

No. 897,612.

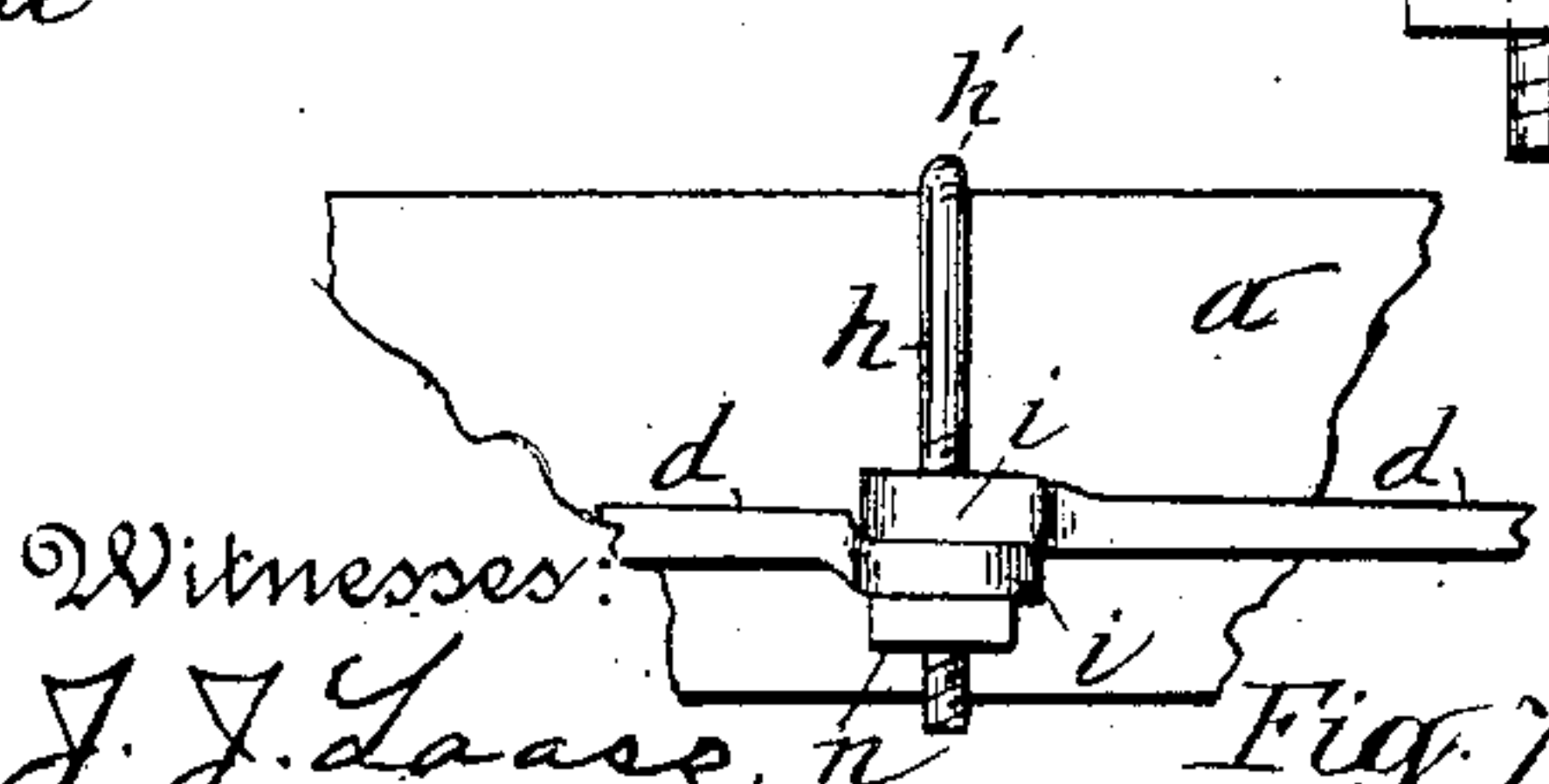
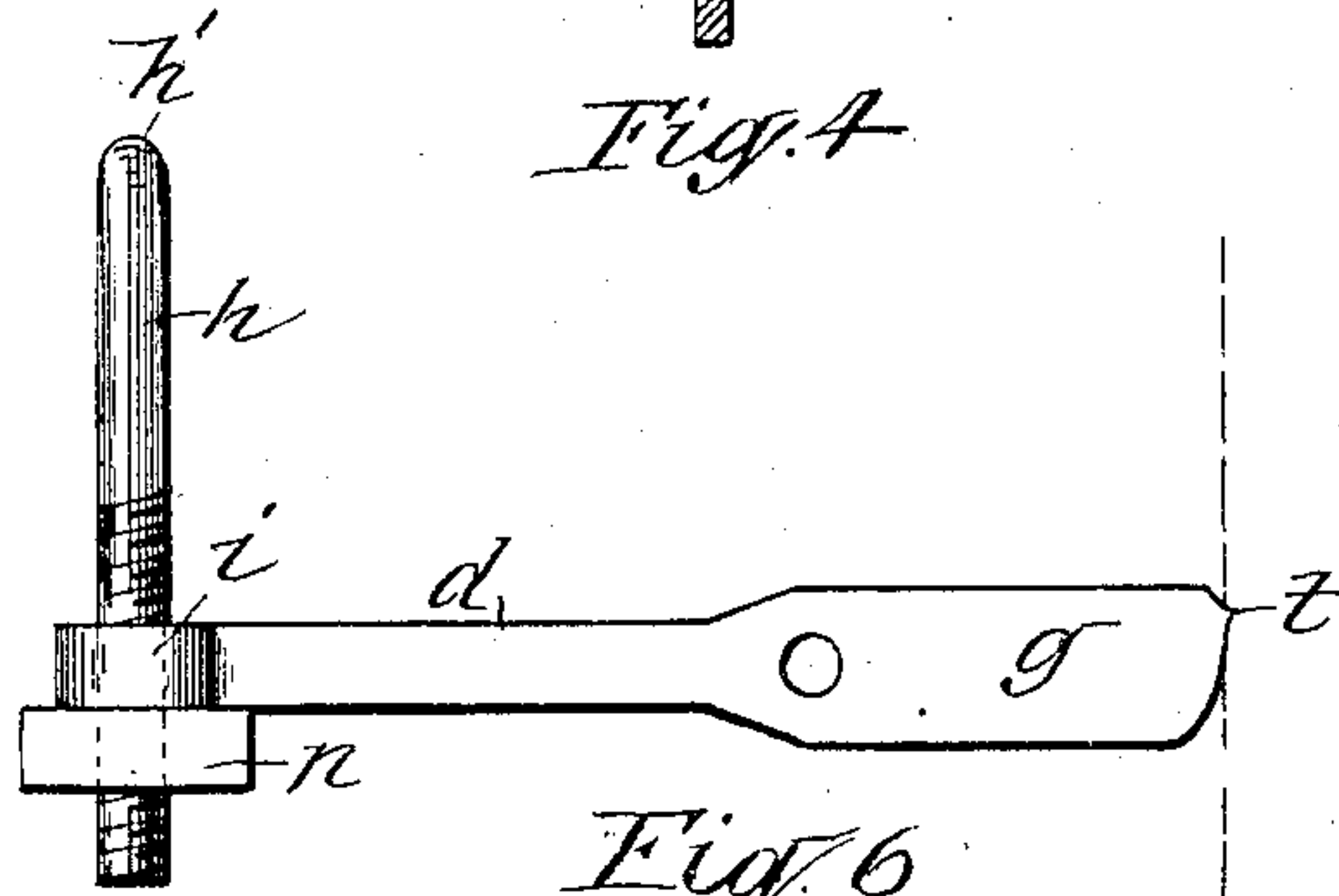
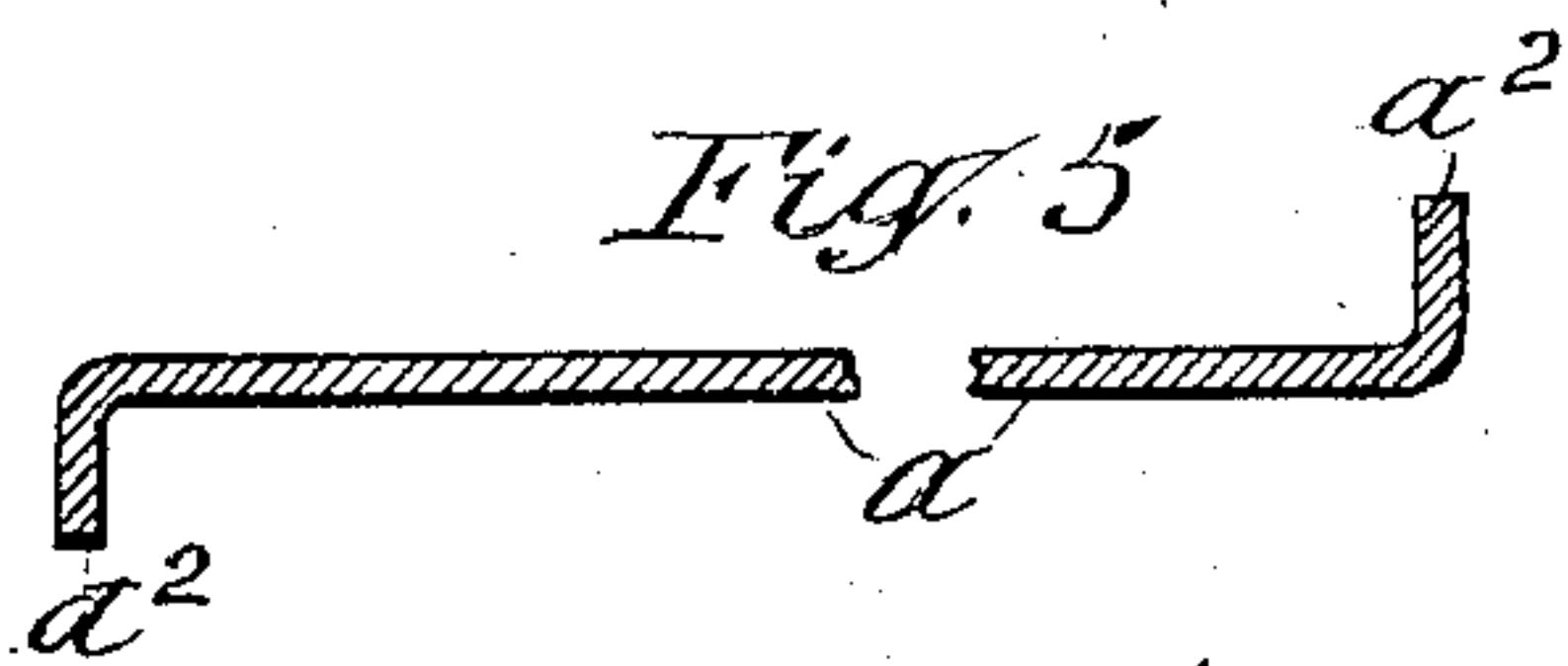
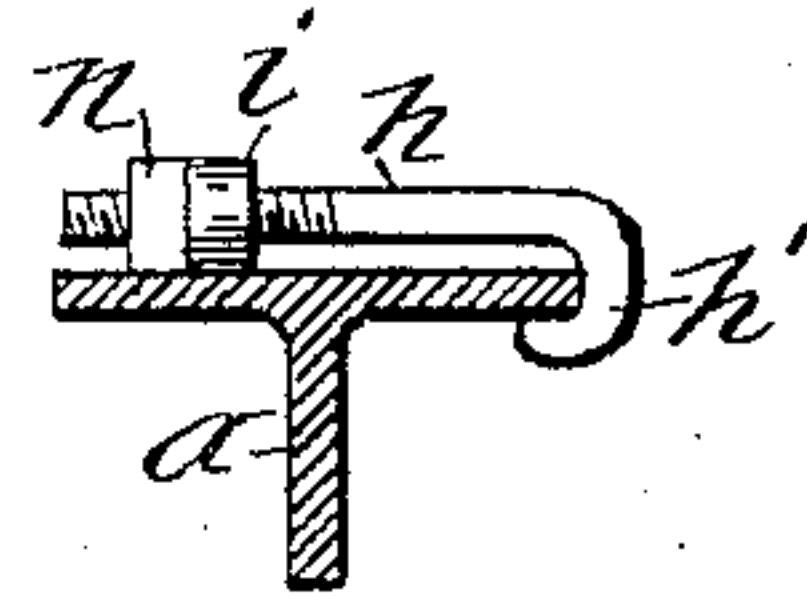
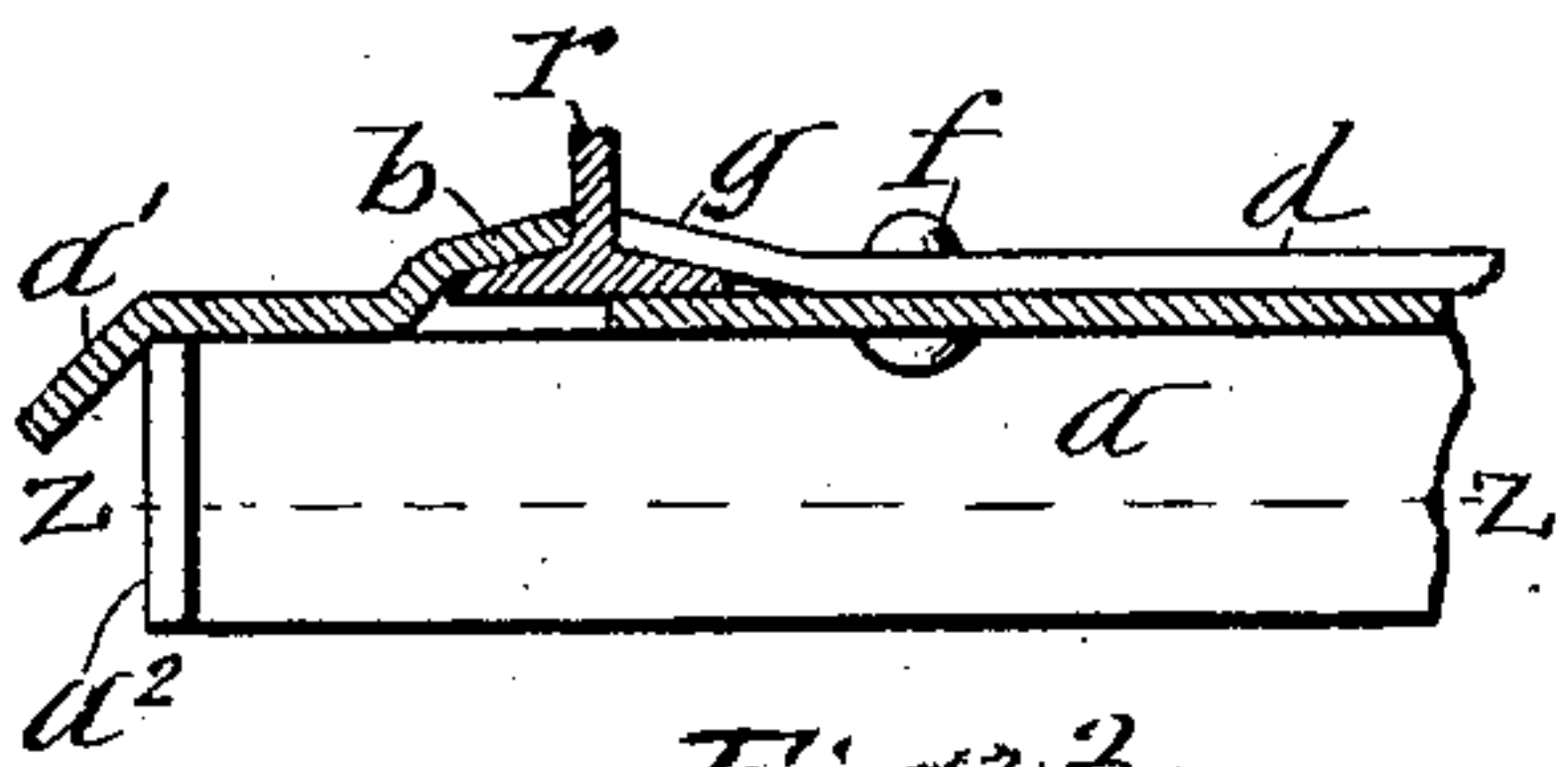
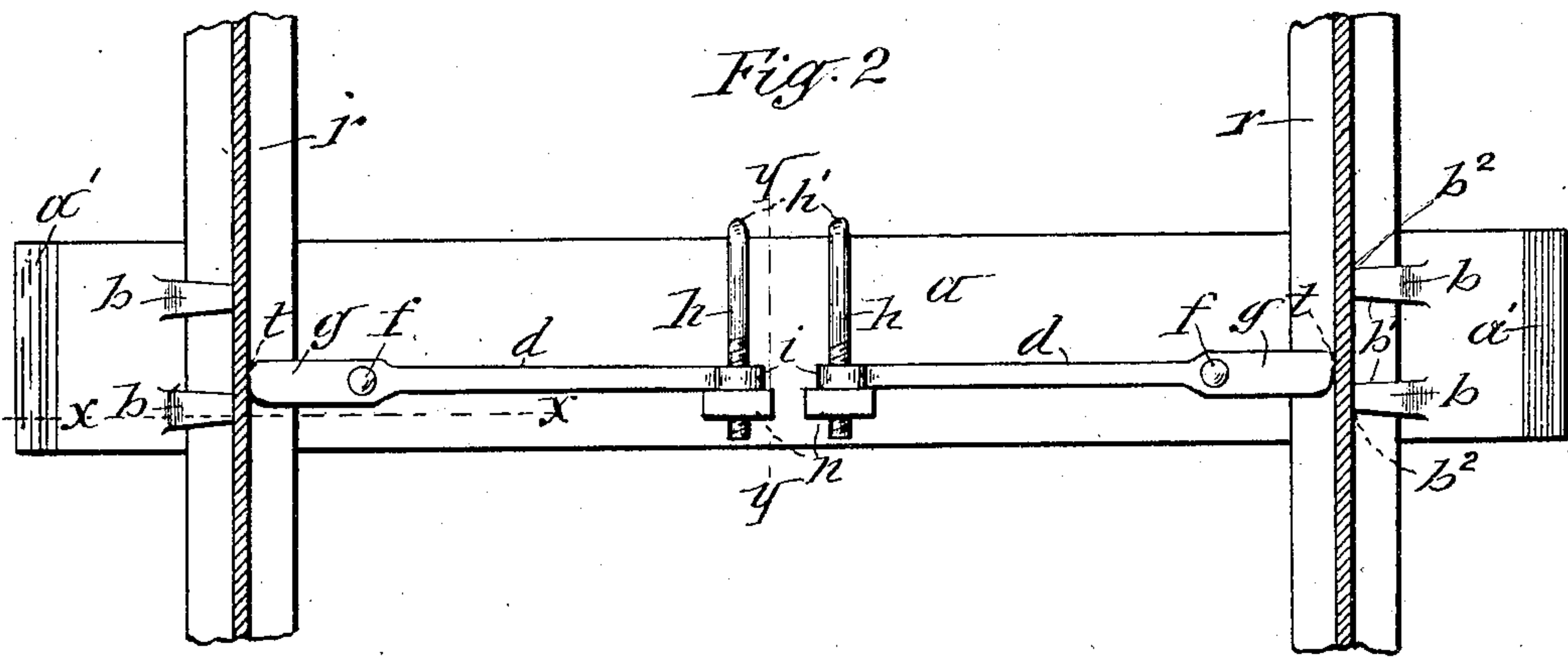
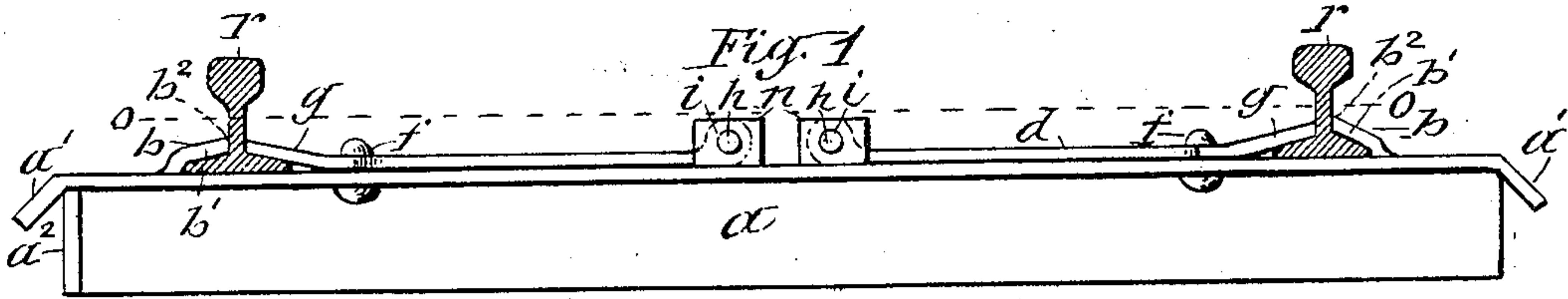
PATENTED SEPT. 1, 1908.

E. G. GAY, DEC'D.

J. M. GAY, EXECUTRIX.

RAILWAY CROSS TIE.

APPLICATION FILED JULY 6, 1907.



Witnesses:

J. J. Laas

El. Kaiser

Elisha G. Gay
Inventor,

By his Attorney E. Laas

UNITED STATES PATENT OFFICE.

JOSEPHINE M. GAY, OF ONEIDA, NEW YORK, EXECUTRIX OF ELISHA G. GAY, DECEASED.

RAILWAY CROSS-TIE.

No. 897,612.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed July 6, 1907. Serial No. 382,515.

To all whom it may concern:

Be it known that ELISHA G. GAY, a citizen of the United States, and resident of Oneida, in the county of Madison and State of New York, invented new and useful Improvements in Railway Cross-Ties, 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 railway cross-ties which are formed from steel bars of the desired shape in cross-section imparted to said bars in rolling mills in the usual and well known manner. And the invention consists in novel devices for securely anchoring the track-rails to the cross-tie as hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, in which

Figure 1 is a side view of a crosstie embodying the invention; Fig. 2 is a plan view of the same in the plane indicated by the dotted line —o—o— in Fig. 1; Fig. 3 is a longitudinal section on the line —X—X— in Fig. 2; Fig. 4 is a transverse section on the line —Y—Y—; Fig. 5 is a horizontal section on the line —Z—Z— in Fig. 3; Fig. 6 is an enlarged plan view of the rail gripping lever, and Fig. 7 shows a modification of the invention.

—a— denotes the crosstie which is preferably —T— shaped in cross section and has the end portions of its horizontal web or top member deflected downwardly as shown at —a¹— to shed the rain-water from the ends of the tie and guard against the entry of said water under the tie.

The end portions of the vertical web of the tie are bent laterally at right angles from opposite sides of said web as shown at —a²— to form transverse walls which are embedded in the ballast of the road bed and serve to prevent the crosstie from shifting endwise and also form lateral supports for both sides of the tie. The downwardly deflected end portions —a¹— bear on the tops of the walls —a²— and brace said walls to resist outward strain received from the ballast under the tie.

—b—b— represents jaws which project from the top of the tie —a— to grip the outer flanges or bases of the rails —r—r— mounted on the tie. These jaws are each formed integral with the tie by portions of the top member of the tie being slit lengthwise a distance equal to the length of the jaw and

forming the side edges —b¹—b¹— of said jaw, and a transverse slit extending from one end of one of the longitudinal slits to the corresponding end of the other of said slits, forms the end edge —b²— of the jaw, which is made to project from the top of the tie by the free end portion of the jaw being bent up from the plane of the top member of the tie.

To securely retain the rails —r—r— under the jaws —b—b— levers —d—d— are employed which are suitably pivoted to the top of the tie in proximity to the rails as shown at —f— preferably by means of rivets passing through the levers and top member of the tie and headed on their ends. Each of the levers —d— is formed with a jaw —g— which bears on top of the inner flange of the rail —r— and extends to the stem of the said rail and is formed with a tooth —t— which projects from the end of the jaw —g— and is caused to bite the stem of the rail by the movement of the lever —d— when swung at its inner end or long arm in one direction preferably toward parallelism with the crosstie. The joint action of the jaw —g— with the jaws —b—b— securely holds the rail —r— in its required position on the crosstie. The lever —d— is retained in its said rail-gripping position by means of a suitable anchor —h— connected to the end of the long arm of said lever and formed with a hook —h'— by which it engages the side of the tie or the edge of the top member of the crosstie as shown in Fig. 4 of the drawings. If desired to reduce the cost of the rail fastening devices a single anchor may be connected to both levers as shown in Fig. 7.

The anchor is preferably formed from a rod bent hookshaped at one end and having its opposite end screw-threaded and passing through an eye —i— in the lever —d— and provided with a nut —n— which allows the said anchor to be adjusted in its length as may be found necessary to securely hold the lever in position to cause its jaw —g— to effectually grip the rail —r—. It is preferred to elongate the nutsidewise so as to afford it a long bearing on the tie and thereby prevent the nut from accidentally turning and working loose on the anchor.

What is claimed as the invention is:—

1. The combination, with the cross-tie and rails mounted thereon, of rail-gripping levers pivoted to the tie and provided with eyes on their free ends, an anchor having a screw-

threaded end passing through said eyes, and a nut on said anchor formed with an elongated bearing engaging the tie.

2. A railway crosstie consisting of a steel
5 bar formed T-shaped in cross-section and having rail-gripping jaws formed integral with the tie and engaging the outer flanges of the rails, levers pivoted to the top of the tie in proximity to the rails and formed with
10 jaws engaging the inner flanges of the rails, and with teeth biting the stems of the rails,

and anchors connected to the ends of the long arms of the levers and formed with hooks engaging the side of the tie.

Syracuse, N. Y. July 6" 1908.

JOSEPHINE M. GAY,
Executrix of the last will and testament of
Elisha G. Gay, deceased.

In presence of—

JANETTE L. CLOW,
J. J. LAASS.