No. 782,568. PATENTED FEB. 14, 1905.

E. LAAS.

RAILWAY RAIL STAY.

APPLICATION FILED NOV. 28, 1904.

2 SHEETS—SHEET 1.

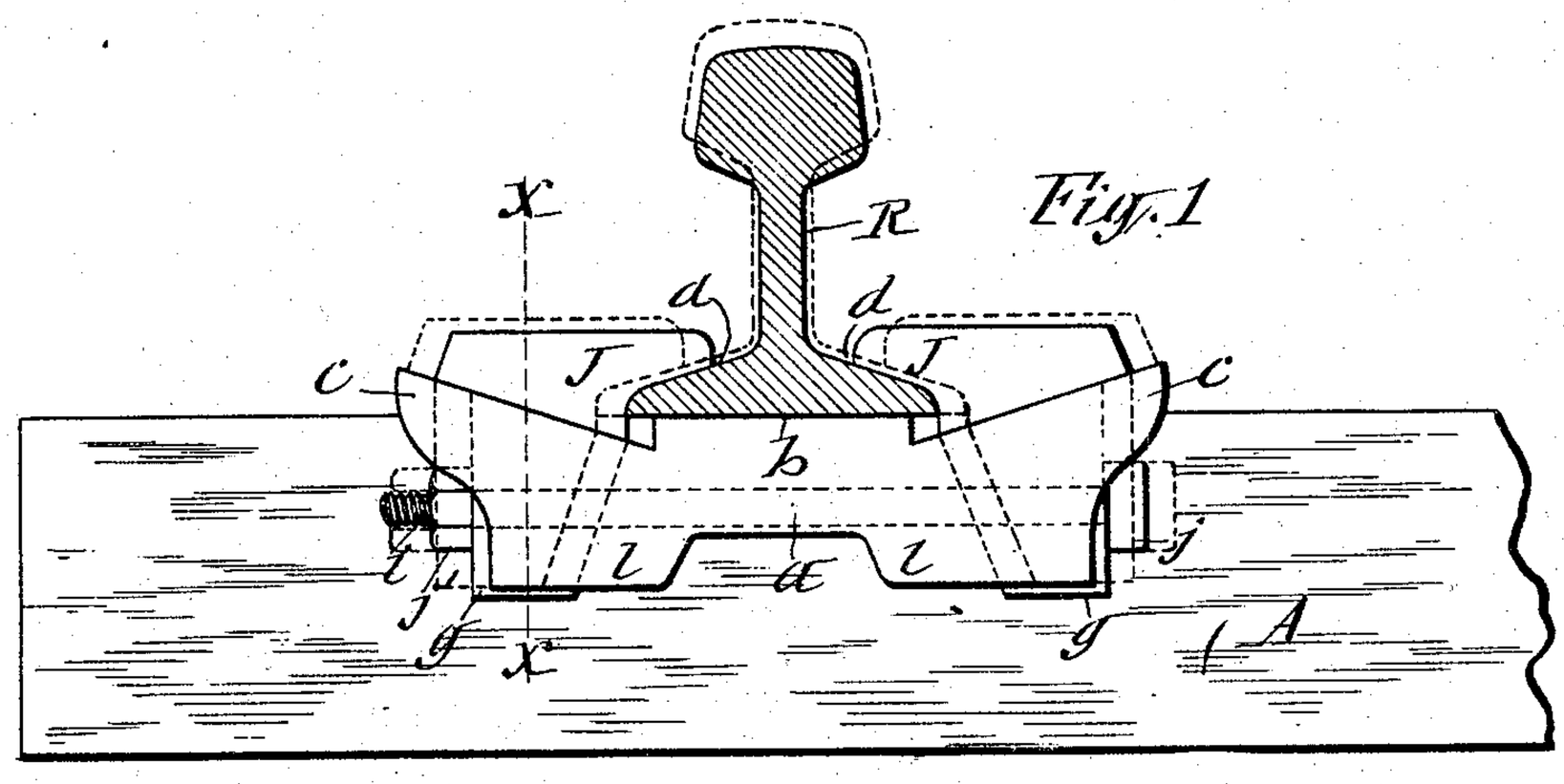

Fig. 1

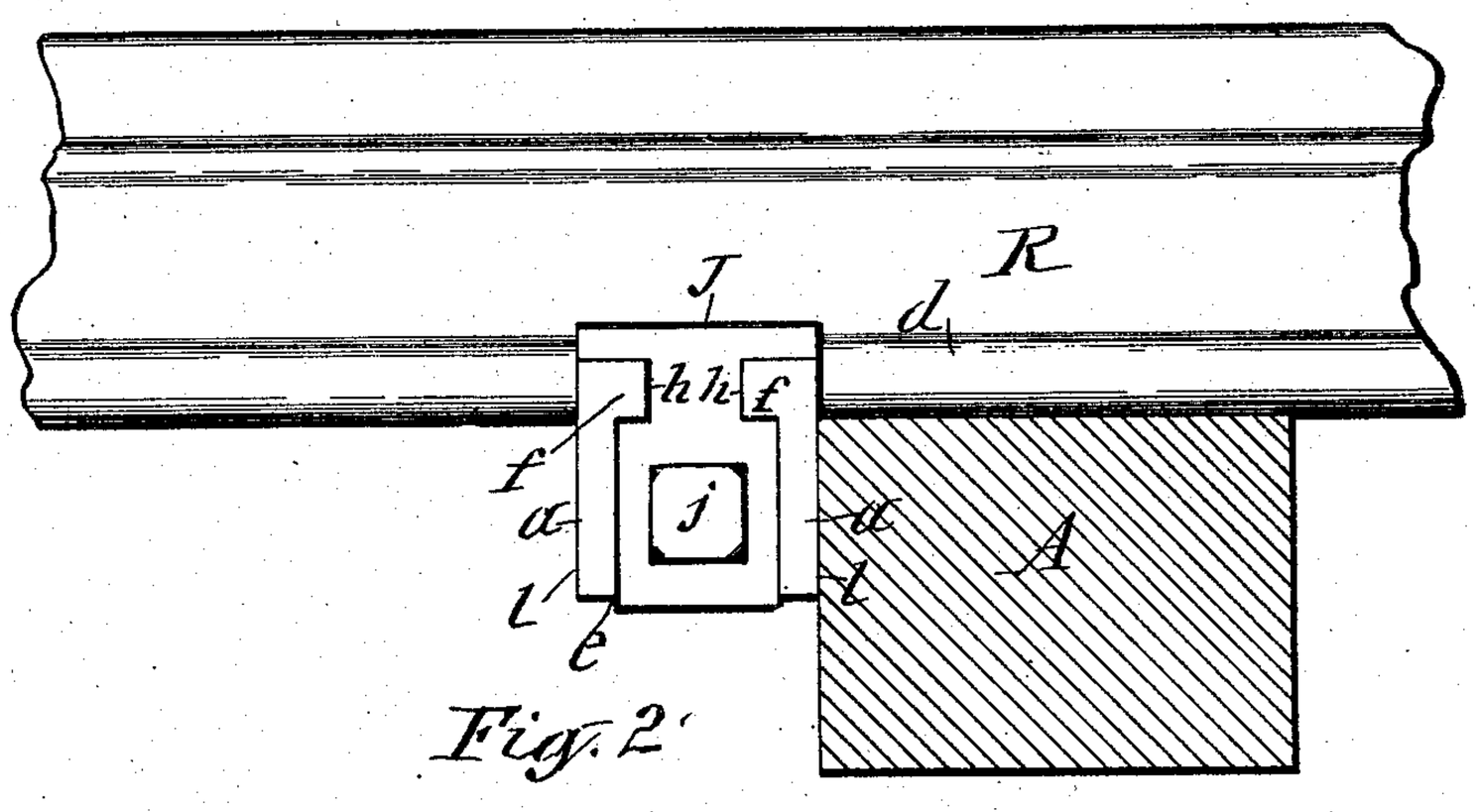

Fig. 2.

WITNESSES:

G. H. Fulmer.

J. J. Laas

INVENTOR

Edward Laas

By E. Laas

His ATTORNEY.

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2 SHEETS—SHEET 2.

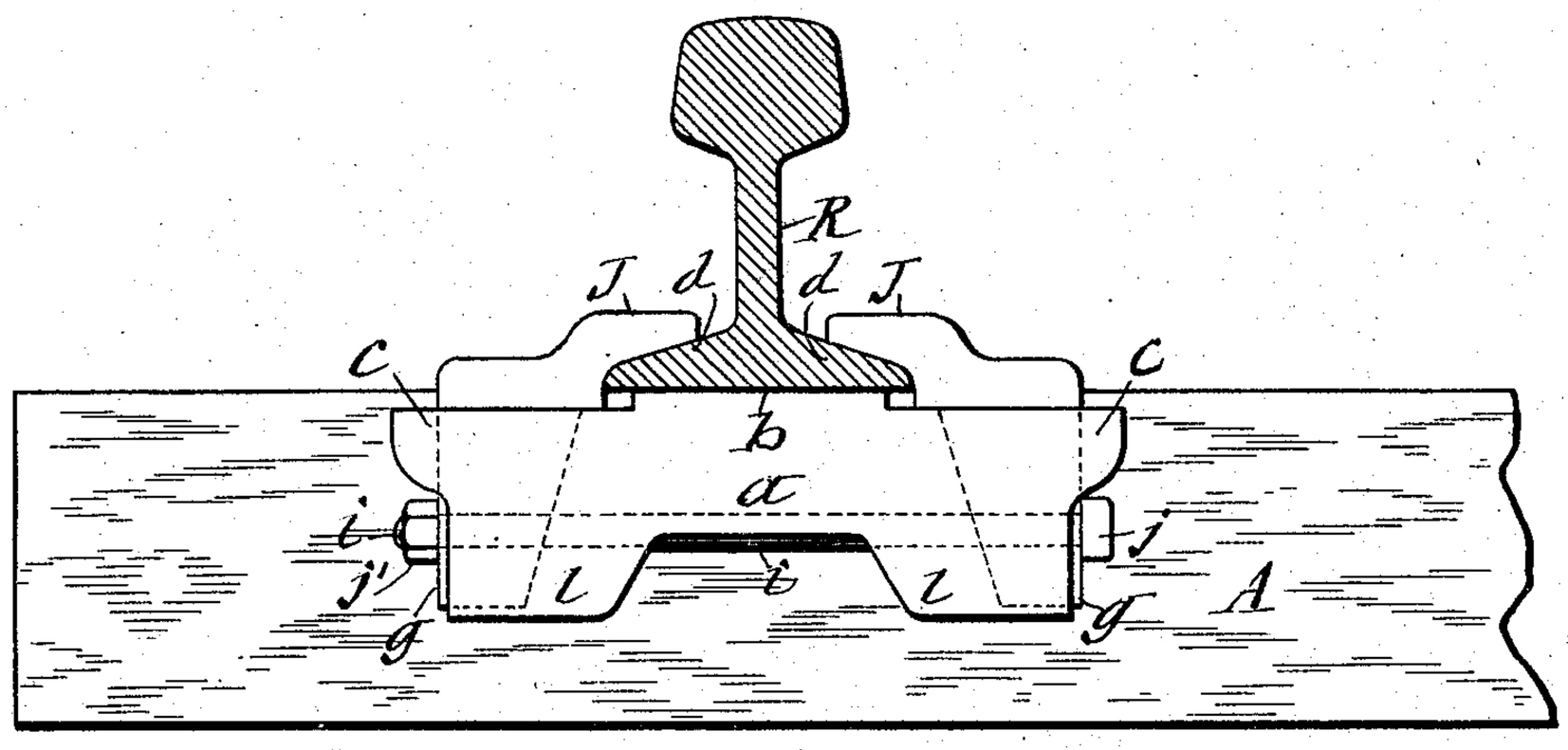

Fig. 7

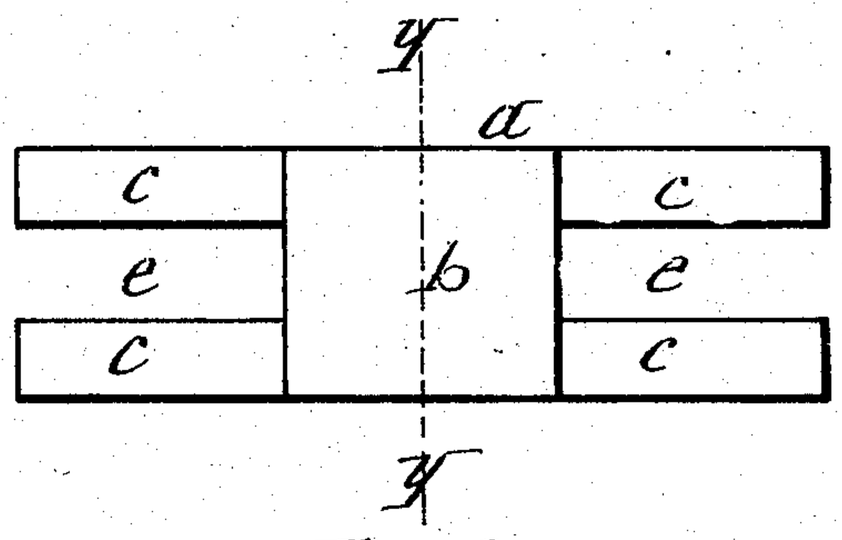

Fig. 3

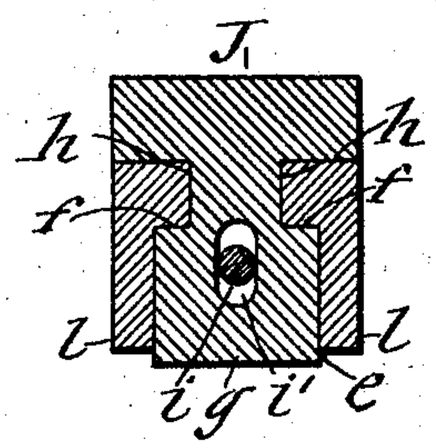

Fig. 4

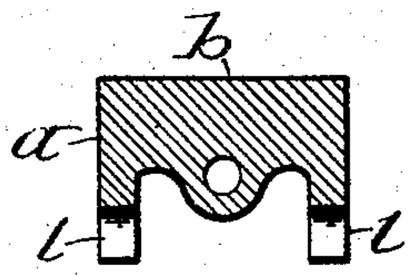

Fig. 5

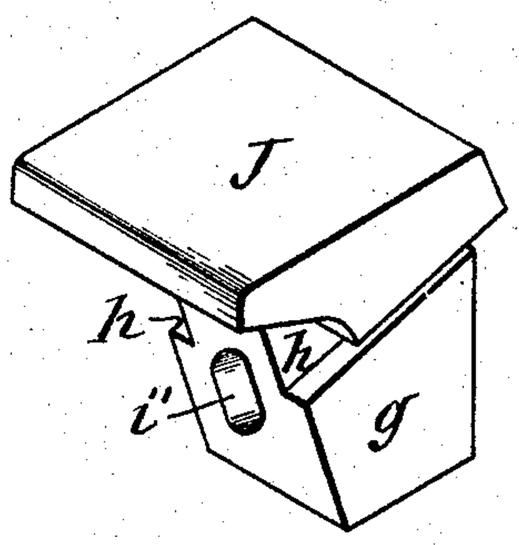

Fig. 6

WITNESSES:

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No. 782,568. Patented February 14, 1905.

UNITED STATES PATENT OFFICE.

EDWARD LAAS, OF OTTUMWA, IOWA, ASSIGNOR OF ONE-HALF TO HIRAM H. SPONENBURG, OF WADSWORTH, ILLINOIS.

RAILWAY-RAIL STAY.

SPECIFICATION forming part of Letters Patent No. 782,568, dated February 14, 1905.

Application filed November 28, 1904. Serial No. 234,453.

To all whom it may concern:

Be it known that I, EDWARD LAAS, of Ottumwa, in the county of Wapello, in the State of Iowa, have invented new and useful Improvements in Railway-Rail Stays, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The object of this invention is to provide efficient means for resisting the longitudinal creeping of railway-rails and which shall be adapted to be applied to rails of different sizes; and to that end the invention consists in the improved construction of the rail-stay hereinafter described, and as illustrated in the accompanying drawings, of which—

Figure 1 is a transverse section of a railway-rail equipped with my improved rail-stay. Fig. 2 is a side view of the same. Fig. 3 is a detached plan view of the supporting-bar of the rail-stay. Fig. 4 is a transverse section on the line X X in Fig. 1. Fig. 5 is a transverse section on the line *y y* in Fig. 3. Fig. 6 is an isometric view of one of the rail-gripping jaws, and Fig. 7 illustrates a modified form of my improved rail-stay.

In the said drawings, A represents one of the cross-ties which support the track-rails, (represented at R.)

The essential features of my invention consist of the bar *a*, which extends across the under side of the rail R and is formed with the seat *b* for said rail and with extensions *c c* at opposite sides of said rail-seat, the rail-gripping jaws J J, mounted on the extensions *c c*, movable toward and from the rail-seat *b*, and suitable means for forcing the said jaws toward the rail-seat so as to securely grip the flanges *d d* of the rail R. The object of this construction and combination of elements is primarily to adjustably support both rail-gripping jaws on a rigid and inflexible bar provided with a continuous bearing across the under side of the rail, and thus affording to the rail-gripping jaws perfectly secure supports which are permanently joined to each other and maintained in their respective planes. I connect the jaws J J to the extensions *c c* by means of suitable interlocking longitudinal joints between said parts so as to guide the jaws in their movements toward the rail-seat *b* and at the same time securely retain said jaws on the extensions *c c*. The detail construction of said joints is susceptible of modifications, and I therefore do not limit myself to any specific construction. I prefer, however, to form each of the extensions *c* with a vertical slot *e* extending lengthwise of the extension, as shown in Fig. 3 of the drawings, and formed with longitudinal shoulders *f f* on the inner sides of the said slots, as shown in Figs. 2 and 4 of the drawings.

Each of the jaws J, I form with a depending tongue *g*, which extends into the slot *e* and is provided with longitudinal grooves *h*, which engage the shoulders *f f*, so as to retain the jaw seated on the extension *c* of the bar *a*. The tongues *g g* are provided with perforations *i'*, which are in a line parallel with the groove *e* and receive through them the adjustable coupling-bolt *i*, which is provided on its opposite ends with a head *j* and a nut *j'*, said bolt tying the tongues *g g* to each other, and by tightening the nut *j'* the jaws J J are forced toward the rail-seat *b* to firmly grip the flanges *d d* of the rail R.

I provide the bar *a* with deep and substantial side bearings *l l* for abutting against the side of the cross-tie in opposition to the longitudinal stress of the rail. Said side bearings consist of vertical walls, which extend, preferably, the entire length of the bar *a* and its extensions *c c* and are disposed with the aforesaid slots *e e* between them.

To render the rail-stay adjustable to different sizes of rails, I form the tops of the extensions *c c* inclined toward the rail-seat *b* and form the bottoms of the jaws J J correspondingly inclined, as illustrated in Fig. 1 of the drawings, in which the dotted lines show the jaws adjusted to grip a rail larger than the rail R represented in full lines. It will be observed that this is effected by setting the jaws J J farther from the rail-seat, in which adjustment the jaws become seated on higher portions of the tops of the extensions *c c*, and thus fitted to the increased thickness of the base of the rail. To permit said adjustment of the

jaws J J without causing the bolt *i* to be lifted, and thus obviate the necessity of weakening the bar *a* by forming it with a groove to accommodate the bolt, I elongate vertically the perforations *i'* in the tongues *g* of the jaws, as shown in Figs. 4 and 6 of the drawings.

What I claim as my invention is—

1. The improved rail-stay consisting of a bar abutting against the side of the cross-tie and formed with a rail-seat and with extensions at opposite sides of said seat, and rail-gripping jaws mounted on said extensions movable toward and from the rail-seat, and means for forcing said jaws toward the said seat.

2. A rail-stay consisting of a bar abutting against the side of the cross-tie and formed with a rail-seat and extensions at opposite sides of said seat, rail-gripping jaws mounted on said extensions movable toward and from the rail-seat and connected to said extensions by interlocking longitudinal joints, and means for forcing the jaws toward the rail-seat.

3. A rail-stay consisting of a bar abutting against the side of the cross-tie and formed with a rail-seat, extensions at opposite sides of said seat and slots extending lengthwise of said extensions, rail-gripping jaws seated movably on the extensions and formed with depending tongues extending into the aforesaid slots, and an adjustable coupling tying the tongues to each other.

4. A rail-stay consisting of a bar abutting against the side of the cross-tie and formed with a rail-seat, extensions at opposite sides of said seat, slots extending lengthwise of said extensions and longitudinal shoulders in the sides of the slots, rail-gripping jaws mounted movably on the extensions and provided with tongues extending into the aforesaid slots and formed with longitudinal grooves engaging the aforesaid shoulders, and an adjustable coupling tying the tongues to each other and forcing the jaws toward the rail-seat.

5. A rail-stay consisting of a bar formed with a rail-seat, vertical walls extending from opposite sides of the rail-seat and disposed to abut against the side of the cross-tie and formed with shoulders on their inner sides, rail-gripping jaws mounted movably on the aforesaid walls and formed with depending tongues disposed between the walls and formed with grooves engaging the shoulders of the walls and provided with perforations in a line parallel with the said walls, and a bolt passing through the perforations and provided with a head and a nut on its ends, as set forth.

6. A rail-stay consisting of a bar formed with a rail-seat, extensions at opposite sides of said rail-seat and with bearings on said extensions inclined toward the rail-seat, rail-gripping jaws mounted movably on said bearings, and means for forcing the said jaws toward the rail-seat.

7. A rail-stay consisting of a bar formed with a rail-seat, extensions at opposite sides of the rail-seat, bearings on said extensions inclined toward the rail-seat and vertical slots extending lengthwise of the extensions and formed with longitudinal shoulders in the sides of the slots, rail-gripping jaws mounted movably on the inclined bearings and provided with tongues extending into the slots and provided with grooves engaging the aforesaid shoulders, and means applied to said tongues for forcing the jaws toward the rail-seat.

EDWARD LAAS. [L. S.]

Witnesses:
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J. M. DUNCAN.