

Dec. 22, 1925.

1,566,639

L. M. ADAMS

RAIL SUPPORT

Filed March 10, 1925

Fig. 1

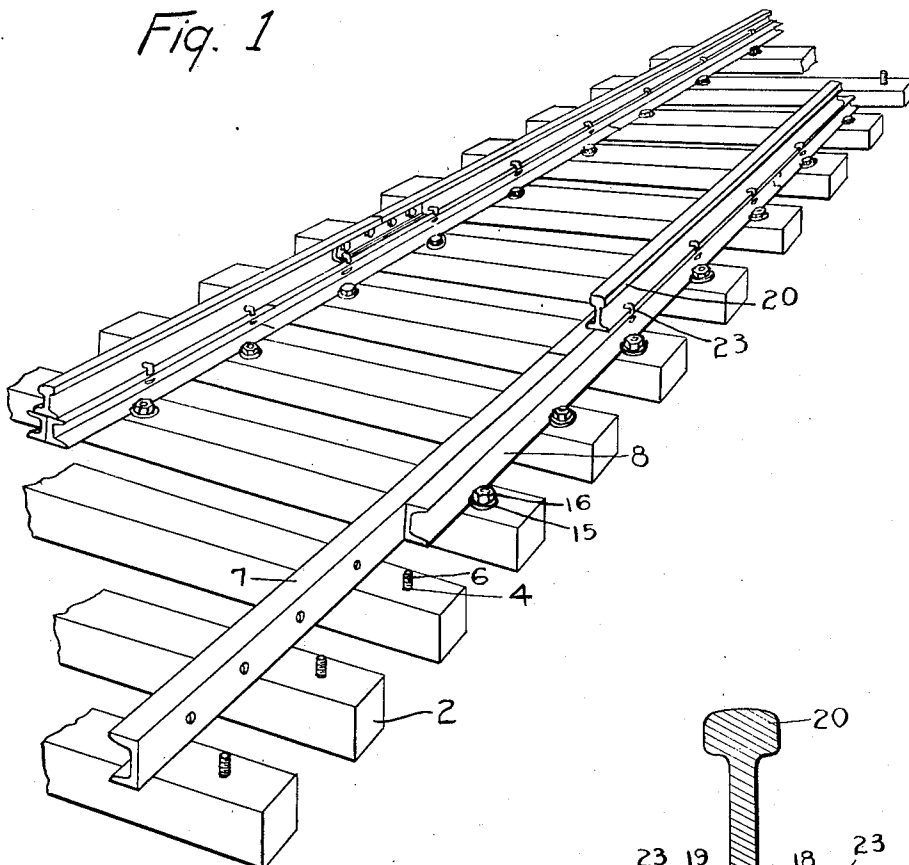
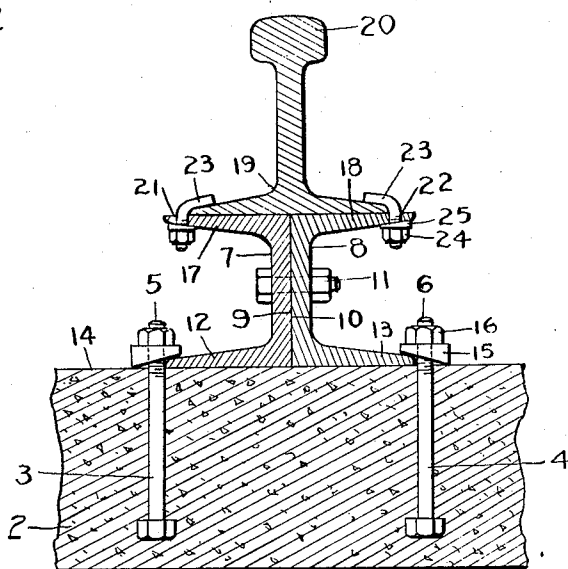


Fig. 2



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UNITED STATES PATENT OFFICE.

LOUIS M. ADAMS, OF LOS ANGELES, CALIFORNIA.

RAIL SUPPORT.

Application filed March 10, 1925. Serial No. 14,453.

To all whom it may concern:

Be it known that I, LOUIS M. ADAMS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Rail Supports, of which the following is a specification.

This invention relates to rail supports.

An object of the invention is to provide a rail support adapted for use in the building of railroads whereby a more firm base is provided for the mounting of the rails.

The common practice of spiking rails directly to wood ties, or any kind of ties, is attended with a certain resulting giving of each individual tie as the rail is subjected to the rolling weight of passing trains and a consequent vibration results.

The present invention contemplates a non-yielding base mounted upon the ties longitudinally of the rail extension, thus providing a very rigid and vibrationless structure upon which the track rail itself may be secured. This permits of much lighter weight rails being used, which can be replaced oftener at comparatively less expense, thereby constantly maintaining a smooth track.

My railway track as a whole is designed to allow usage of concrete ties, provide an inexpensive support for the rails on the ties and the reduction in the size of the rail. I utilize channel irons placed back to back and having flat flanges, the lower flanges being bolted to the concrete ties. The rail which is preferably a standard ball headed rail has a flange narrower than the top flanges of the channels and is secured thereto by hook bolts, the bolts being secured through bolt holes in the flanges of the channels.

Other objects and advantages will be made manifest in the following specification of an embodiment of the invention illustrated in the accompanying drawings in which:

Figure 1 is a perspective of a railroad track provided with rail supports herein described.

Figure 2 is a vertical cross section of the rail support, track and a tie.

The details of construction are as follows:

A railroad tie 2 which may be of wood, but is preferably and is herein shown as cement, has bolts 3 and 4 embedded in the body of the tie with threaded upper ends 5 and 6 projecting above the tie and spaced apart sufficiently to permit a rail support

hereinafter described to be mounted between. There is a pair of such bolts 3 and 4 at each end of the tie.

The rail support comprises a pair of channel bars 7 and 8 arranged with their backs 9 and 10 abutting each other, and it is preferable to retain the channel bars in their contiguous relationship by a plurality of bolts 11 extending through the contiguous portions of the channel bars.

The lower walls 12 and 13 of the channel bars thus have their lower faces on the same plane and are adapted to rest upon the upper faces 14 of the railroad ties and to extend crosswise of the ties and longitudinally of the track extension. The lower walls 12 and 13 are secured rigidly in place between the bolts 3 and 4 by means of washers 15, each having an inclined face which is adapted to bear at two points—that is, on the ties and on the ends of the lower walls of the channel bars, the washers being tightened down by nuts 16.

The upper walls 17 and 18 of the channel bars have their upper faces on the same plane and thus provide a support for the base 19 of a rail 20. The width of the support provided by the contiguous channel bars is somewhat greater than the width of the rail base 19, so that holes 21 and 22 may be provided along the outer edges of the upper walls immediately adjacent the sides of the base 19.

The rail securing means comprise a plurality of hook bolts 23 adapted to bear down upon the upper portion of the base 19, to extend through the holes 21 and 22 and to be tightened by nuts 24 bearing against washers 25 interposed between the nuts and the lower faces of the walls 17 and 18. This means of fastening the rails to the upper faces of the supporting walls accomplishes a wedge-like action providing a very rigid association between the rail 20, the channel bars 7 and 8 and the ties 2.

The contiguous sections of channel bars are staggered so as to distribute the joints and equalize the stability of the supporting structure. The joints of the rail may also be staggered in relation to the joints of the channels. I thereby provide a structure which will allow usage of a smaller rail in which the web of the rail may be materially less than is now required to carry the traffic and hence the rail itself may be materially less expensive, a sufficient strength to carry

the load being provided by the channels. These give a distributive bearing on the ties which are preferably of concrete and may be of a grade of steel considerably less expensive than that of the rails.

On account of the even distribution of weight on the ties through the medium of the channels and thus the prevention of hammering blows, concrete ties may be successfully used with my system of rails.

Various changes may be made without departing from the spirit of the invention as claimed.

What is claimed is:

1. A railway track comprising in combination ties, channels having vertical webs and horizontal flat flanges, means to clamp the webs back to back and in contact, said channels extending over a plurality of ties, means to clamp the lower flanges of the channels to the ties, road carrying rails having flat

lower flanges of less width than the width of the upper flanges of the channels and means to clamp said rail flanges to the upper flanges of the channels.

2. A railway track comprising in combination concrete ties, channels having vertical webs and horizontal flanges, the lower flanges resting directly on the ties, bolts extending through the webs to clamp said channels back to back with the webs in contact, bolts imbedded in the concrete engaging the lower flanges of the channels and clamping them to the ties, road carrying rails having bulbous wearing sections, vertical webs and horizontal base flanges extending both sides of the webs, and bolts to clamp the base flanges of the rails to the upper flanges of the channels.

In testimony whereof I have signed my name to this specification.

LOUIS M. ADAMS.