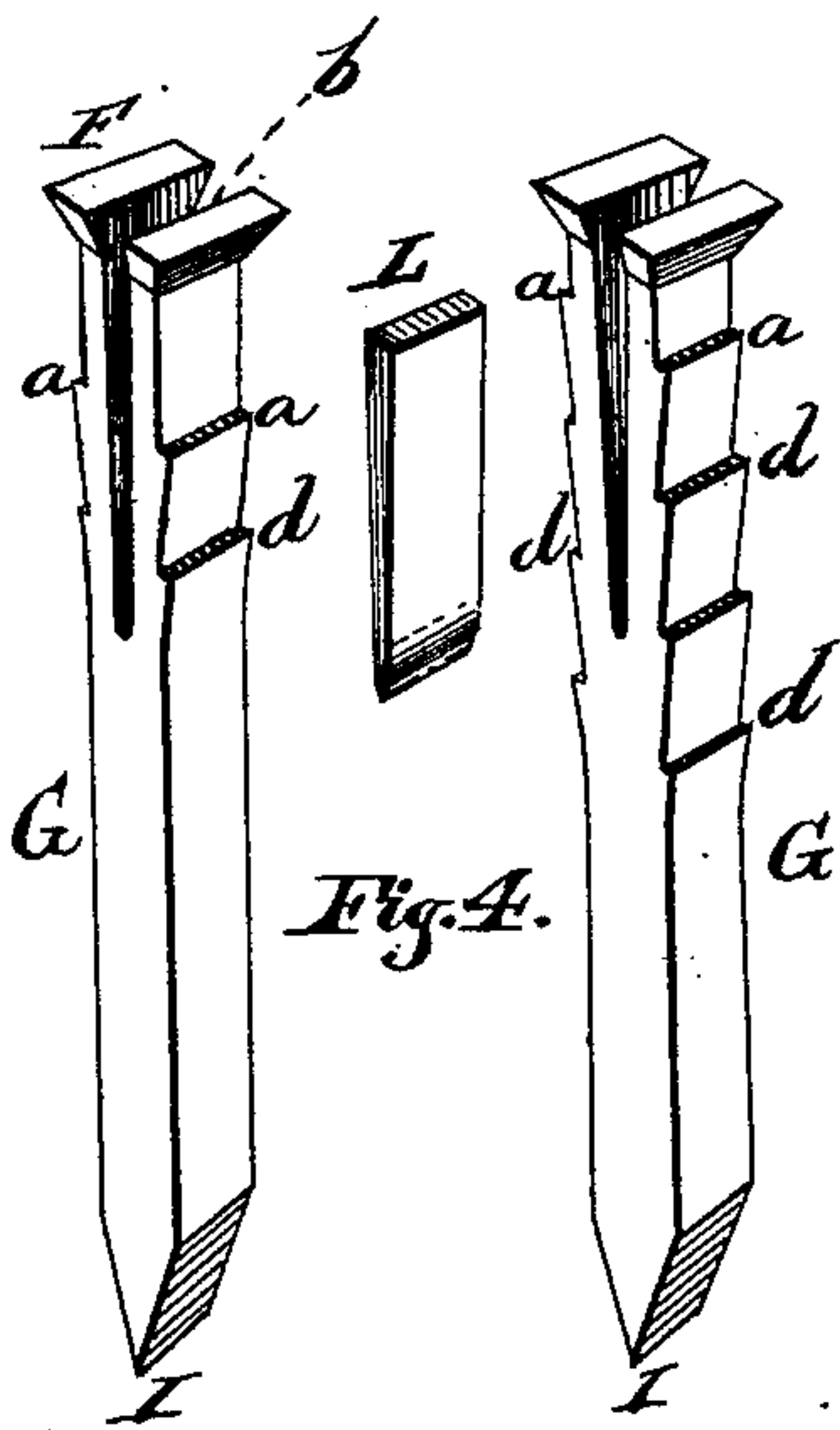
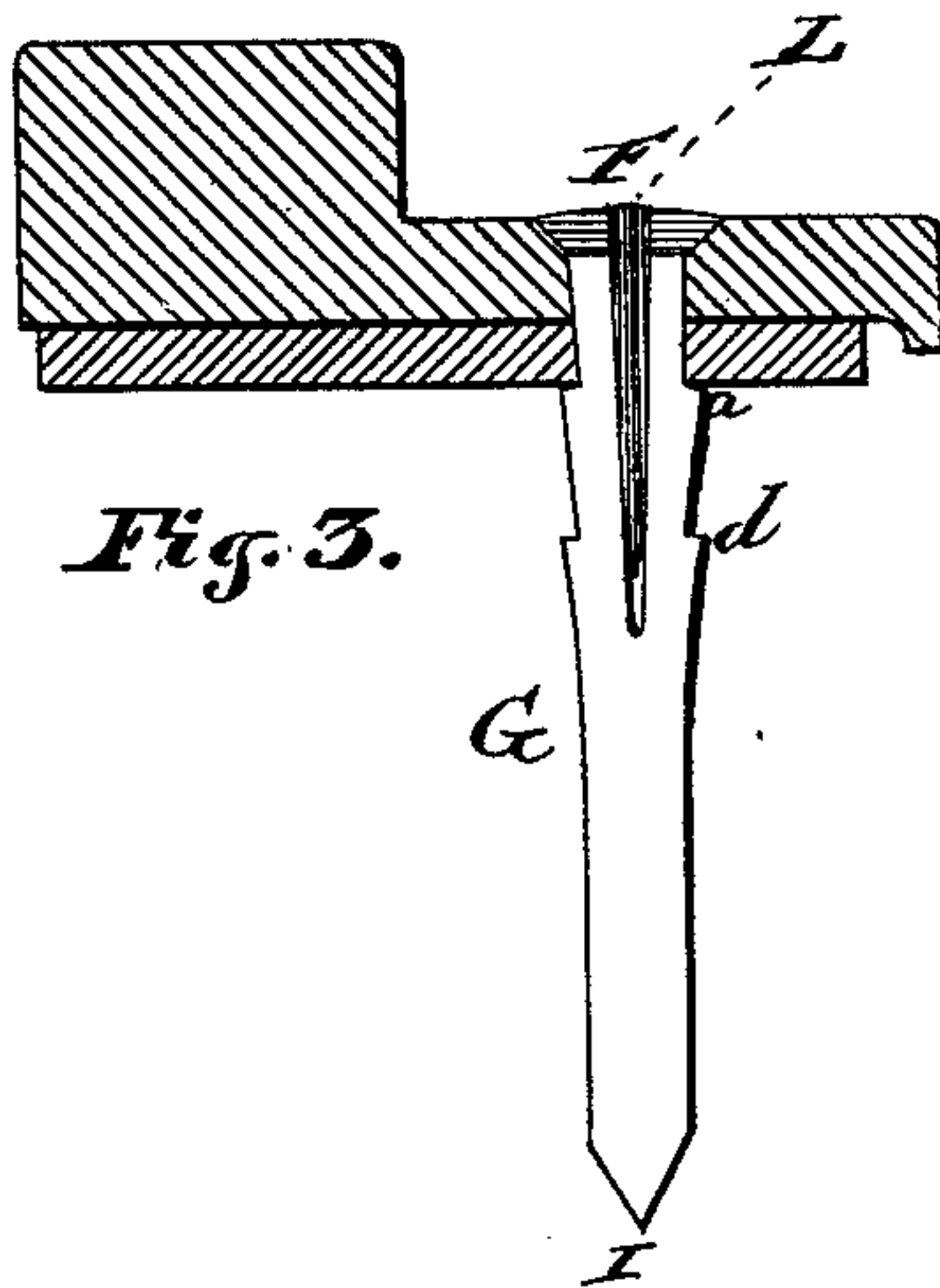
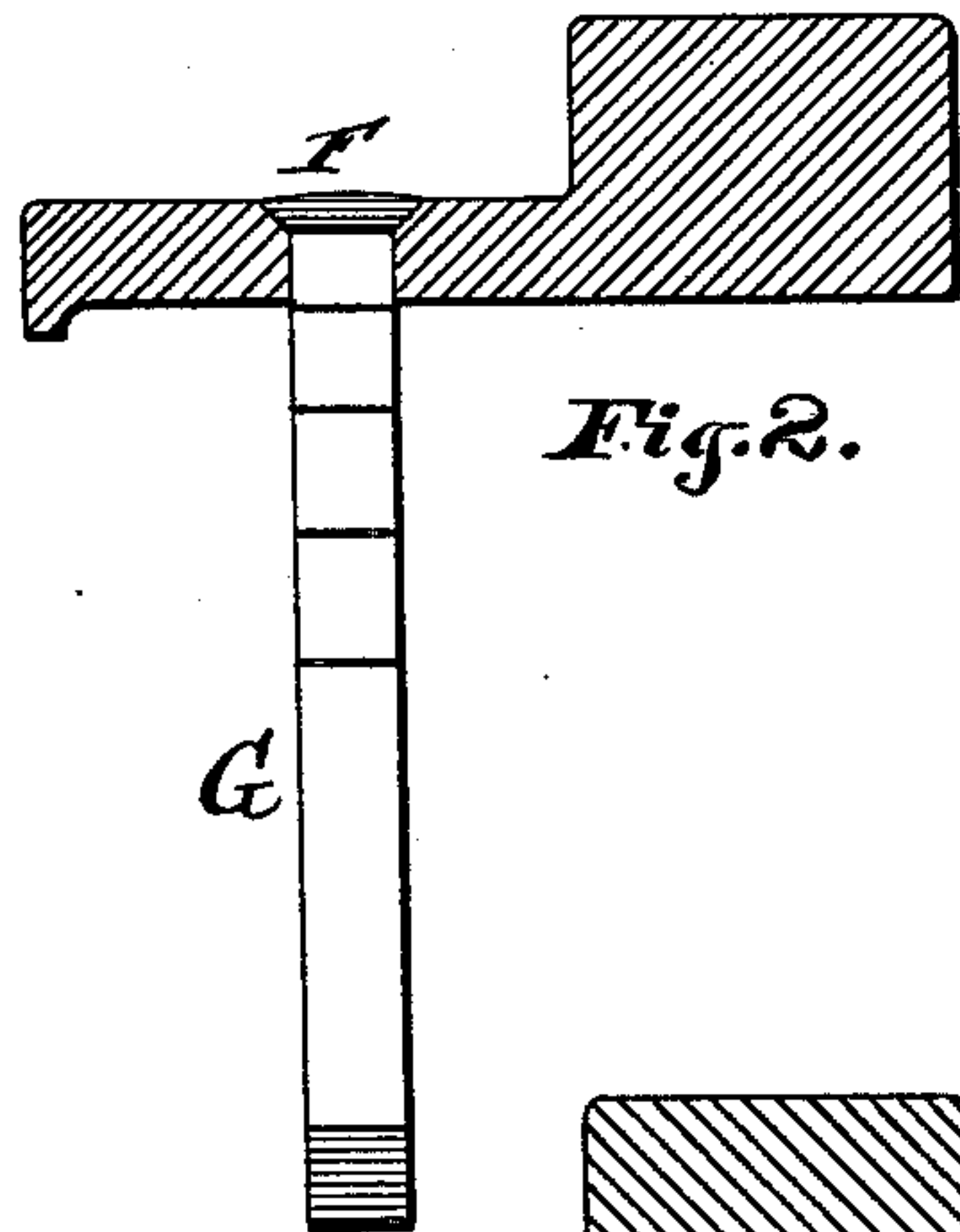
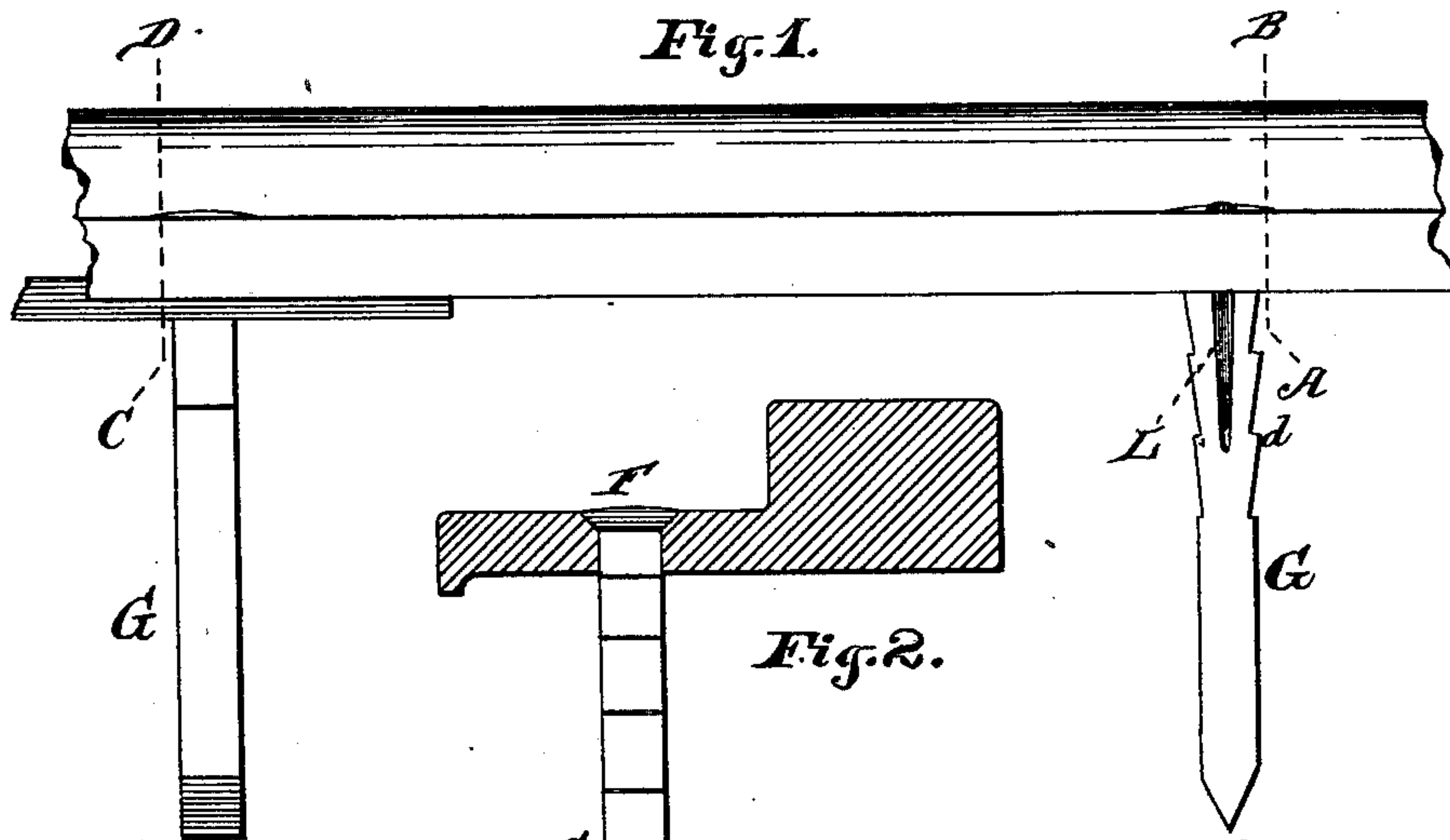


E. J. REMILLON.
Railroad-Spike.

No. 206,898.

Patented Aug. 13, 1878.



Witnesses:
Jas. J. Sheehy.
Robert Everett

Inventor:
Eugene J. Remillon.
J. H. Moore, Smith & Co.
per,
Attorneys.

UNITED STATES PATENT OFFICE.

EUGÈNE J. REMILLON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
JOHN H. SCHREINER, OF SAME PLACE.

IMPROVEMENT IN RAILROAD-SPIKES.

Specification forming part of Letters Patent No. **206,898**, dated August 13, 1878; application filed
January 12, 1878.

To all whom it may concern:

Be it known that I, EUGÈNE J. REMILLON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Railroad-Spikes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a portion of rail with the spikes in position. Fig. 2 is a vertical transverse section through rail on line A B, Fig. 1. Fig. 3 is a vertical transverse section through rail on line C D, Fig. 1. Fig. 4 is a perspective view of the spikes and the wedge-piece.

The nature of my invention consists in the construction of a spike or nail, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

F represents the head of the spike, and G is the body thereof. On two opposite sides of the spike, a suitable distance from the head, are formed two shoulders, *a a*.

b is a slot extending longitudinally through and from the head through a portion of the spike. I is the point of the spike. The portion of the body G between the point I and shoulders *a a* may be made plain or with auxiliary shoulders *d* on the sides.

L is a wedge to be driven into the slot *b* for expanding the spike. This spike is designed to remove an existing defect in the mode of fastening one, two, or more hard substances together, and to one of a more penetrable nature, and it is especially applicable to the fastening of railroad-rails.

The shoulders *a a* are parallel with the surface of and at such distance from the head as to admit of their being expanded beneath the inner surface of the substance to be held in place. The auxiliary shoulders, when the

spike is expanded by the wedge L, are forced into the wood or other penetrable substance into which the spike may be driven.

The variable pressure of cars and other rolling-stock tends to embed the rails in the comparatively soft wood of which the stringers are composed, while the spikes ordinarily used are not subjected to, or susceptible to, the same effects from such pressure, thus speedily creating a space between the rail and head of spike, allowing the rail to rebound after each depression, creating a necessity for constant repairs and resetting.

It can readily be seen that my improved spike obviates this difficulty. It can be driven into place as easily as the ordinary spike. The wedge L, being then driven into the slot *b*, expands the shoulders *a a* in such a manner that the rail or fish-plate rests directly upon them, so that the pressure upon the rail acts equally upon the spike, thus preventing any rebound or looseness. When fish-plates are used to connect the ends of rails this spike or nail will be peculiarly useful, as by its use the rails and fish-plates will always be held in the same relative position.

What I claim as new, and desire to secure by Letters Patent, is—

1. A spike or nail made in one piece, provided with a slot extending longitudinally from the surface of the head through a portion of its length, and capable of being expanded by means of a wedge, as herein set forth.

2. The spike or nail G F, provided with slot *b*, shoulders *a a*, and with or without the auxiliary shoulders *d d*, in combination with the wedge L, substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EUGÈNE J. REMILLON.

Witnesses:

EDWARD C. RYER,
EDWARD J. MCCREA.