No 800,980. PATENTED OCT. 3, 1905.

S. R. BRYAN.

RAILWAY RAIL STAY.

APPLICATION FILED JULY 6, 1905.

2 SHEETS—SHEET 1.

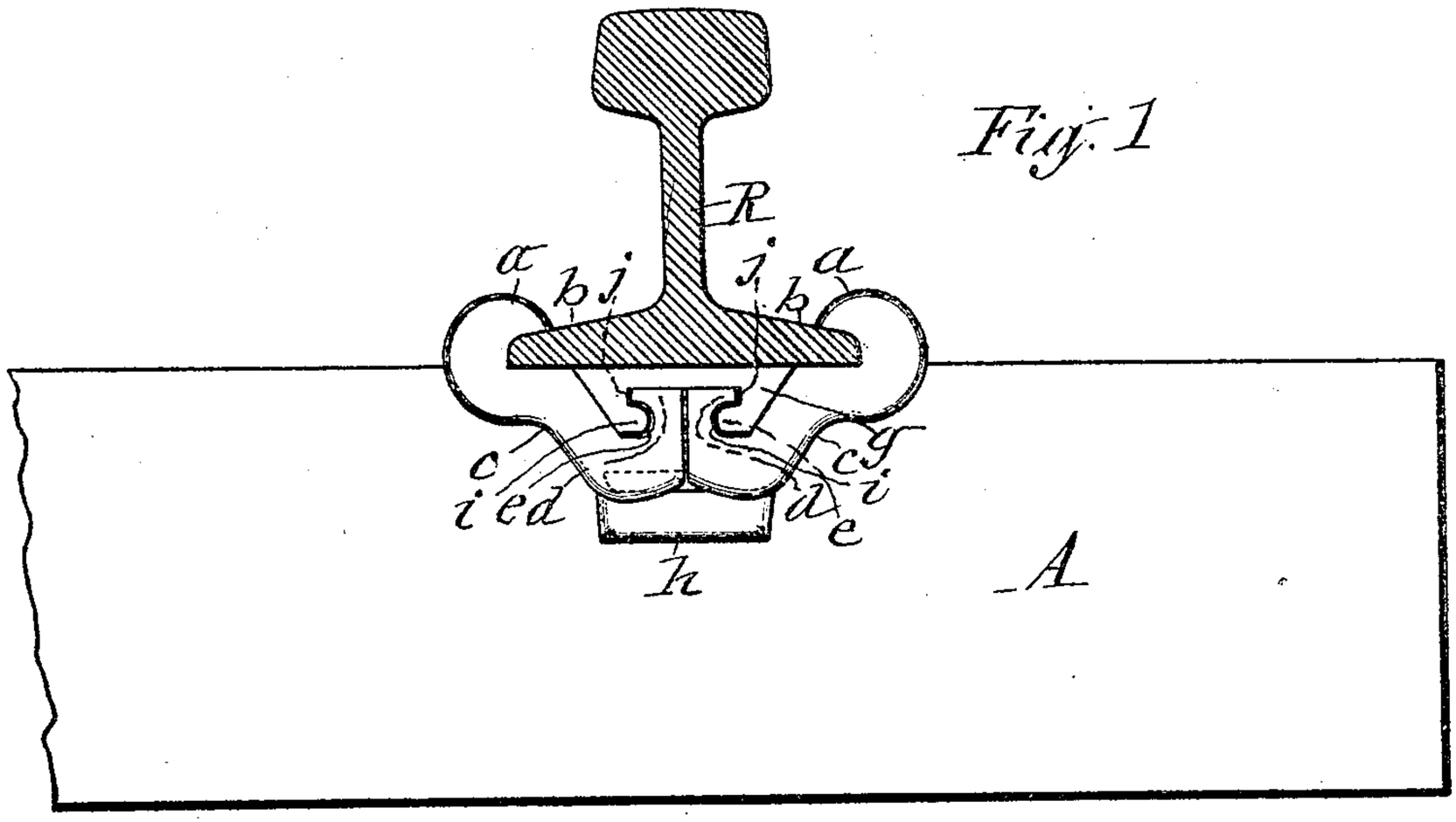

Fig. 1

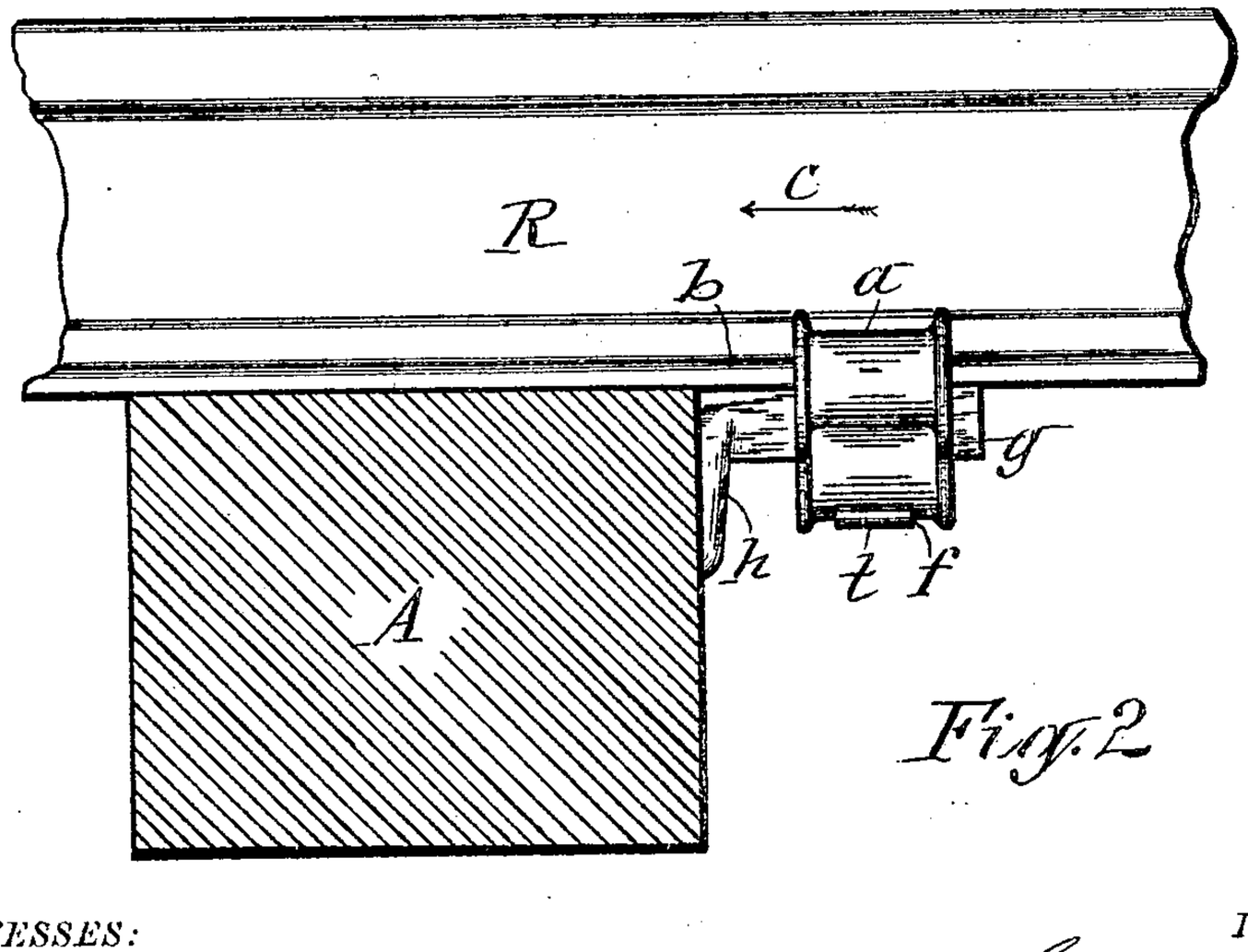

Fig. 2

WITNESSES:

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INVENTOR

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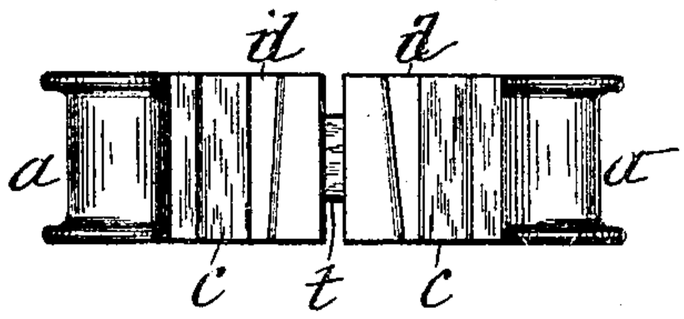

Fig. 5

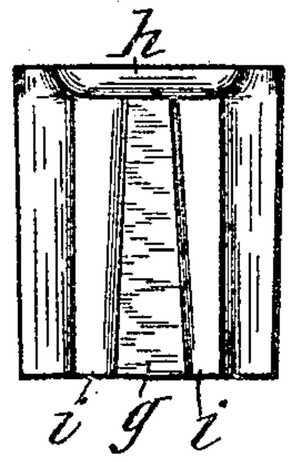

Fig. 4

Fig. 7

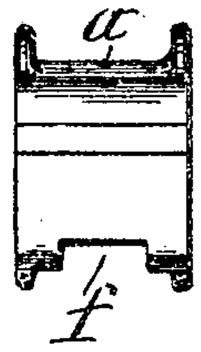

Fig. 6

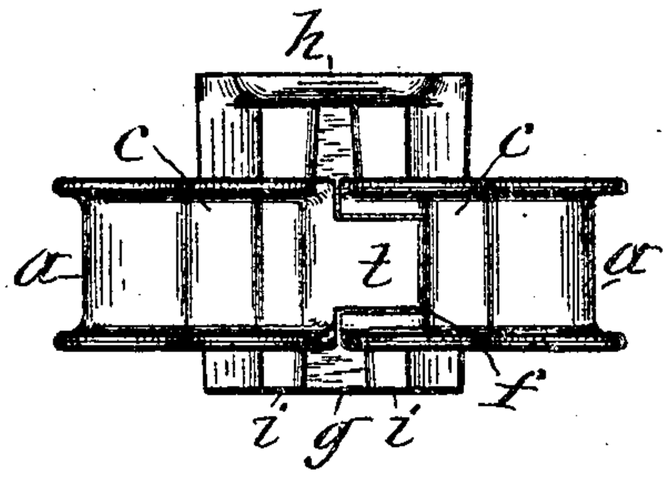

Fig. 3

WITNESSES:

H. H. Fulmer.

J. J. Lacey.

INVENTOR

Symon R. Bryan

By E. Lacey

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UNITED STATES PATENT OFFICE.

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RAILWAY-RAIL STAY.

No. 800,980. Specification of Letters Patent. Patented Oct. 3, 1905.

Application filed July 6, 1905. Serial No. 268,464.

To all whom it may concern:

Be it known that I, SYMON R. BRYAN, a citizen of the United States, and a resident of Racine, in the county of Racine, in the State of Wisconsin, 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.

This invention relates to the class of rail stays or anchors which are designed to prevent longitudinal creeping of the rails of railroads; and the invention consists in a novel construction and combination of its component parts which cause the rail-stay to automatically tighten its hold on the rail by the strain exerted in resisting the creeping of the rail; and the invention also embodies certain novel features of its details, as hereinafter described, and summed up in the claims.

In the accompanying drawings, Figure 1 is a transverse section of a rail equipped with my invention. Fig. 2 is a side view of the same. Fig. 3 is an inverted plan view of my improved rail-stay. Fig. 4 is an inverted plan view of the arm by means of which the rail-stay is sustained on the cross-tie. Fig. 5 is a plan view of the rail-gripping jaws, and Figs. 6 and 7 are inverted inner end views of the said jaws.

Similar letters of reference indicate corresponding parts.

R denotes the railway-rail, and A the cross-tie, which supports said rail in the usual manner.

The arrow C in Fig. 2 indicates the direction in which the rail tends to creep.

a a are the rail-gripping members of the rail-stay, which members are preferably of the form of hooks or jaws, which are disposed to engage the flanges *b b* on opposite sides of the rail, and thus grip the rail between the jaws. Said jaws are formed with downwardly and inwardly inclined extensions *c c*, terminating in horizontal wedges *d d*, which are beveled toward each other and are disposed lengthwise under the rail R and formed with longitudinal grooves *e* under the outer edges of the wedges, as shown in Fig. 1 of the drawings. The bottom of one of the extensions *c* is provided with a transverse groove *f*, and the bottom of the other of said extensions is formed with a tongue *t*, which passes through the groove *f* when the jaws are applied to the rail. Said tongue-and-groove connection serves to maintain the jaws in line with each other.

g represents a horizontal arm which is disposed lengthwise under the rail R and is rigidly sustained on the cross-tie A by means of a vertical plate *h*, formed on the end of the said arm and abutting against the side of the cross-tie. The said arm is provided with suitable means for compressing the two wedges *d d*, and thus tightening the grip of the jaws *a a* on the rail R. I preferably form said arm with ribs or ways *i i*, which are inclined endwise toward each other, corresponding to the bevels of the two wedges *d d*, and receive said wedges between them, as shown in Fig. 1 of the drawings, the inclination of the ways *i i* being illustrated in Fig. 4 of the drawings. The said ways are undercut longitudinally, as shown at *j*, to receive the adjacent wedges *d d*, and thus couple the arm *g* to the jaws *a a*.

In the operation of the described rail-stay the longitudinal strain exerted on the rail due to its tendency to creep longitudinally causes the wedges *d d* of the jaws *a a* to be forced tightly toward the converging ends of the ways *i i*, and thus compress said wedges and force the jaws *a a* with increased pressure onto the flanges of the rail. Hence my improved rail-stay is adjusted automatically to securely grip the rail, and thus its efficiency is materially increased and rendered safe and reliable.

What I claim as my invention is—

1. A rail-stay consisting of rail-gripping members, and means disposed lengthwise under the rail and adapted to tighten the grip on the rail.

2. A rail-stay consisting of jaws disposed to grip opposite sides of the rail, wedges sustained on said jaws, a stationary member, and means sustained on said stationary member and actuating the aforesaid wedges.

3. A rail-stay consisting of jaws disposed to grip the rail between them and formed with wedges beveled toward each other lengthwise of the rail, and an arm sustained on the cross-tie and provided with means for engaging said wedges to automatically tighten the grip of the jaws by resistance of the creeping of the rail.

4. A rail-stay consisting of jaws disposed to grip the rail between them and formed with

wedges beveled toward each other and disposed under the rail, and an arm sustained on the cross-tie and formed with ways compressing the wedges between them to tighten the grip of the jaws on the rail.

5. A rail-stay consisting of jaws disposed to grip the rail between them and formed with downward extensions terminating in wedge-shaped tongues beveled toward each other, and an arm sustained rigidly on the cross-tie and formed with ways receiving the wedges between them and inclined correspondingly as set forth.

6. A rail-stay consisting of jaws disposed to grip the rail between them and formed with downward extensions terminating in wedge-shaped tongues beveled toward each other lengthwise of the rail and grooved longitudinally under the wedges, and an arm disposed longitudinally under the rail and rigidly sustained on the cross-tie and provided with undercut ways receiving between them the aforesaid wedges substantially as set forth and shown.

7. A rail-stay consisting of rail-gripping jaws disposed at opposite sides of the rail and formed with downward extensions and with a transverse groove in one of said extensions and a tongue on the other extension passing through the said groove, and means for forcing the jaws into gripping position on the rail.

8. A rail-stay consisting of jaws disposed to grip the rail between them and formed with downward extensions, and with a transverse groove in one of said extensions, a tongue on the other of said extensions passing through said groove, and wedges on the lower ends of the extensions and beveled longitudinally toward each other, and an arm abutting against the side of the cross-tie and formed with ways receiving the wedges between them and inclined correspondingly substantially as set forth and shown.

SYMON R. BRYAN. [L. S.]

Witnesses:
GEORGIE MALONE,
ANDREW DIETRICH.