

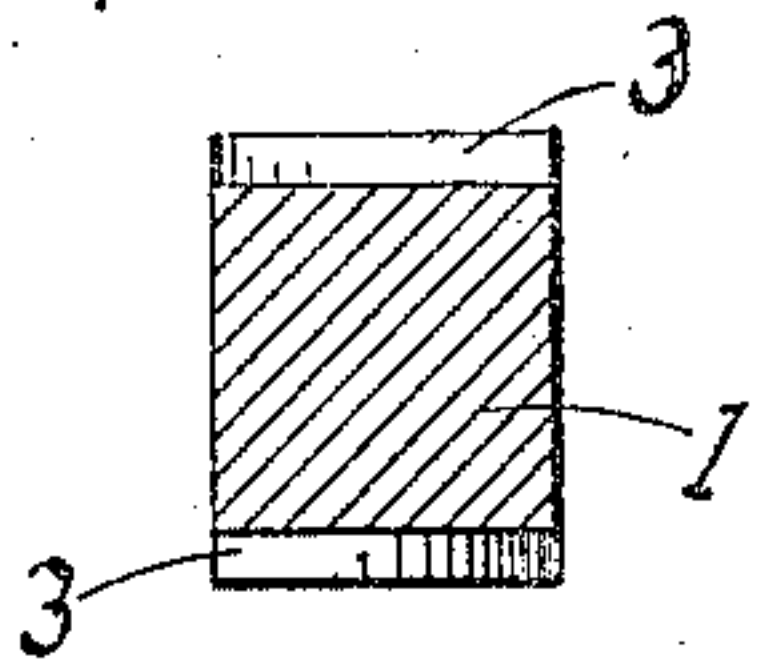
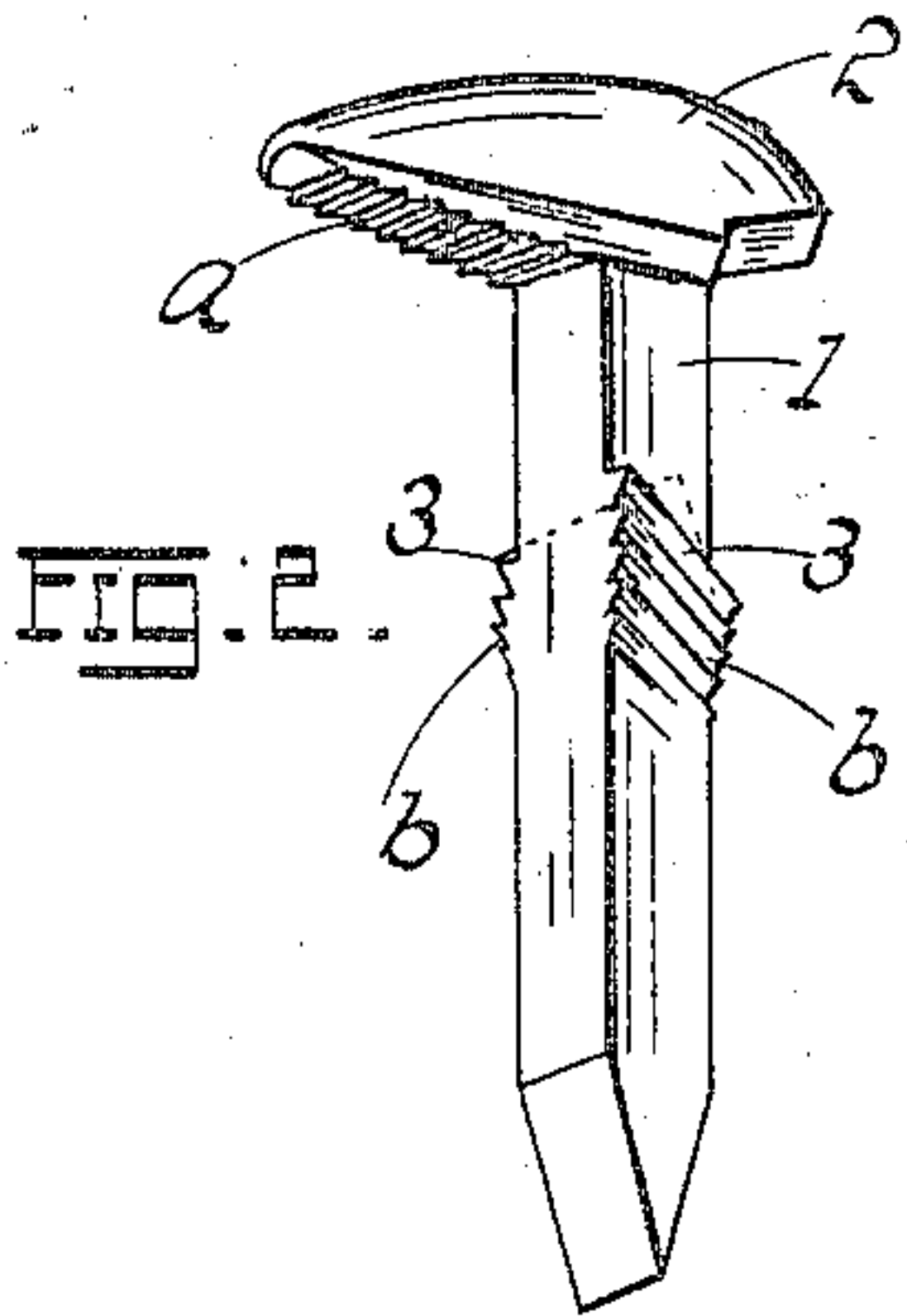
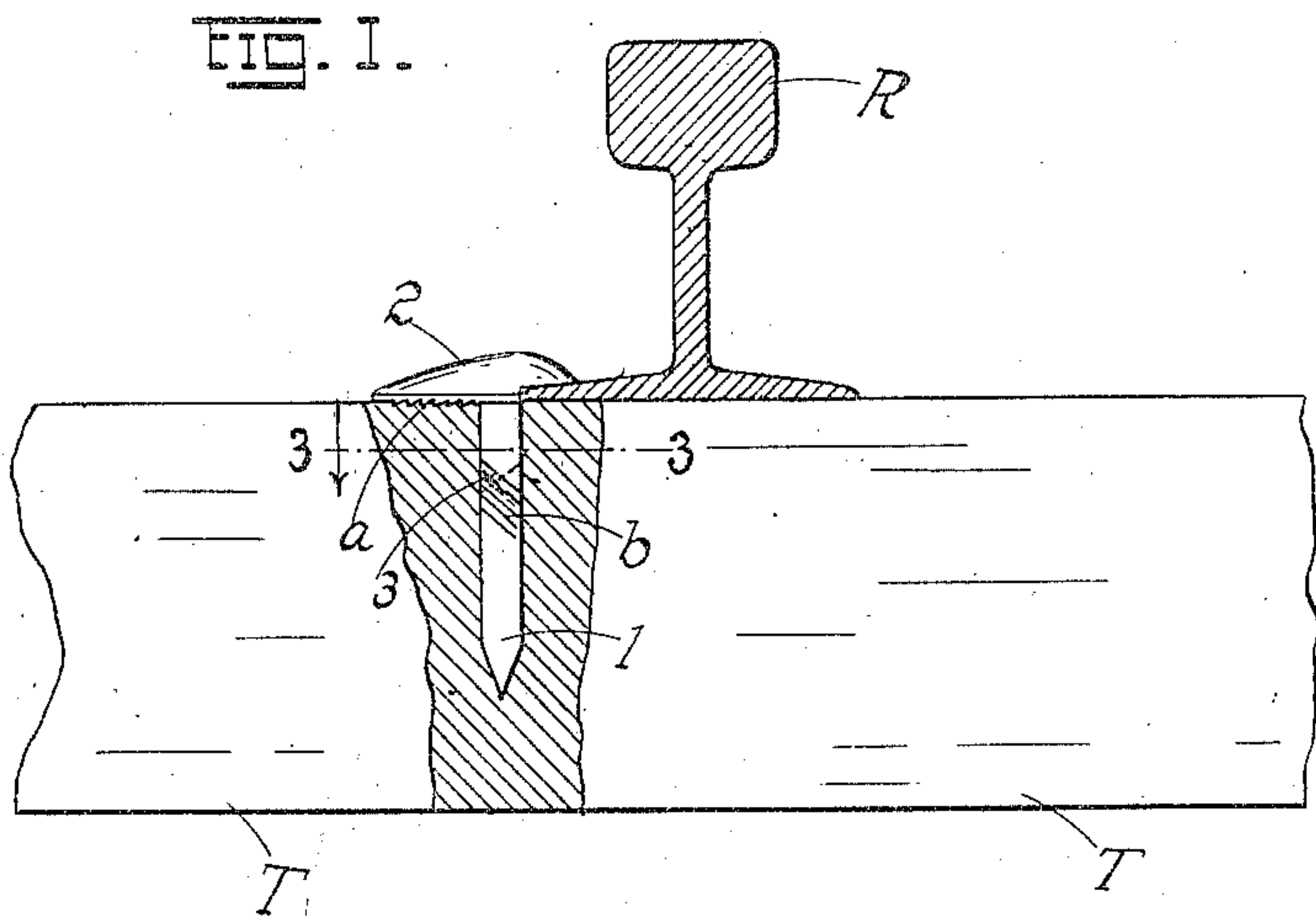
J. F. LIMBERG & E. KOELLING.

RAIL-SPIKE.

APPLICATION FILED OCT. 7, 1909.

963,027.

Patented June 28, 1910.



WITNESSES:

Harry A. Berne.

H. C. Killen

INVENTORS

John F. Limberg.
Edward Koelling.

BY *Am. Taren*
ATTORNEY.

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN F. LIMBERG AND EDWARD KOELLING, OF MATSON, MISSOURI.

RAIL-SPIKE.

963,027.

Specification of Letters Patent. Patented June 28, 1910.

Application filed October 7, 1909. Serial No. 521,601.

To all whom it may concern:

Be it known that we, JOHN F. LIMBERG and EDWARD KOELLING, citizens of the United States, residing at Matson, in the county of St. Charles and State of Missouri, have invented certain new and useful Improvements in Rail-Spikes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention has relation to improvements in rail-spikes; and it consists in the novel construction of spike more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is a cross-section of a rail showing the spike applied thereto and to the tie which supports the rail; Fig. 2 is a perspective of the spike looking against the bottom of the head; and Fig. 3 is an enlarged cross section of the spike on the line 3—3 of Fig. 1.

The object of our invention is to provide a spike specially adapted for use in ties of soft wood, and which, when once embedded therein will be held in the body of the tie without danger of wearing loose or becoming withdrawn under ordinary conditions of rail traffic.

The advantages of the invention will be best apparent from a detailed description thereof which is as follows:—

Referring to the drawings, T, represents a wooden tie and R, a rail supported thereon. The spike in the present instance comprises the stem or nail portion 1 proper preferably rectangular in cross-section and terminating in a bevel driving edge or end as usual. The upper end of the nail terminates in a head 2 overhanging two opposite faces of the nail, one over-hanging portion (the shorter) being adapted to engage the flange of the rail when the spike is driven into the

tie (Fig. 1) and the other overhanging portion (the longer one) embedding itself to the depth of its bottom transverse corrugations *a* into the surface of the tie.

Formed with the spike stem, and disposed on two opposite faces thereof (the faces extending from the sides of the head 2) are wedges 3, 3, whose bases incline toward the driving end of the spike, the inclinations being in opposite directions when viewed from one side of the spike. The faces of these wedges gradually merge into the faces of the spike, being at the same time provided with serrations or ridges *b* to insure an effective grip on the fiber of the wood. When the spike is driven home, the comparatively soft and yielding fibers of the wood close over the bases of the wedges 3, and fill the recesses between the ridges *b*. At the same time the serrations *a* embed themselves into the surface of the tie, thus insuring a maximum frictional engagement between the spike and the wood of the tie, and preventing the spike from working loose.

Having thus described our invention, what we claim is:

A rail-spike comprising a stem having a driving end and an upper terminal head overhanging two opposite faces of the stem, serrated wedges forming enlargements on the faces of the stem extending from the sides of the head, the bases of the respective wedges inclining in opposite directions toward the driving end, and the edges of the wedges merging with the faces of the stem on which they are formed.

In testimony whereof we affix our signatures, in presence of two witnesses.

JOHN F. LIMBERG.
EDWARD KOELLING.

Witnesses:

JOHN D. MEYER,
WILLIAM SCHAAF.