

No. 837,192.

PATENTED NOV. 27, 1906.

C. H. CASPAR.  
MEANS FOR PREVENTING CREEPING OF RAILS.  
APPLICATION FILED APR. 6, 1906.

FIG. 1.

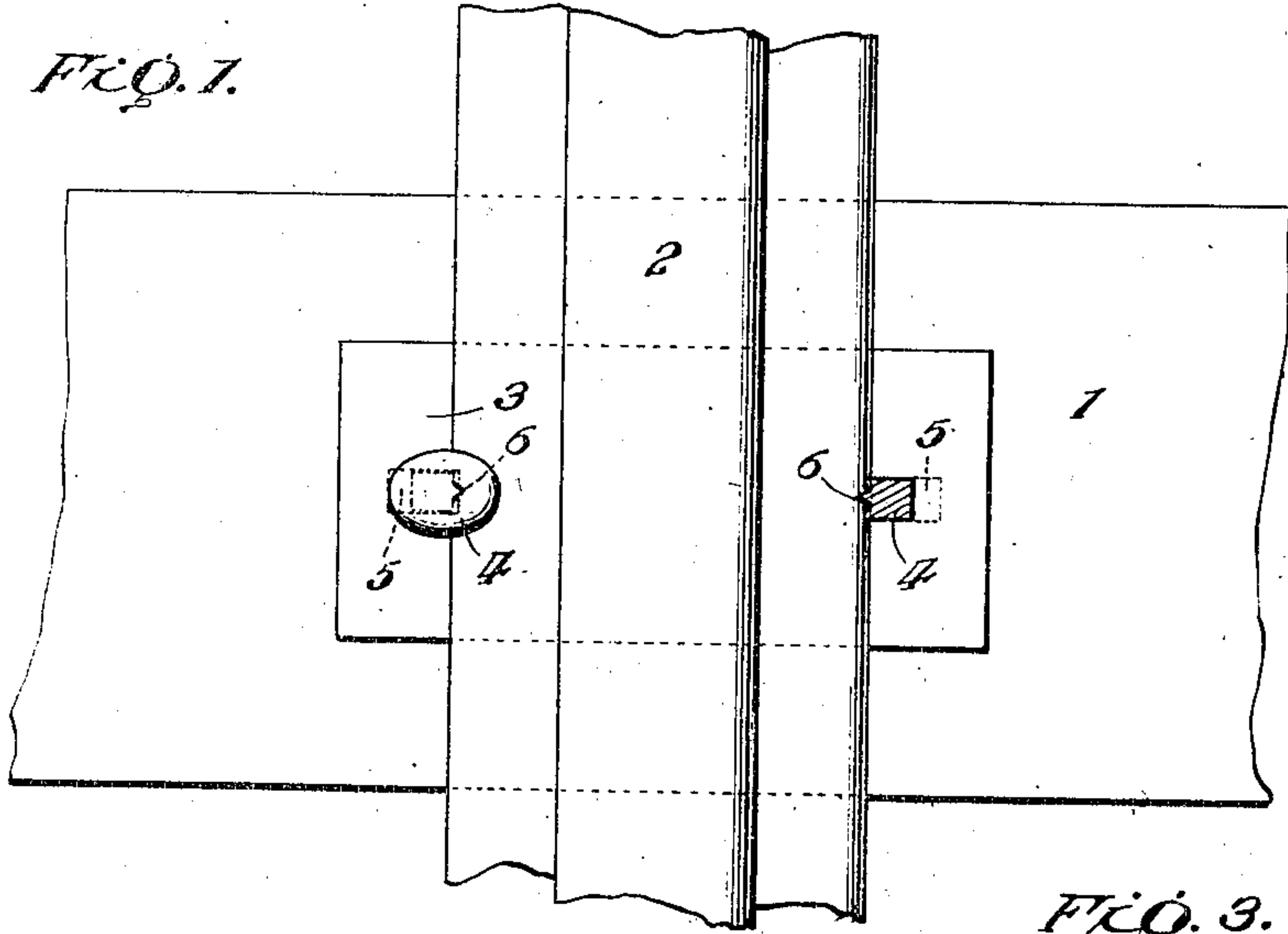


FIG. 3.

FIG. 2.

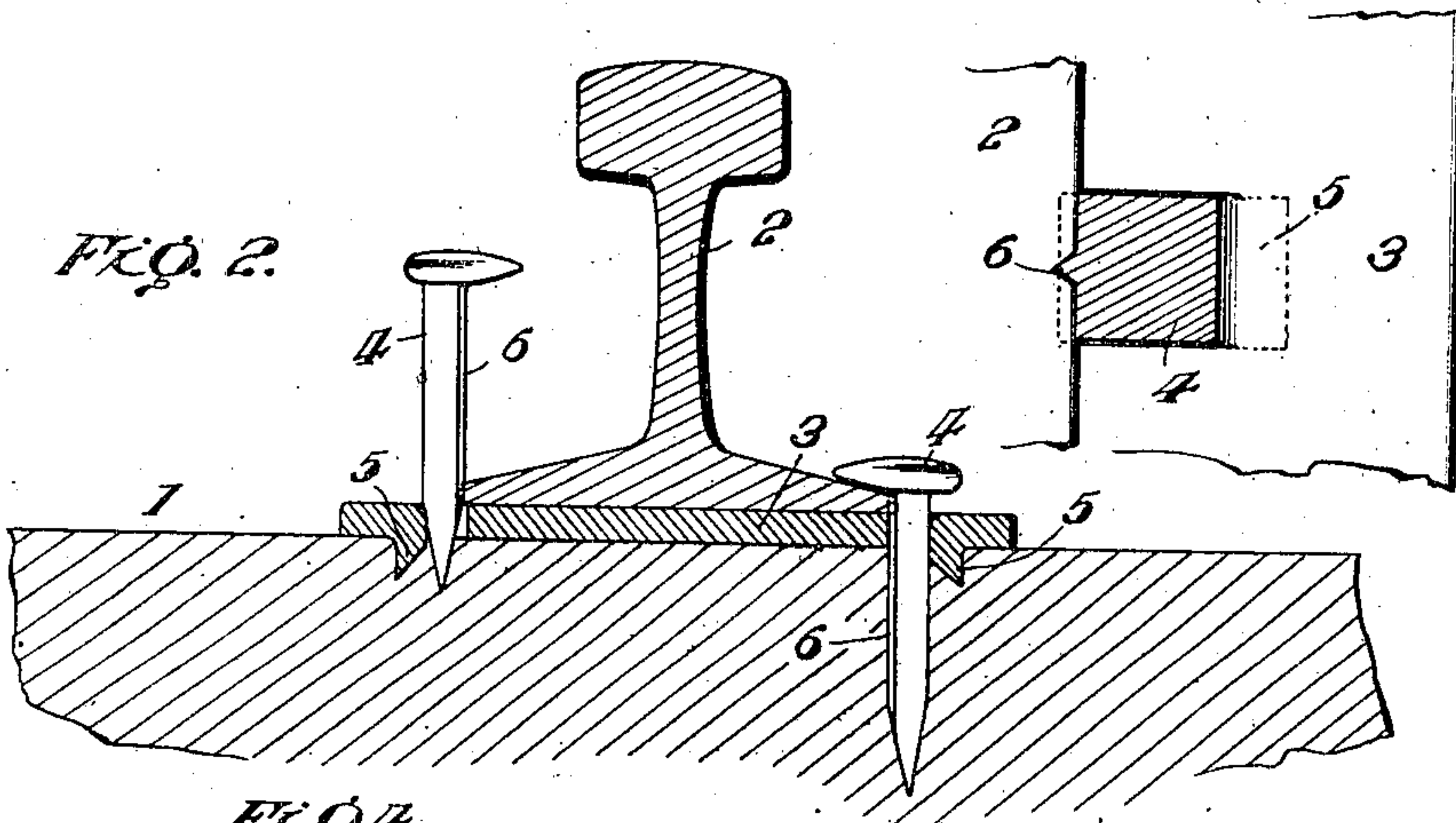


FIG. 4.

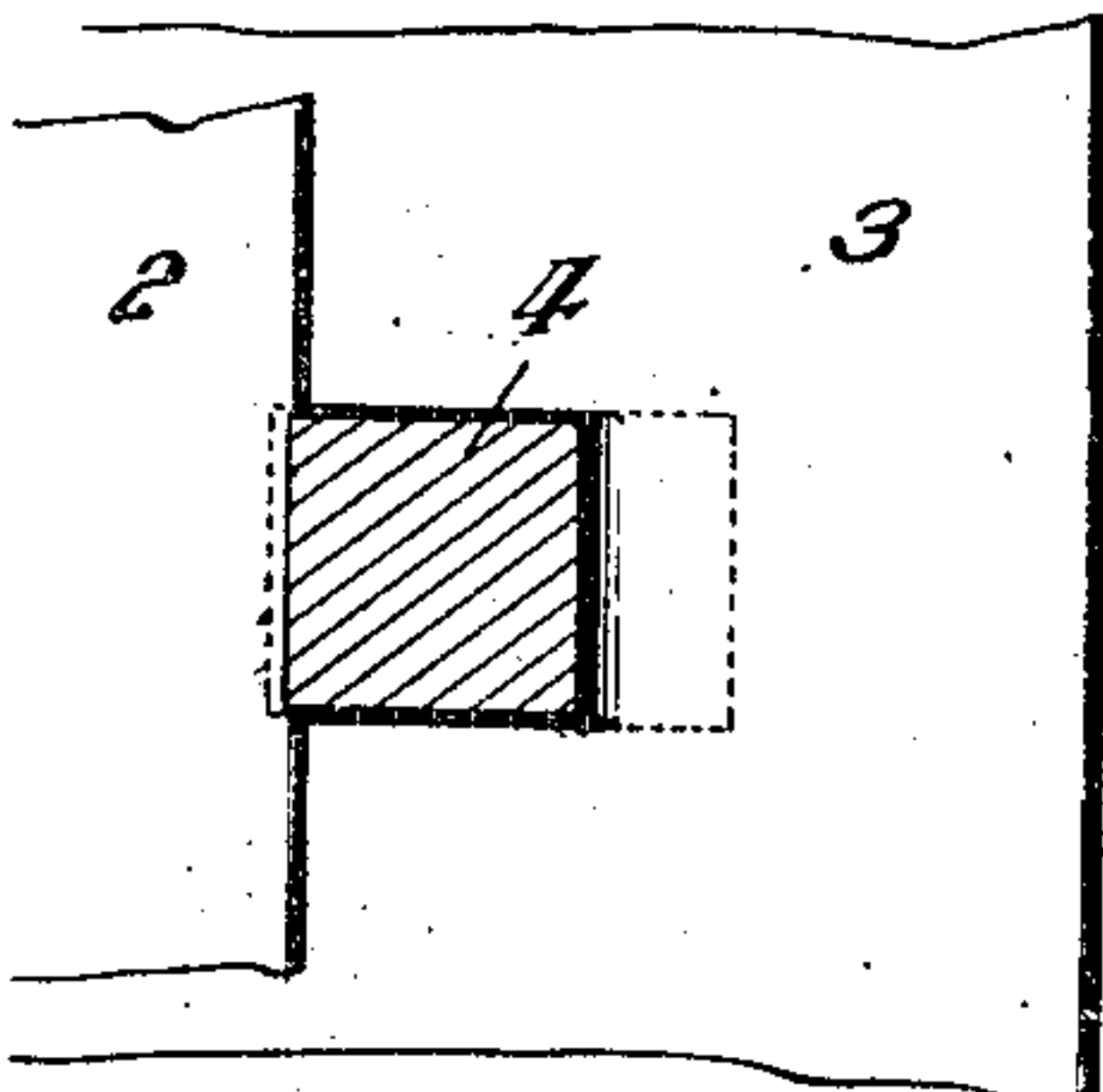
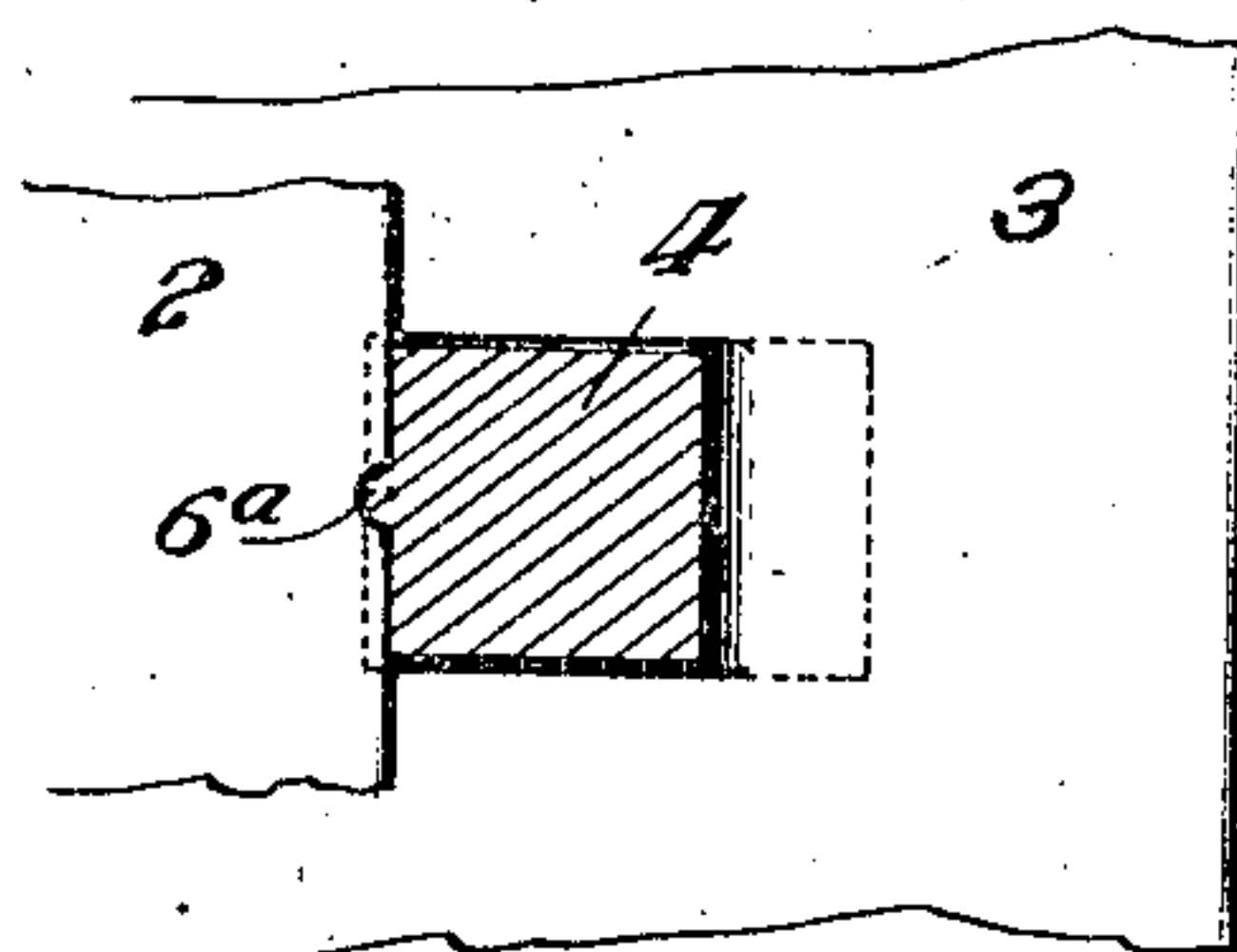


FIG. 5.



Inventor

Charles H. Caspar,

By

*J. H. Martin*

Attorney

Witnesses

*Louis H. Schmidt*

*Francis S. Rogers*



# UNITED STATES PATENT OFFICE.

CHARLES HAYES CASPAR, OF WILKES-BARRE, PENNSYLVANIA.

## MEANS FOR PREVENTING CREEPING OF RAILS.

No. 837,192.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed April 6, 1906. Serial No. 310,382.

*To all whom it may concern:*

Be it known that I, CHARLES HAYES CASPAR, of Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Means for Preventing Creeping of Rails; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide improved simple and highly-efficient means for preventing track-rails from creeping or spreading. This I accomplish by providing a base-plate having openings at opposite sides of the rail-base, the space between the inner walls of such openings being less than the width of the rail-base, while the space between the outer walls of the two openings is less than the width of such base plus the two spikes. In consequence the spikes as they are driven home cut into the edges of the rail-base, and so interlock therewith that the rails are held from creeping as well as from spreading. To insure the cutting of the spikes into the rail-base, I provide means whereby the base-plate is additionally braced. Although it is desirable to form the flange-engaging face of each spike with a longitudinal rib, yet this is not essential.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a portion of a rail with the retaining-spikes in section. Fig. 2 is an end view of a rail with the base-plate in section, one spike being shown driven home and the other in position therefor. Fig. 3 is an enlarged fragmentary view with the spike in section. Figs. 4 and 5 show slight modifications.

Referring to the drawings, 1 designates a tie or sleeper, 2 a rail, and 3 a base-plate upon which the rail rests. This base-plate is of about the thickness of the rail-base at the edges of the flanges thereof. In it are formed two corresponding openings. The space between the inner walls of these two openings is slightly less than the width of the rail-base, as shown in Fig. 2, and the space between the outer walls of these two openings is less than the width of the rail-base plus the two spikes.

4. The base-plate adjacent to each of the openings is formed with a lip or tongue 5,

which may be provided in the formation of such openings. These lips or tongues are driven down into the face of the tie and serve in themselves to partly hold the latter in place. Their main office, however, is to afford such additional bearings for the spikes that as the latter are driven home their inner faces will cut into the edges of the rail-flanges. This is shown in dotted lines to the left of Fig. 1 and also in Fig. 3. The extent to which the spikes thus cut into the rail-base is sufficient to hold the rail as against creeping in either direction. By forming the openings in the manner stated as the spikes are crowded in against the rail-flanges the metal of the outer faces is somewhat cut into by the upper edges of the outer walls of the openings.

Although I have shown the spikes in Figs. 1 and 2 as having ribs 6 extending longitudinally of their rail-engaging faces so they will cut openings in the edges of the rail-flanges of less width than the spikes themselves, yet, while this is desirable for many purposes, it is not really essential that the spikes be so formed. In Fig. 4 I have shown the spikes with the longitudinal ribs omitted. The bracing afforded by the base-plate is sufficient to insure the forcing of the spikes into the edges of the rail-flanges sufficiently to prevent creeping. In Fig. 5 I have shown the rib 6<sup>a</sup> as being exteriorly curved or rounded instead of V shape, as in Figs. 1 and 3.

The advantages of my invention will be apparent to those skilled in the art.

I claim as my invention—

1. The combination with a tie or sleeper and a rail thereon, of spikes for securing such rail to the tie, and means for forcing the spikes, as they are driven home, tight against the flanges of the rail to form grooves in the edges of such flanges.

2. The combination with a tie or sleeper and a rail thereon, of spikes for securing such rail to the tie, and means for forcing the spikes, as they are driven home, tight against the flanges of the rail to form grooves in the edges of such flanges, said spikes having each a rib extending longitudinally of that face thereof engaging the rail-flange.

3. The combination with a tie or sleeper, and a rail, of a base-plate interposed between such tie and rail having openings formed therein, and spikes passed through said openings designed to form grooves in the edges of the rail-base as they are driven home, the dis-



tance between the outer walls of the opposite openings being less than the width of the rail-base plus the spikes.

4. The combination with a tie or sleeper and a rail thereon, of a base-plate beneath the rail having openings adjacent to the rail-flanges, and spikes designed to be driven through said openings, the distance between the inner walls of said openings being less than the width of the rail-base, while the distance between the outer walls of the two openings is less than said width of the rail-base plus the spikes.

5. The combination with the tie and the rail, of the plate having openings therein on opposite sides of the rail, and spikes designed to be driven through said openings, the distance between the outer walls of such openings being less than the width of the rail-base plus the spikes, and tongues depending from said base-plate and designed to enter the tie.

6. The combination with the tie and the rail, of the plate having openings therein on opposite sides of the rail, and spikes designed to be driven through said openings, the distance between the outer walls of such openings being less than the width of the rail-base plus the spikes, and tongues struck up from said plate in the formation of said openings, said tongues being designed to enter the tie.

7. The combination with a tie and a rail thereon, of spikes having ribs extending longitudinally thereof for forming grooves in the edges of the rail-flanges, each of such grooves being of less width than the face of the spike.

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

CHARLES HAYES CASPAR.

Witnesses:

EDWARD N. NOLL,

E. GARNEY.