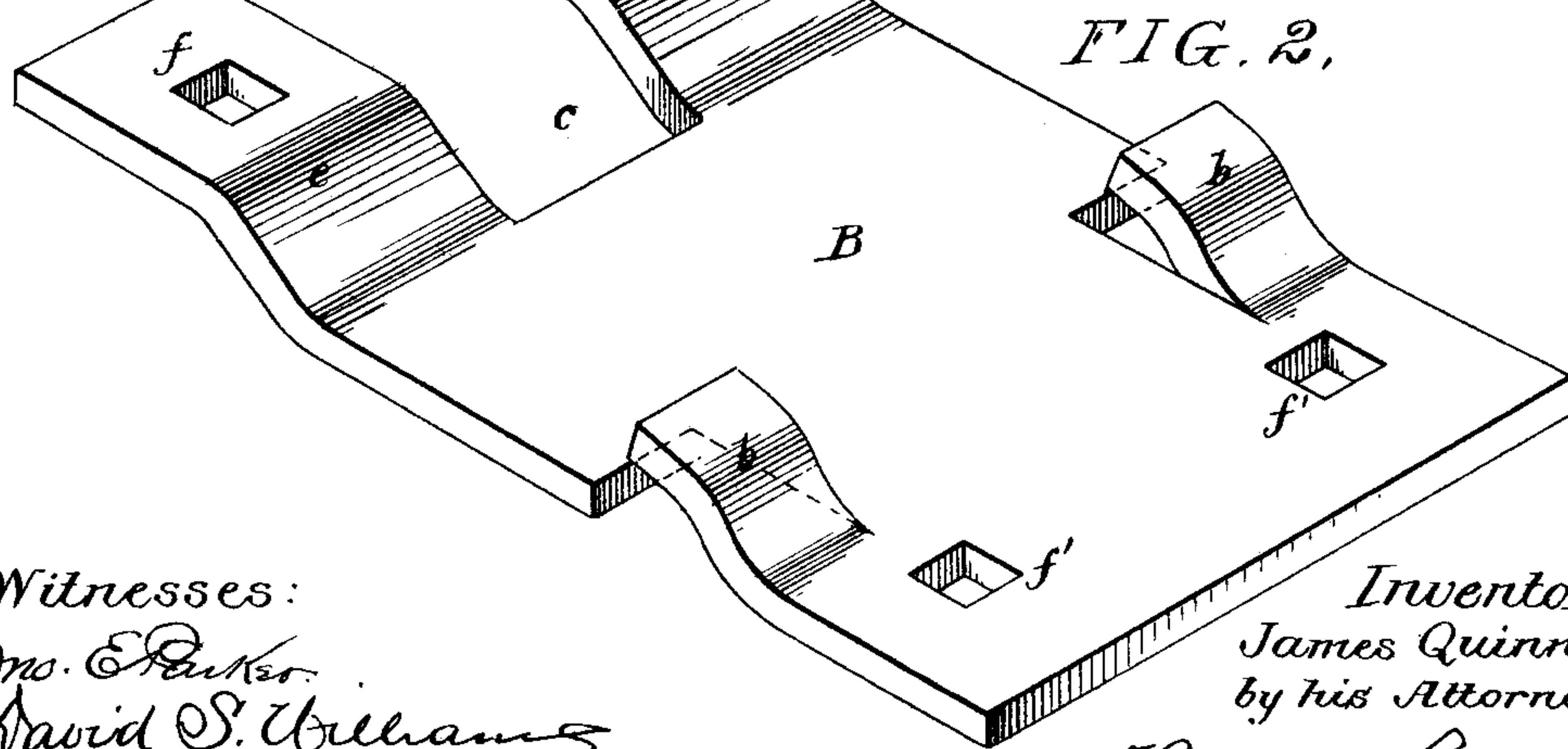
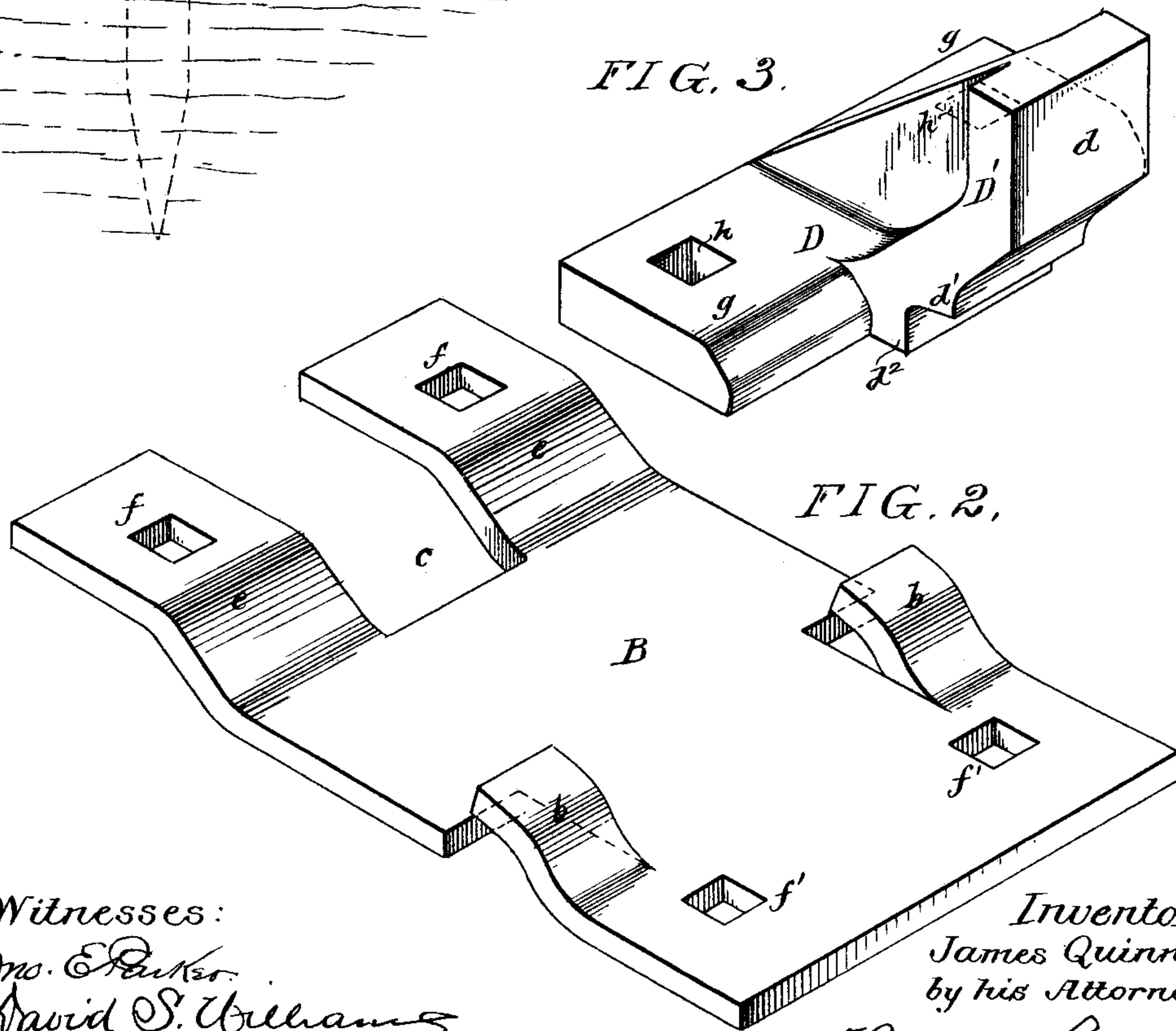
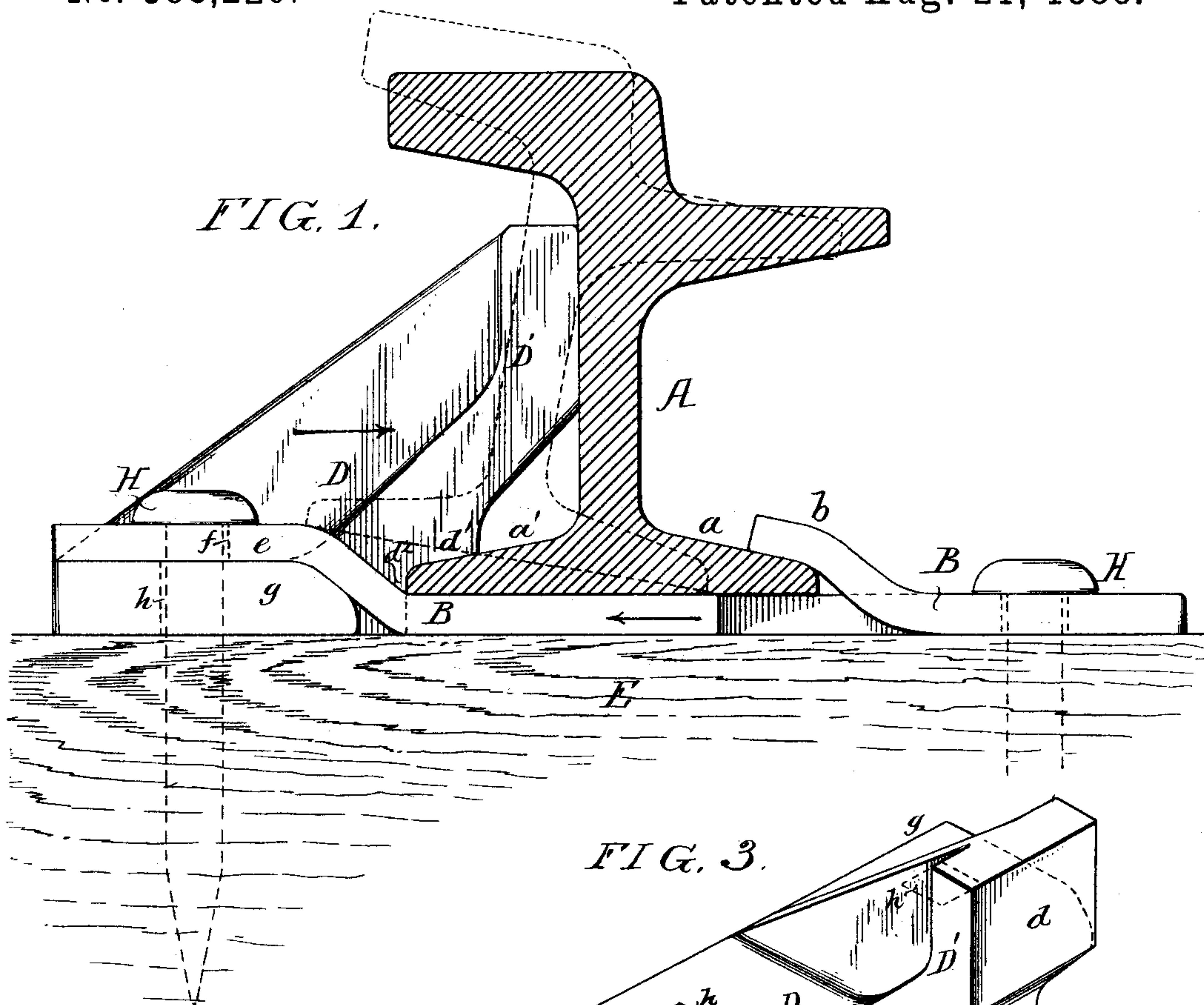


(No Model.)

J. QUINN, Jr.
RAIL FASTENING.

No. 388,220.

Patented Aug. 21, 1888.



Witnesses:
Jno. E. Parker
David S. Williams

Inventor:
James Quinn Jr
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

JAMES QUINN, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
WILLIAM WHARTON, JR., AND COMPANY, INCORPORATED, OF
SAME PLACE.

RAIL-FASTENING.

SPECIFICATION forming part of Letters Patent No. 388,220, dated August 21, 1888.

Application filed May 4, 1888. Serial No. 272,754. (No model.)

To all whom it may concern:

Be it known that I, JAMES QUINN, JR., a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Rail-Fastenings, of which the following is a specification.

The object of my invention is to provide a tie-plate for a railway-rail having a brace-piece which can be removed without removing or disturbing the tie-plate, a further object being to so construct the two pieces that when the spikes or bolts are inserted to retain the pieces to the cross-tie the action of the spikes in the spike-holes will tend to draw the two pieces together and simultaneously clamp the rail, as fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved tie-plate and brace with the rail shown in section. Fig. 2 is a perspective view of the tie-plate detached; and Fig. 3 is a perspective view of the brace detached.

The rail to which I have shown my invention as applied is what is termed a "girder-rail," used especially in the construction of street-railways, although it will be understood in the outset that any ordinary form of T-rail or girder-rail may be used without departing from my invention.

Referring to the drawings, A is the rail. B is the tie-plate; D, the brace; and E is the cross-tie—in the present instance an ordinary wooden tie.

On one side of the tie-plate are two lips, *bb*, struck up in the present instance from the sheet metal of which the tie-plate is composed. These lips overlap the base-flange *a* of the rail. The opposite side of the tie-plate is recessed at *c* to accommodate the brace D. This recess forms two tongues, *ee*, which are raised, as shown, and by which the brace-piece is confined. The tie-plate is provided with suitable spike-holes, *ff*, on one side, and similar holes, *f'f'*, at the other side. Although I have shown this tie-plate made by striking up a metallic plate, it will be understood that a cast tie-plate may be used without departing from my invention.

The brace-piece D has an upright extension,

D', having a face, *d*, which bears against the web of the rail. The lower portion, *d'*, of this extension overlaps the base-flange *a'* of the rail and the portion *d''* of the brace fits snugly against the edge of said rail-base, for a purpose described hereinafter. The brace D has two side wings, *gg*, which fit beneath the elevated tongues *e* of the tie-plate B. These wings *g* are provided with spike-holes *h*, and these holes are so formed as to overlap the spike-holes *f* in the tongues *e*, as shown by dotted lines in Fig. 1, so that when the spikes H are driven to hold the plate and brace in position they will tend to force the brace in the direction of its arrow, Fig. 1, and the tie-plate in the direction of its arrow, thus securely clamping the rail between the lips *b* of the tie-plate and the brace, as will be readily understood on reference to the drawings.

Another feature of the device is that the tie-plate can be placed in position on the cross-tie and the rail afterward inserted, as shown by dotted lines in Fig. 1, and after the gage is set the spikes H' can be driven into position, and then the braces can be slipped on from the side and spiked to the tie and tie-plate, as described above, thus securing the rail firmly to the tie.

In case of repairs, the spikes H can be withdrawn and the braces can be removed laterally, so that the rail can be taken out and a new rail placed in position without disturbing the tie-plate. In some instances this tie-plate can be mounted on any suitable elevated chair, such as is commonly used in connection with elevated girder-rails.

I claim as my invention—

1. The combination of the rail with a tie-plate having lips which overlap one of the base-flanges of the rail, and with a brace-piece adapted to bear against the opposite side of the rail and transversely detachable from the tie-plate, substantially as described.

2. The combination of a rail with a tie-plate having lips overlapping one of the base-flanges of the rail, with a brace-piece adapted to bear against the opposite side of the rail and having side wings provided with spike-holes, and tongues on the tie-plate overlapping the said side wings of the brace-piece, and also pro-

vided with spike-holes, so that when the spikes are driven through these holes the tie-plate and brace will be secured to the rail and to each other, substantially as set forth.

- 5 3. The combination of a rail and a tie-plate having lips at one side adapted to overlap one of the base-flanges of the rail, with a brace-piece adapted to bear against the opposite side of the rail and having side wings with spike-
10 holes therein, and tongues on the tie-plate overlapping the side wings of the brace-piece and provided with spike-holes, the spike-holes of the tongues overlapping the spike-holes of the brace-piece, whereby the spike or bolt acts

as a wedge to draw the tie-plate and brace-piece together, substantially as described. 15

4. A struck-up metallic tie-plate having portions cut out and struck up to form lips *b b*, with a cut-out portion, *c*, to form tongues, said tongues being struck up into the position and 20 for the purpose described.

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

JAMES QUINN, JR.

Witnesses:

EDWARD M. RILEY,
HARRY SMITH.