F. H. WHITMAN.

Rail-Fastenings.

No. 154,777. Patented Sept. 8, 1874.

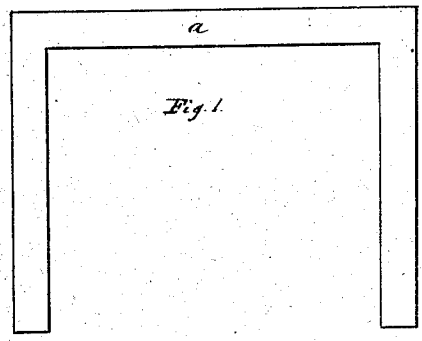

Fig. 1.

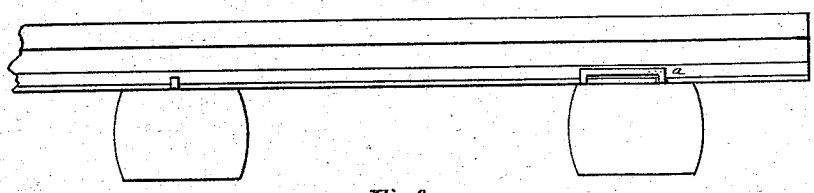

Fig. 2.

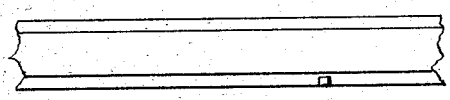

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS H. WHITMAN, OF HARRISON, MAINE.

IMPROVEMENT IN RAIL-FASTENINGS.

Specification forming part of Letters Patent No. **154,777**, dated September 8, 1874; application filed May 28, 1874.

To all whom it may concern:

Be it known that I, FRANCIS HENRY WHITMAN, of Harrison, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Rail-Fastenings; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 shows a side view of my improved fastening; Fig. 2, a side view of the rail with the fastening applied; and Fig. 3, a top view of a rail, showing a notch in the side.

It is found in the management of railways that the momentum and friction of passing trains have a very strong tendency to carry the rails onward in the direction of the train. In view of this difficulty the rail most commonly used is provided with a notch on the side of the flange, (see Fig. 3,) through which is driven one of the ordinary spikes used to keep the rail from lateral or upward motion. But so great is this tendency that sooner or later this spike becomes loosened and the rails moved more or less from their original position. Where the trains always pass in one direction, as in case of double-track roads, or where resistance is less to trains passing in one direction than to trains passing in the other, as in case of grades, the spike is drawn from the sleeper and the rails carried forward several inches—a defect of great importance, especially when the support of the sleeper at the point of union of two rails is depended upon to keep the rails level.

Spikes of various forms and constructions have been substituted for the ordinary spike, and various other devices applied for the purpose of obviating this tendency; but the force with which the rail is impelled, in either one or both directions, is so great that these devices have proved inadequate, and constant attention is required to preserve the proper position of the rails.

It is the object of my invention to provide a fastening which will have such a hold in the sleeper as to overcome the motion of the rail.

For this purpose I use a dog, *a*, of the shape in Fig. 1. This is driven into the sleeper, as shown in Fig. 2, one of its points passing through the notch of the rail.

It is obvious that the holding power of this fastening must be much greater than that of two ordinary spikes, the firmness given by the connection between the driving-points at the top more than doubling their resisting power.

The number of driving-points may be increased and the general form altered as convenience suggests.

What I claim as my invention, and desire to secure by Letters Patent, is—

The dog *a*, in combination with the notch of the rail and the sleeper, as herein set forth and described.

In testimony that I claim the foregoing, I have hereunto set my hand this 19th day of May, 1874.

FRANCIS H. WHITMAN.

Witnesses:

GEO. E. BIRD,

MANASSEH SMITH.