

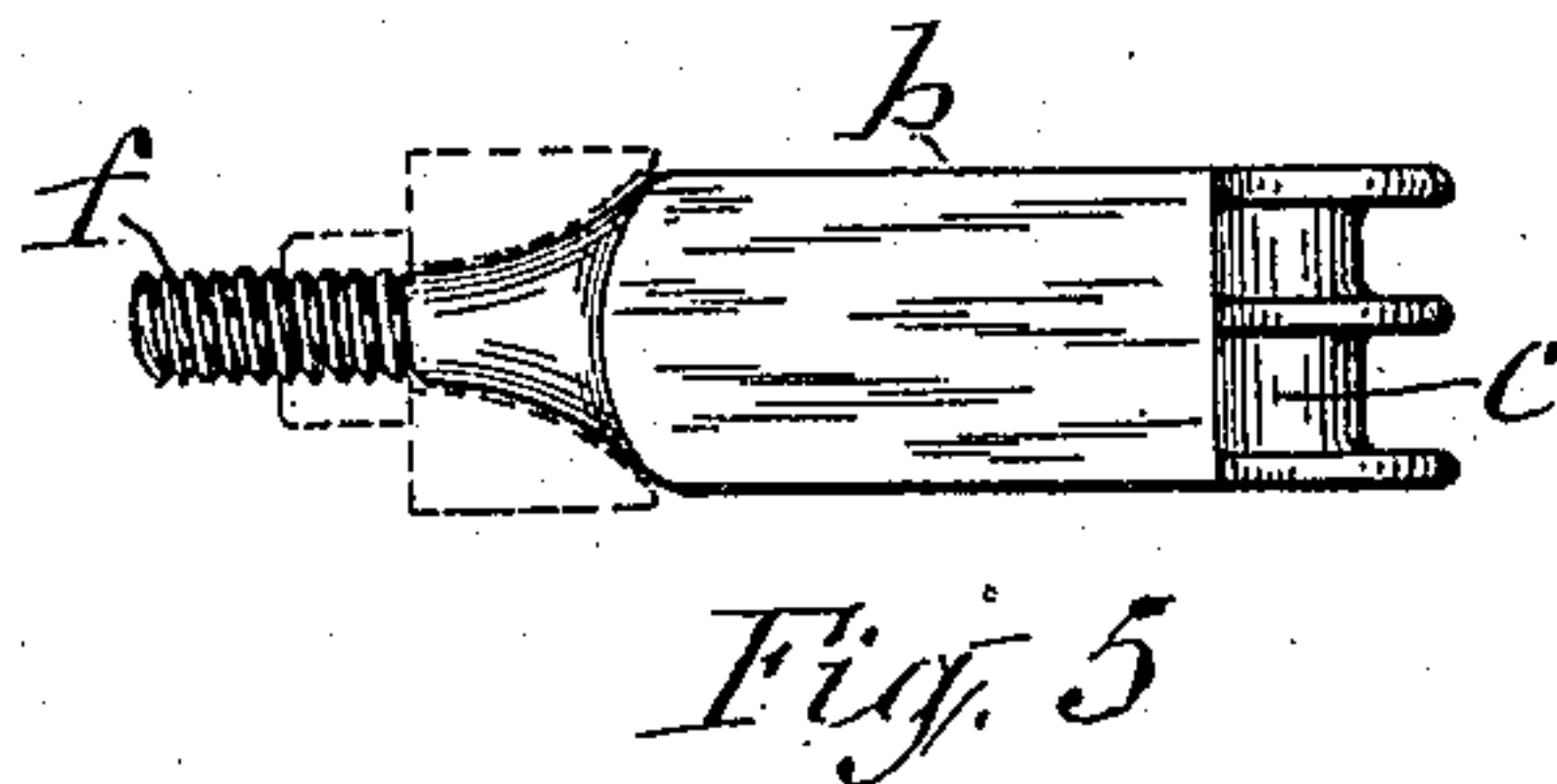
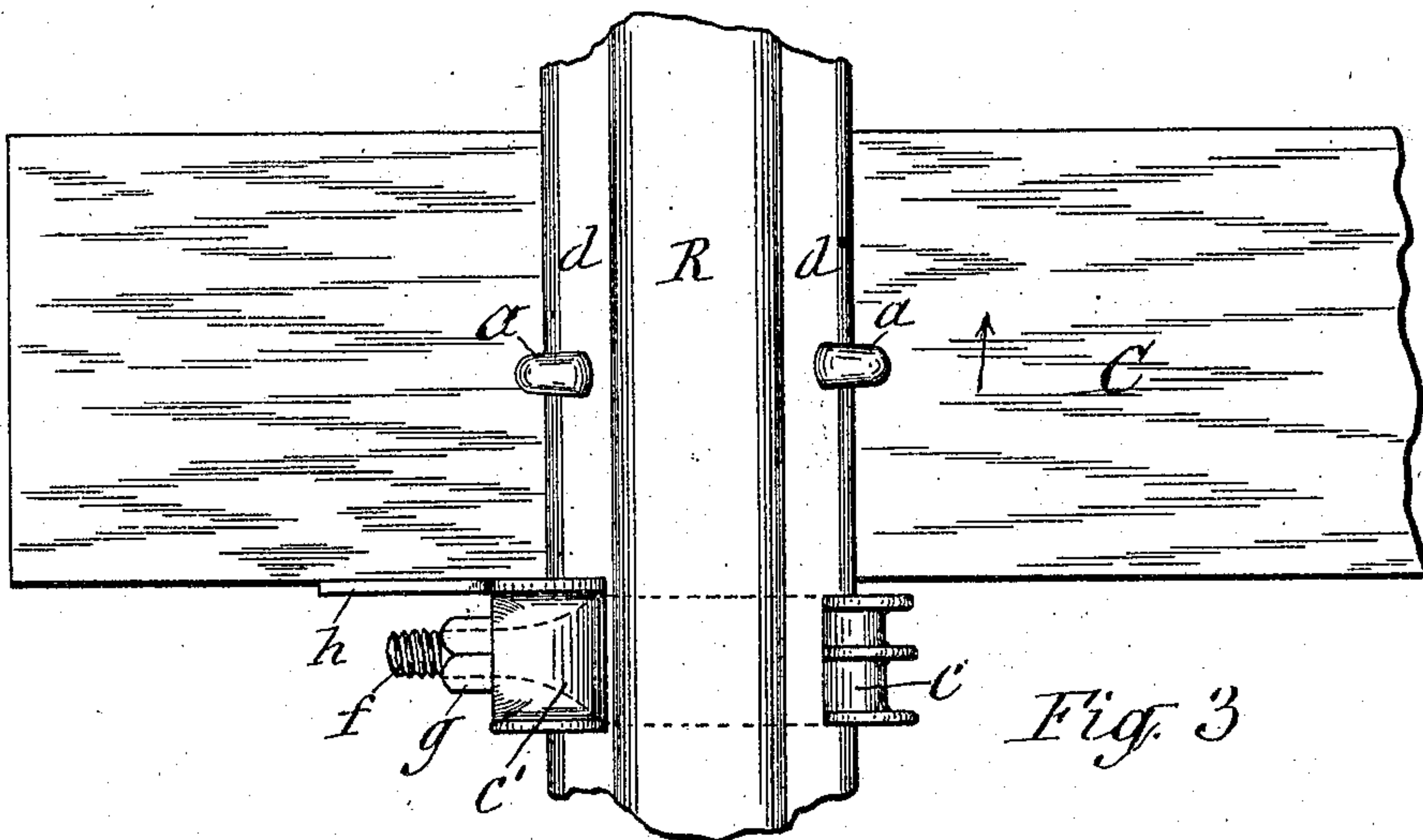
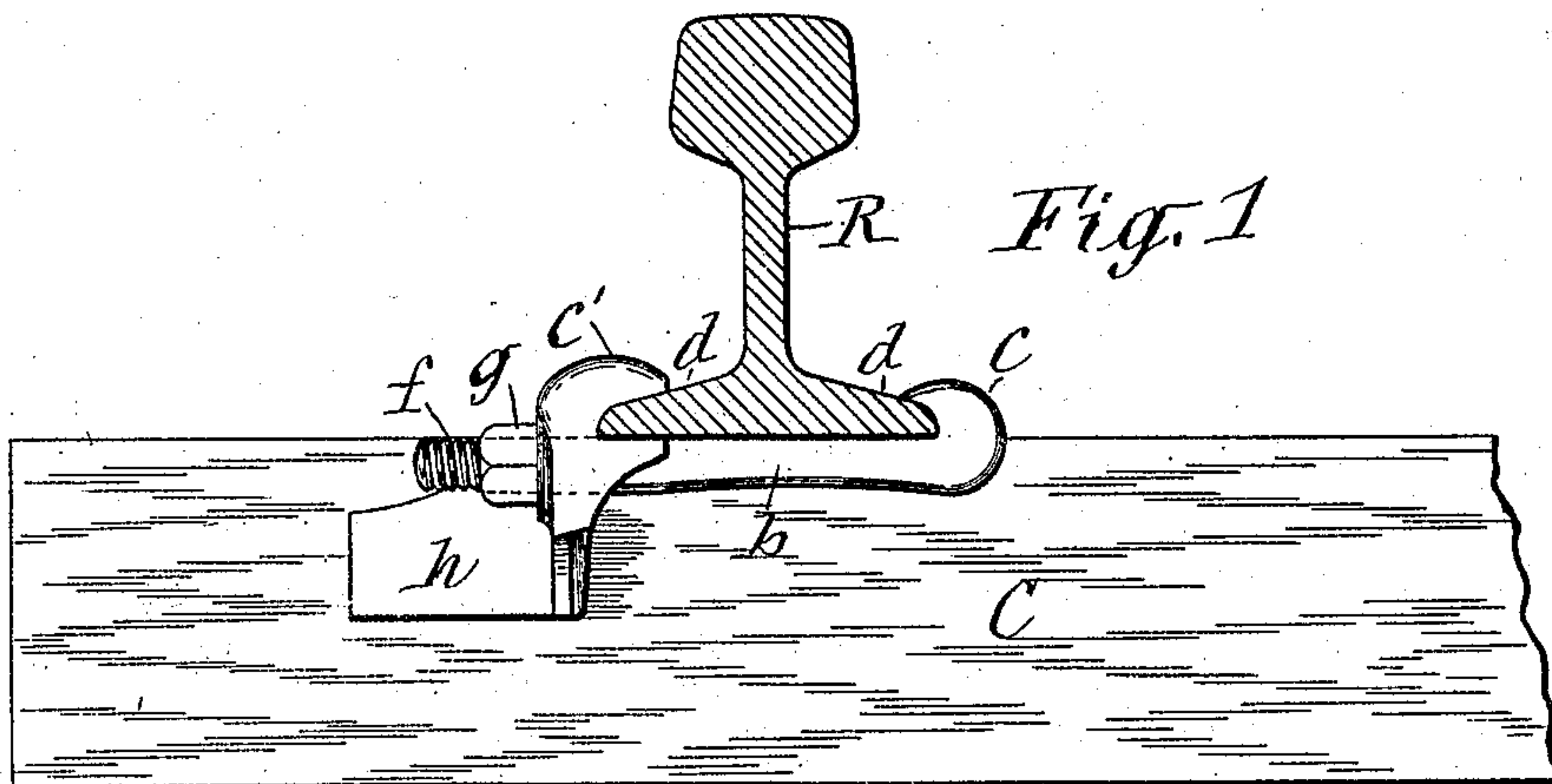
No. 806,375.

PATENTED DEC. 5, 1905.

H. H. SPONENBURG.  
RAILWAY RAIL STAY.

APPLICATION FILED APR. 13, 1905.

2 SHEETS—SHEET 1.



WITNESSES:

H. H. Fulmer  
J. J. Laess

INVENTOR

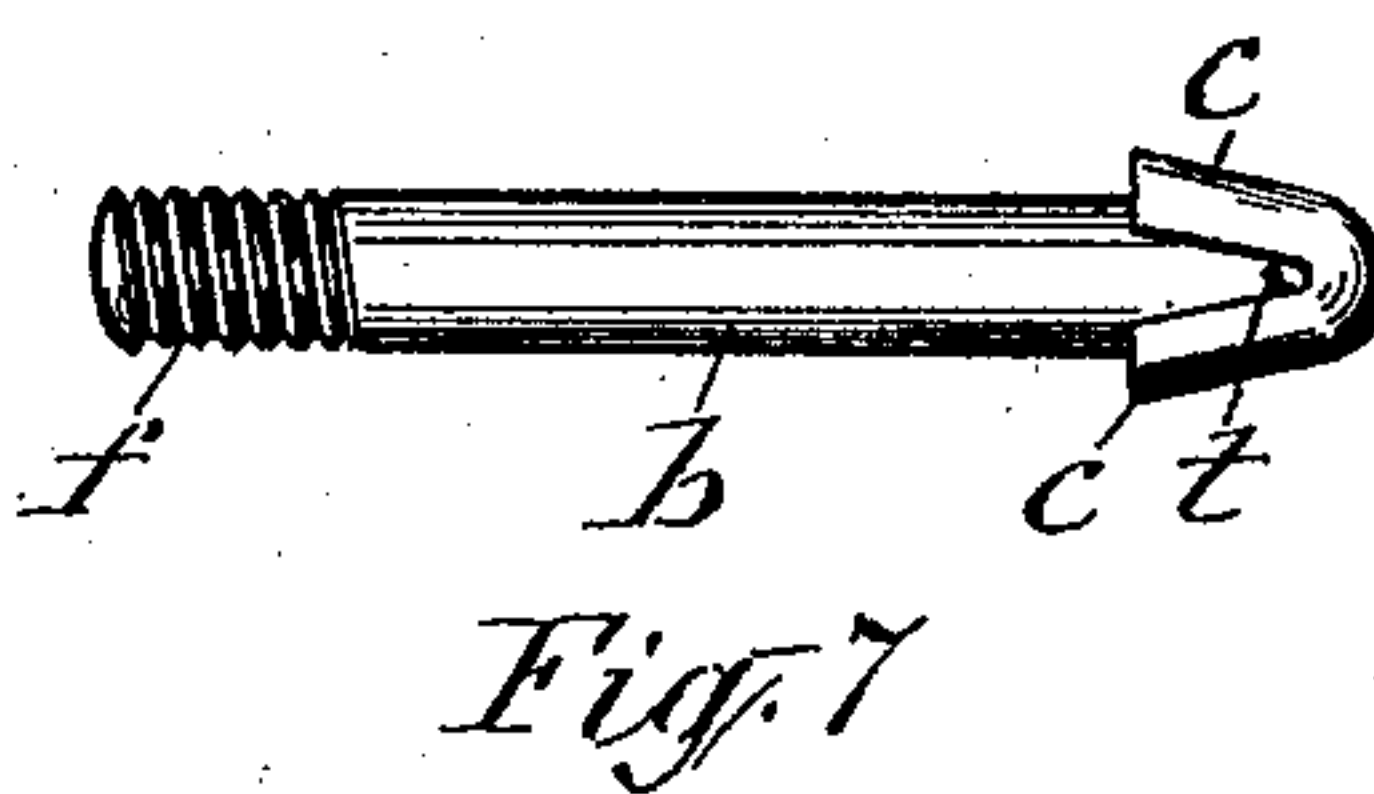
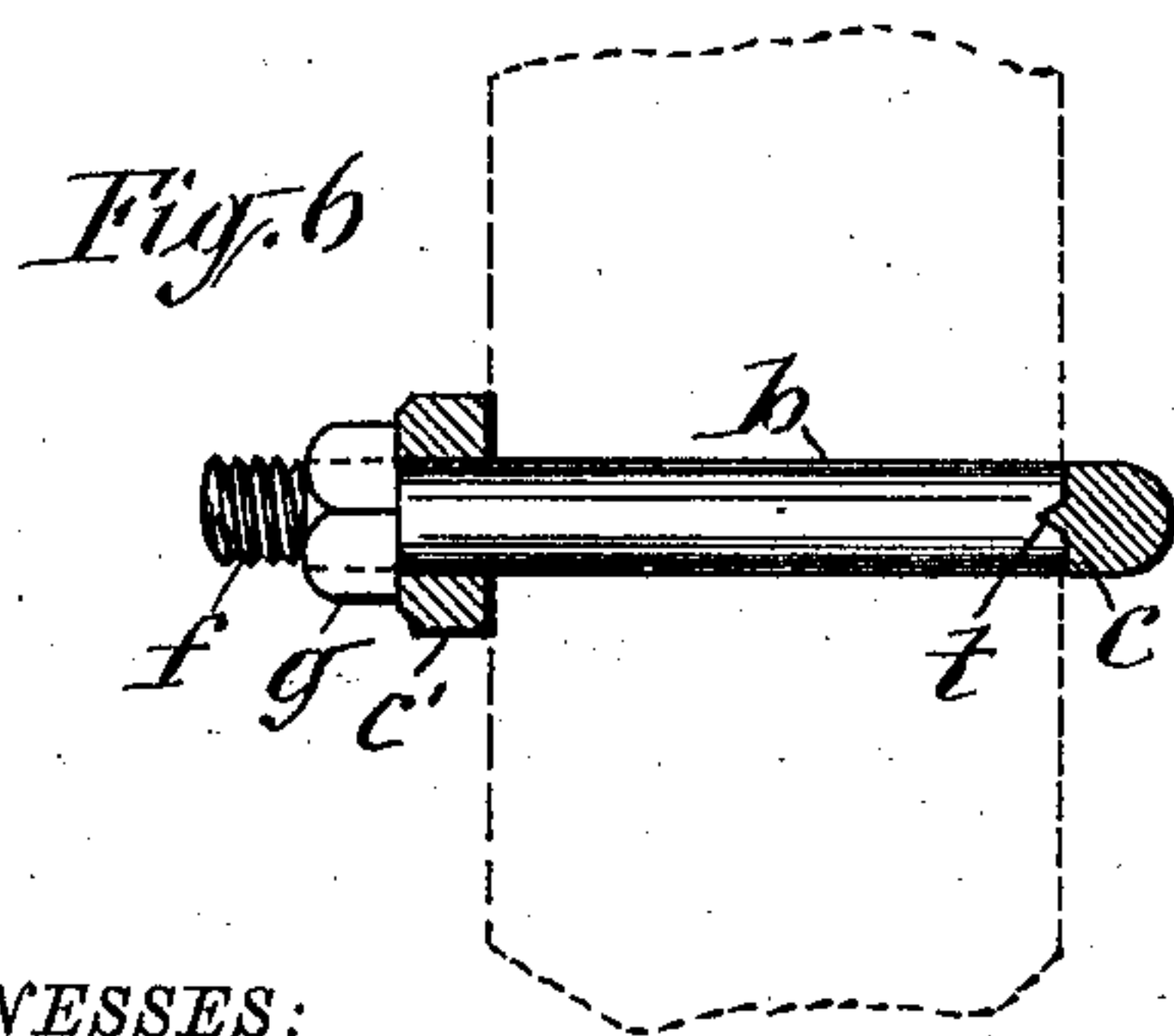
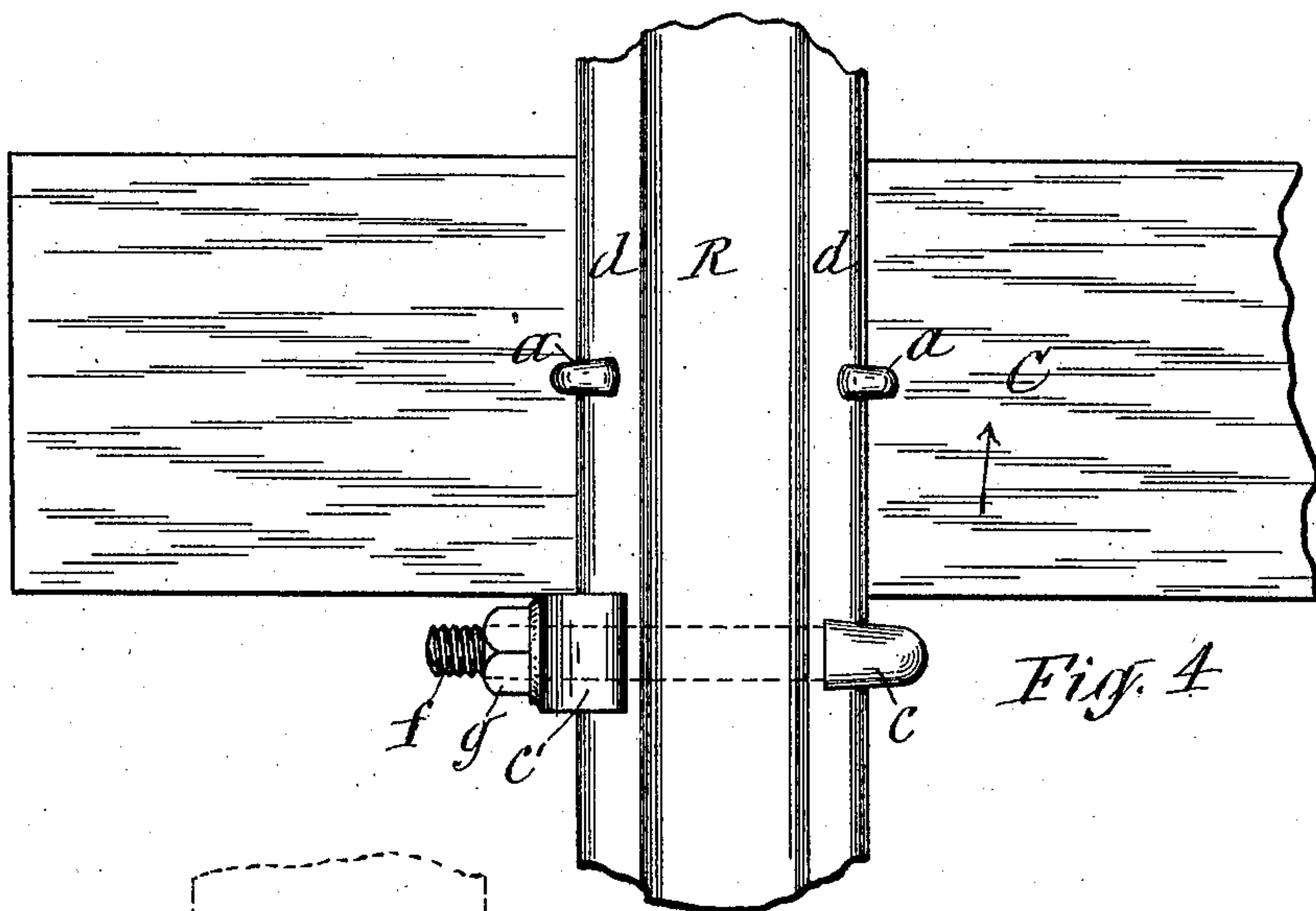
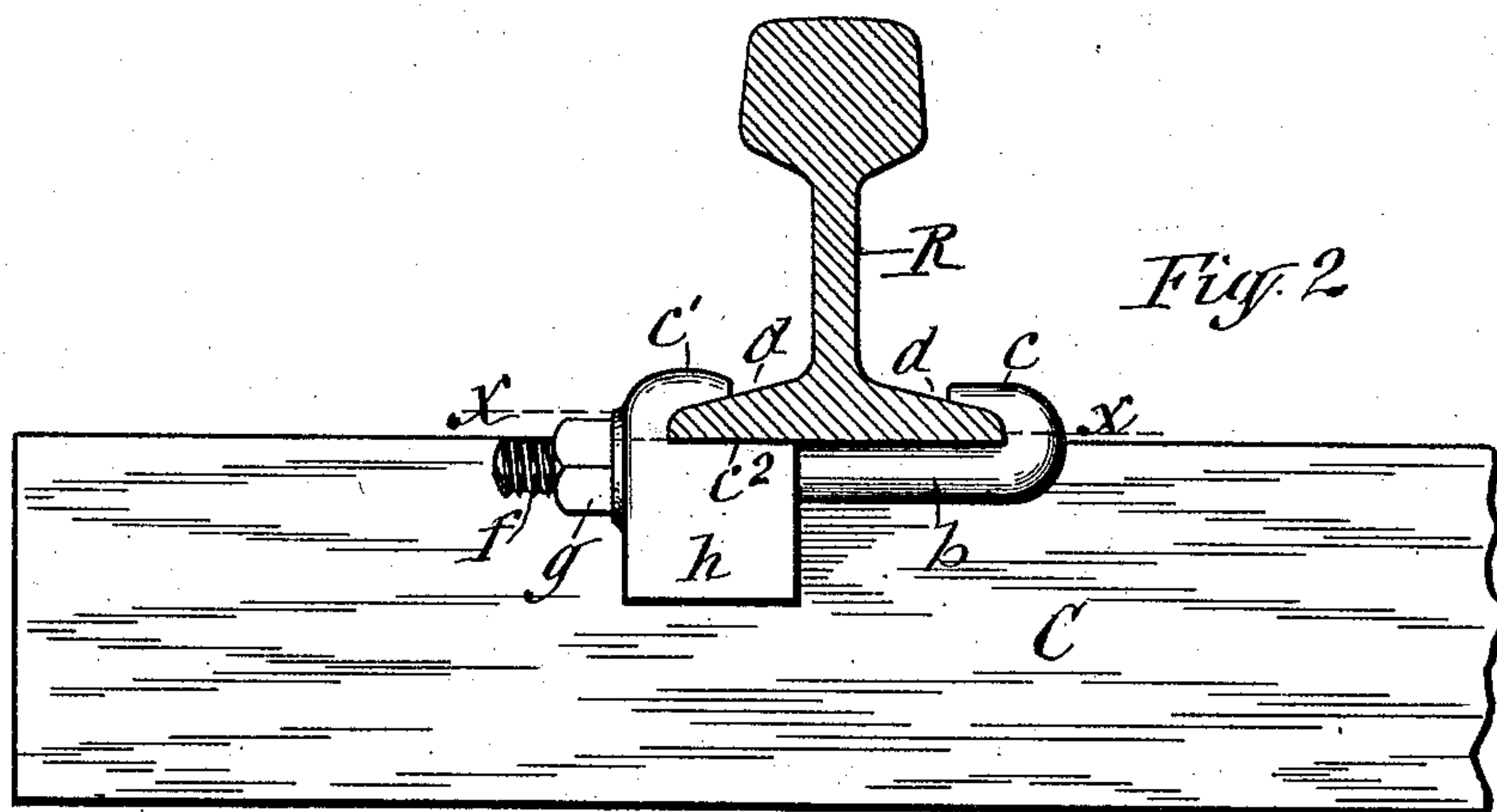
Hiram H. Spontenburg  
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2 SHEETS—SHEET 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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

## RAILWAY-RAIL STAY.

No. 806,375.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed April 13, 1905. Serial No. 255,272.

*To all whom it may concern:*

Be it known that I, HIRAM H. SPONENBURG, of Wadsworth, in the county of Lake, in the State of Illinois, 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 which are designed to prevent longitudinal creeping of the rail; and the invention consists in certain novel features of the details of the rail-stay, which possess several advantages of prior analogous devices employed for the same purpose, as hereinafter explained and summed up in the claims.

In the accompanying drawings, Figures 1 and 2 are transverse sections of a railway-rail equipped with my improved rail-stay of slightly-modified forms. Figs. 3 and 4 are plan views of Figs. 1 and 2. Fig. 5 is a detached plan view of the jaw-carrying bar shown in Figs. 1 and 3. Fig. 6 is a horizontal transverse section on the line X X in Fig. 2. Fig. 7 is a detached plan view of a further modification of the jaw-carrying bar.

Similar letters of reference indicate corresponding parts.

R represents the railway-rail, which is supported on the cross-tie C and secured thereto by spikes *a a* in the usual manner. The darts D in Figs. 3 and 4 indicate the direction in which the rail tends to creep and which movement of the rail is sought to be prevented by the rail-stay to which this invention pertains.

*b* denotes the bar, which carries the rail-gripping jaws *c* and *c'* of the rail-stay. In my present invention I place the bar *b* at right angles across the bottom of the rail R, and thus reduce to a minimum the length of said bar and cause the jaws to grip the flanges *d d* of the rail at points directly opposite each other and in a secure manner. The jaw *c* is formed directly on one end of the bar *b* and hook-shaped to grip one of the flanges *d*. The cooperating jaw *c'* is connected adjustably to the bar *b* and has its bottom portion *c<sup>2</sup>* extended some distance under the bottom of the rail, preferably across the entire or the greater portion of the width of the flange *d*, as shown in Fig. 2 of the drawings, thus obtaining a firm hold on the rail. The jaw *c'* is provided with a horizontal aperture,

through which passes the shank *f*, formed on the end of the bar opposite the jaw *c*. The said shank is in line with the bar *b* and is screw-threaded and provided with a nut *g*. By screwing up this nut very tightly the two jaws *c c'* are caused to firmly grip the base of the rail. The adjustable jaw *c'* is formed with a dependent flange *h*, which bears on the side of the cross-tie C in opposition to the creeping tendency of the rail. I prefer to form the said flange of the same length as the bottom bearing *c<sup>2</sup>* of the jaw *c'*, so as to extend the abutment of the flange *h* against the cross-tie farther under the rail, as shown in Fig. 2 of the drawings.

The bar *b* may consist of a rod having one of its ends bent hook shape to form the jaw *c* and preferably flattened at its overhanging portion and in its inner side. This form of the bar *b* is illustrated in Figs. 2, 4, 6, and 7 of the drawings. The opposite end of the said rod is maintained straight and in line with the main portion of the rod and is screw-threaded to form the shank *f*.

To obtain a firmer and more secure hold on the rail, I form the interior of the jaw *c* with a tooth *t* to bite the rail-flange *d*. By bifurcating or splitting the jaw *c* and spreading the ends thereof apart, as shown in Fig. 7, a plurality of jaws are formed to grip one of the rail-flanges *d*, and thus a more effective hold on the rail is obtained.

What I claim is—

1. A rail-stay consisting of a bar extending at right angles across the bottom of the rail and provided on one end with a fixed rail-gripping jaw, a jaw adjustably connected to the opposite end of said bar, and a tie-abutment formed on the adjustable jaw.

2. A rail-stay consisting of a bar extending at right angles across the bottom of the rail and formed with a rail-gripping jaw on one end and with a shank on the opposite end, a rail-gripping jaw mounted adjustably on said shank, means applied to the shank for forcing the jaws to the rail, and a tie-abutting flange formed on the adjustable jaw as set forth and shown.

3. A rail-stay consisting of a bar extending at right angles across the bottom of the rail and terminated at one end in a hook-shaped jaw, and at the opposite end in a screw-threaded shank disposed in line with the bar, a hook-shaped jaw mounted on said



shank, a nut on the shank forcing the two jaws into gripping position on the rail, and a tie-abutting flange depending from said adjustable jaw as set forth.

- 5 4. A rail-stay consisting of a bar extending at right angles across the bottom of the rail and terminated at one end in a hook-shaped jaw formed with a tooth projecting from the interior of the hook toward the rail,  
10 the opposite end of said bar formed with a screw-threaded shank disposed in line with the bar, a hook-shaped jaw mounted on said shank and formed with a depending abutment engaging the side of the cross-tie, and  
15 a nut on the shank forcing the two jaws into gripping position on the rail as set forth.

5. A rail-stay consisting of a rod having one end bent hook-shaped over the rod and the opposite end of said rod maintained in  
20 line with the main portion of the rod and screw-threaded, a jaw mounted on the screw-threaded end of the rod and formed with a depending flange, and a nut on said end of  
the rod forcing the aforesaid hook and jaw  
25 into gripping position on the rail.

6. A rail-stay comprising a bar extending

across the bottom of the rail and formed on one end with a plurality of rail-gripping jaws, a jaw mounted adjustably on the opposite end of said bar, and means forcing said jaws 30 to the rail.

7. A rail-stay consisting of a bar extending across the bottom of the rail and formed on one end with a plurality of jaws and on the opposite end with a screw-threaded 35 shank, a jaw mounted on said shank, and a nut on the shank forcing said jaws into gripping position on the rail as set forth.

8. A rail-stay consisting of a bar extending at right angles across the bottom of the 40 rail and formed on one end with two hook-shaped jaws and with a tooth between said jaws, the opposite end of said bar formed with a screw-threaded shank in line with the bar, a jaw mounted on said shank and formed 45 with a depending flange, and a nut on the shank forcing the jaws into gripping position as set forth and shown.

HIRAM H. SPONENBURG. [L. S.]

Witnesses:

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JOHN E. REARDON.