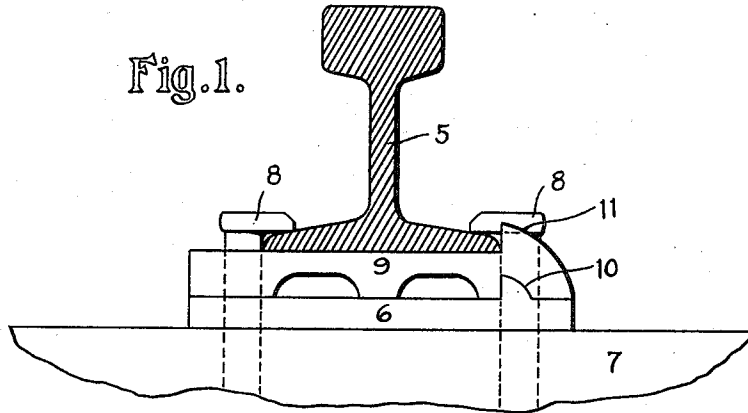


H. C. WOODBRIDGE.
RAIL SHIM.
APPLICATION FILED MAR. 5, 1913.

1,060,656.

Patented May 6, 1913.



Witnesses:
C. W. Carroll
D. Gurnee

Inventor:
Howard C. Woodbridge
by his attorneys
Davis & Dorsey

UNITED STATES PATENT OFFICE.

HOWARD C. WOODBRIDGE, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-THIRD TO
MICHAEL G. MCINERNEY AND ONE-THIRD TO JOHN P. REYNOLDS, OF ROCHESTER.
NEW YORK.

RAIL-SHIM.

1,060,656.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed March 5, 1913. Serial No. 752,192.

To all whom it may concern:

Be it known that I, HOWARD C. WOODBRIDGE, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Rail-Shims, of which the following is a specification.

This invention relates to shims employed to regulate the height of railroad-rails by insertion between the rails and the ties, or other devices, upon which they rest.

The object of the invention is to produce a metallic shim adapted particularly for use beneath a rail which is supported upon tie-plates.

A tie-plate, as usually constructed, is provided with a flange, on its upper surface, located in position to engage the outer edge of the base of the rail, so as to hold the rail securely against lateral movement. In my improved shim I employ a flange or abutment, upon the upper surface, which is adapted to engage the rail in the same manner as the flange of the tie-plate, and in order that the shim itself may be held against lateral movement, and also to permit the shim to be laid flat upon the tie-plate, I provide the lower surface of the shim with a shoulder lying directly beneath the rail-engaging surface of its abutment, and adapted to engage the flange on the tie-plate, the shim being also recessed or cut away where necessary to avoid the flange on the rail-plate. In this manner I produce a shim which may be readily introduced between the rail and the tie-plate, and which will hold the rail with the same security as before, and in exactly the same lateral position, but at a height variable according to the thickness of the shim employed.

In the accompanying drawings:—Figure 1 is an end-elevation of a shim embodying the present invention, together with a railroad-rail supported thereon, and the tie-plate, the tie, and the spikes associated therewith, the rail being shown in cross-section; Fig. 2 is a similar view, showing a shim embodying the invention in a modified form; and Fig. 3 is a section on the line 3—3 in Fig. 2, looking from left to right in the latter figure.

The drawings illustrate a T-rail 5, and a tie-plate 6, of ordinary form; the tie-plate resting upon the usual tie 7. The rail and

the tie-plate are held upon the tie by spikes 8, which pass through openings in the tie-plate, in the usual manner, and clasp the edges of the base of the rail.

The shim embodying the present invention, as illustrated in Fig. 1, has a body 9 with parallel upper and lower bearing-surfaces, the body being recessed at intermediate points on the bottom to save unnecessary material. This shim rests upon the tie-plate, and the rail rests upon the upper surface of the shim, the parts being held together by the spikes 8. The shim, as illustrated in Fig. 1, is of the same length and width as the tie-plate, and is provided with spike-receiving perforations registering with those of the tie-plate. The tie-plate is provided with the usual flange 10, and the lower surface of the shim is recessed to receive this flange, and to provide a shoulder which bears against the vertical left-hand surface of the flange. The upper surface of the shim is provided with a corresponding flange 11, of which the left-hand surface lies in the same vertical plane as the corresponding surface of the flange 10. Accordingly, the rail, by engagement with the flange 11, is held against lateral movement in the same manner as it is normally held by the flange of the tie-plate, and in the same transverse position, while at the same time the flange 10 forms no impediment to the introduction of the shim beneath the rail.

As shims are commonly employed to elevate the rail to various degrees, I propose to provide shims of various thicknesses, and within a certain minimum thickness these shims may all be substantially similar in construction to that shown in Fig. 1, differing from each other only in the distance between their upper and lower surfaces. Where a comparatively thin shim is necessary, however, the construction must be slightly modified by reason of the fact that the recess which receives the flange 10 of the rail-plate approaches closely to the upper surface of the shim, so as to leave little or no intervening material at the point 13. In such a case the shim is formed as shown in Figs. 2 and 3, being made slightly longer than the tie-plate. In this case the recess in the bottom of the shim does not extend throughout the length of the shim, but terminates at the ends of the

flange 10. Accordingly, the shim has solid or unrecessed portions 14 at its ends, which support the flange 11 regardless of the amount of material at the part 13.

5 I claim:—

1. A rail-shim adapted to be introduced between a tie-plate and the base of a rail, the shim having, on its lower surface, a shoulder adapted to abut against the flange
10 of the tie-plate, and, on its upper surface, a projection with a rail-engaging surface which lies in the same vertical plane as said shoulder.

2. A rail-shim adapted to be introduced between a tie-plate and the base of a rail, 15 the shim having, on its lower surface, a recess shorter than the shim and adapted to receive the flange of the tie-plate, and, on its upper surface, an abutment having a rail-engaging surface which lies in the same 20 vertical plane as the inner surface of the flange.

HOWARD C. WOODBRIDGE.

Witnesses:

FARNUM F. DORSEY,
D. GURNEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."