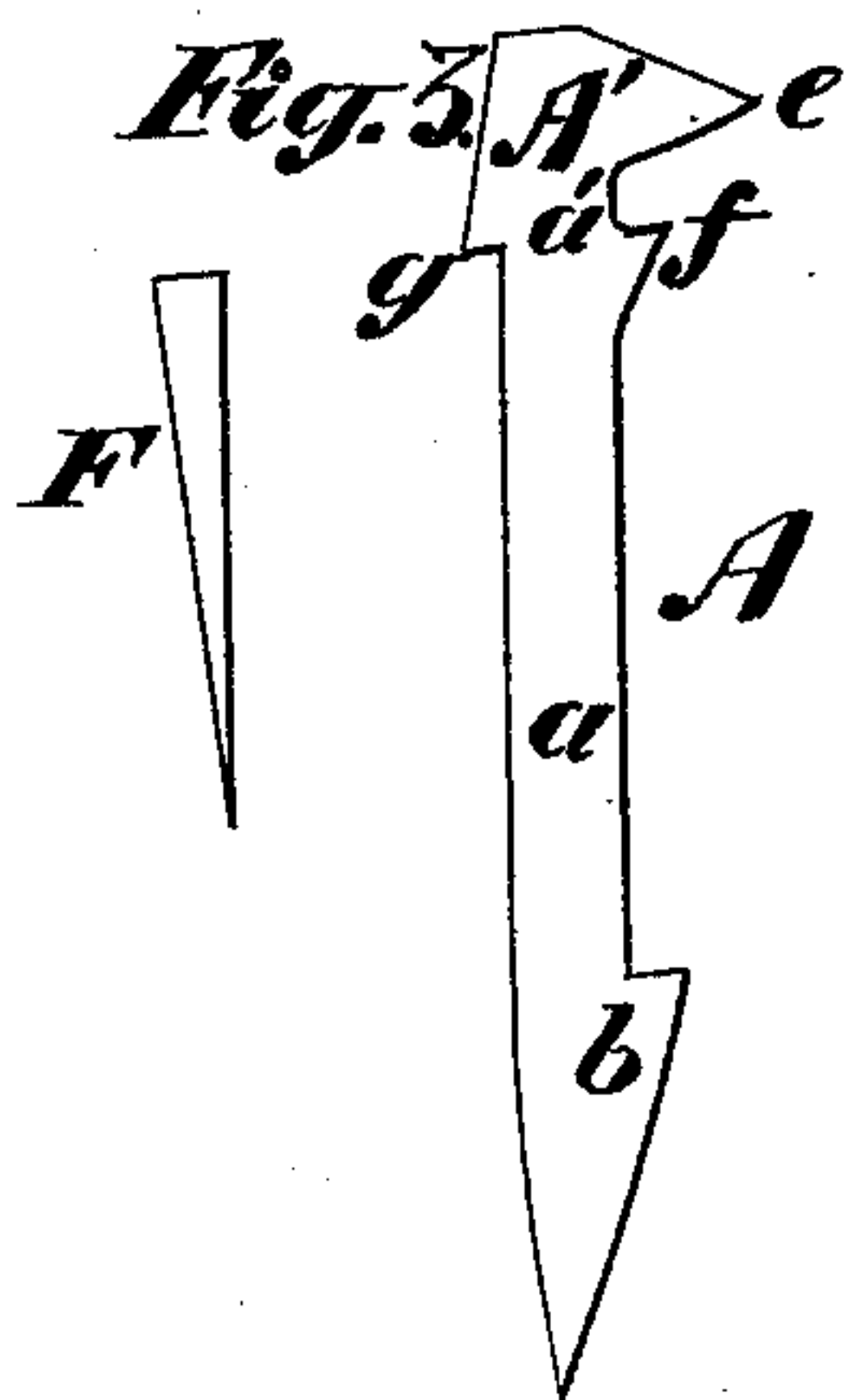
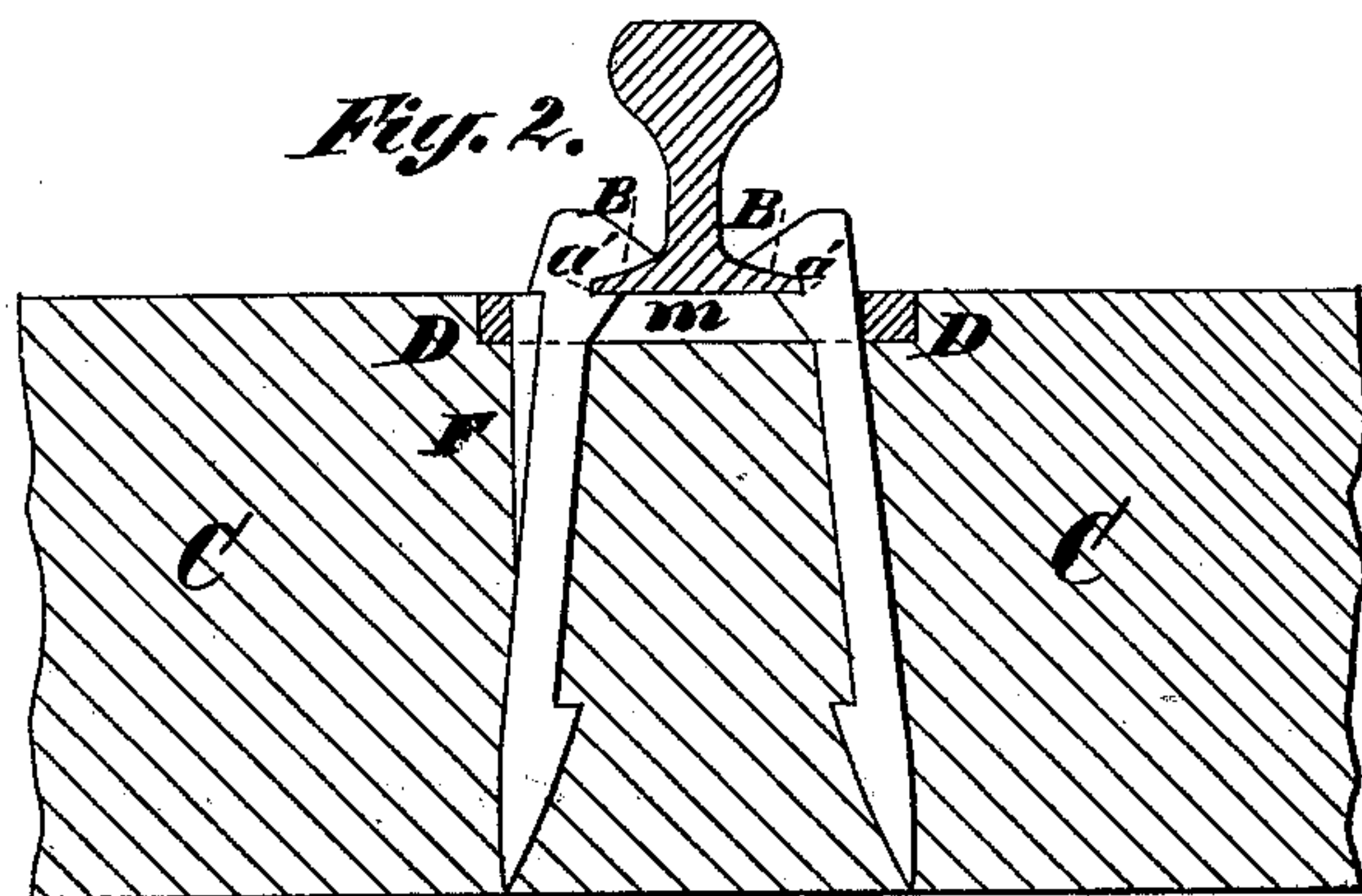
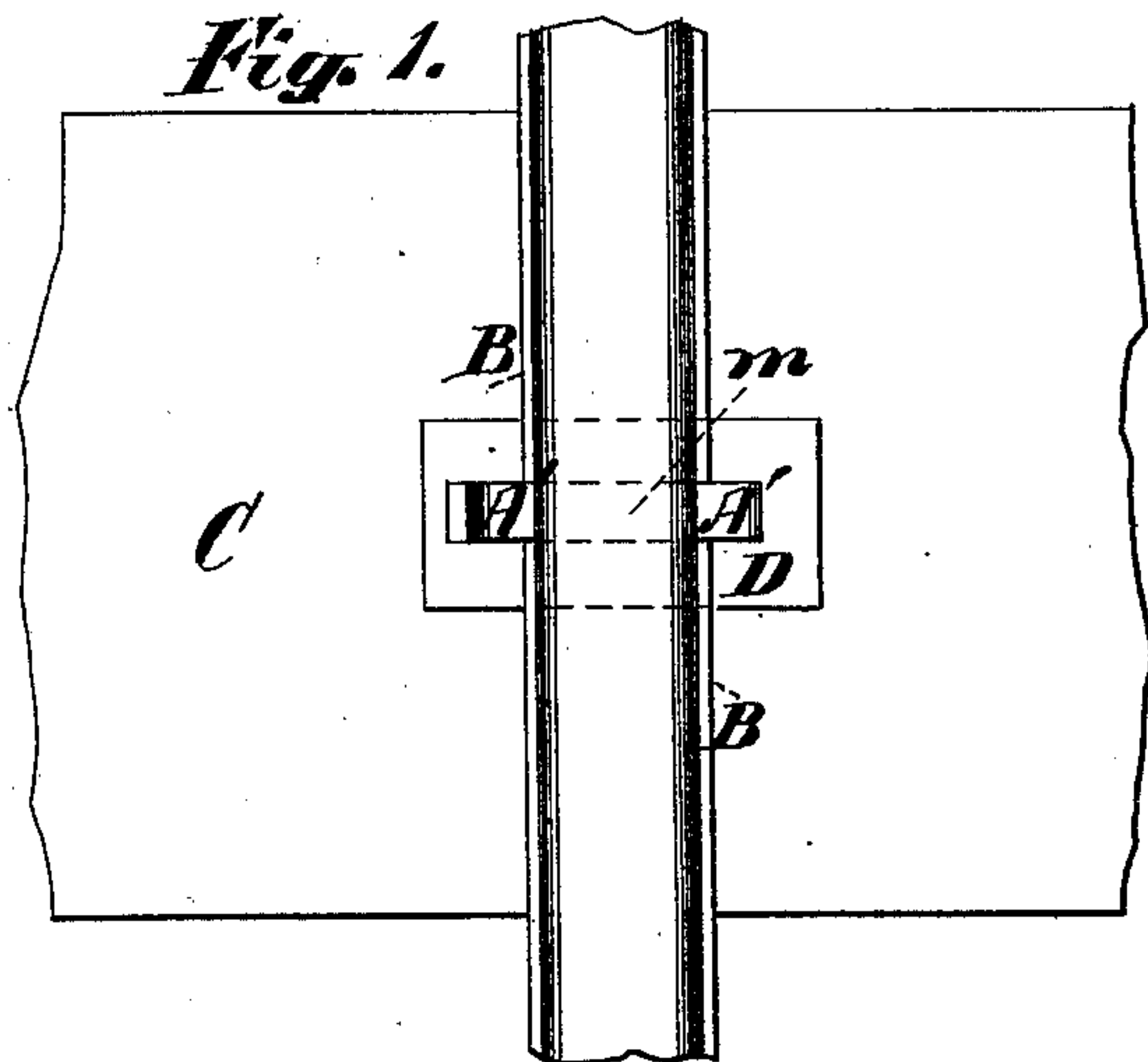


F. A. WILLIAMS.
Device for Securing Railroad Rails.

No. 235,320.

Patented Dec. 7, 1880.



WITNESSES.

H. A. Parker.
Chas. H. Doxat

INVENTOR.

Francis A. Williams
Per-James A. Whitney
Att'y.

UNITED STATES PATENT OFFICE.

FRANCIS A. WILLIAMS, OF NEW YORK, N. Y.

DEVICE FOR SECURING RAILROAD - RAILS.

SPECIFICATION forming part of Letters Patent No. 235,320, dated December 7, 1880.

Application filed December 2, 1879.

To all whom it may concern:

Be it known that I, FRANCIS A. WILLIAMS, of the city, county, and State of New York, have invented certain Improvements in Means of Securing Railway-Rails in Place, of which the following is a specification.

This invention is designed to insure the most solid and firm retention of railway-rails in place upon their sleepers or supporting-beams, as the case may be.

Said invention comprises a peculiarly-constructed spike, in the head of which are provided two lateral bearing-shoulders with a space between for the reception of the flange of the rail, the said spike being also constructed with a jog or shoulder on the side opposite the aforesaid lateral bearing-shoulder, whereby provision is made for the effective application of the tightening or holding wedge for crowding the spike closely against the flange of the rail when said spike is applied to use, whereby, when the spike is driven into position, the flange is held against either upward or downward movement.

The invention further comprises a novel combination of duplicate spikes, a bearing-plate, and a tightening-wedge with the sleeper or supporting-beam, whereby the most effective operation of the spike itself in holding the rail against displacement in any direction is provided for.

Figure 1 is a plan view, showing a rail confined to its sleeper by means of my said invention; and Fig. 2 is a vertical sectional view of the same. Fig. 3 comprises edge views of the spike and tightening-wedge, respectively.

A is the spike, the shank *a* of which may have parallel sides, and when desired may have its lower end provided with the barb *b*.

The head *A'* is constructed with the laterally-projecting shoulders *e f*, with the notch or recess *a'* between. The under surface of the uppermost shoulder, *e*, is of a shape to fit upon or correspond to the upper surface of the flange of the rail, which latter is shown at B in Figs. 1 and 2.

The upper surface of the lower shoulder, *f*,

is straight, to correspond with the under side of the flange of the rail.

Near the top of the spike, and at the side opposite that at which the shoulders *e f* are situated, is preferably a jog, *g*.

The sleeper or beam for supporting a rail is shown at C; and D is a plate, formed centrally in which is an oblong slot, *m*.

In applying the invention to use the plate D is placed upon the sleeper C, and preferably countersunk therein, as shown in Fig. 2.

Two of the spikes, hereinbefore explained, are used in securing the rail in place. One spike is first driven through the slot *m*, at one end thereof, and into the sleeper or beam, as shown in Fig. 2, until the upper surface of the lower shoulder, *f*, is brought flush with the top of the plate D. The rail is then placed across the sleeper and across the plate D, and one of its flanges is pushed into the notch or recess *a'* of the spike already driven, as just explained. When this is done a second spike is placed upon the opposite side of the rail, driven down through the opposite end of the slot *m* of the plate D and into the sleeper, with its inner side as close as possible against the edge of the flange, until the notch *a'* of said second spike is brought coincident with the said edge of said flange, which done, a wedge, F, is driven down adjacent behind said second spike, and within the adjacent end of the slot *m*, and is thereby caused to crowd the said second spike inward until the adjacent flange of the rail is brought within the recess *a'* of the said second spike, and until the top of the wedge itself is brought underneath the jog at the back of the spike, which said jog prevents the accidental displacement of the wedge. The flange of the rail is therefore firmly gripped within the oppositely-placed notches or recesses *a'* of the two oppositely-arranged spikes of the said flange, and consequently the rail is firmly and securely held against displacements either vertically or laterally.

What I claim as my invention is—

1. The combination, in a device for securing railroad-rails, of the holding-wedge F, with

the spike constructed with the jog or shoulder *g*, and the laterally-projecting shoulders *e f*, with the recess *a'* between said shoulders, substantially as and for the purpose herein set
5 forth.

2. A fastening for railroad-rails, composed of two spikes, each constructed with lateral shoulders *e f*, a slotted plate, D, a supporting-

sleeper, B, and a tightening-wedge, F, all substantially as and for the purpose herein set 10 forth.

FRANCIS A. WILLIAMS.

Witnesses:

CHAS. H. DOXAT,
H. F. PARKER.