

998,781

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RAILWAY SPIKE.
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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

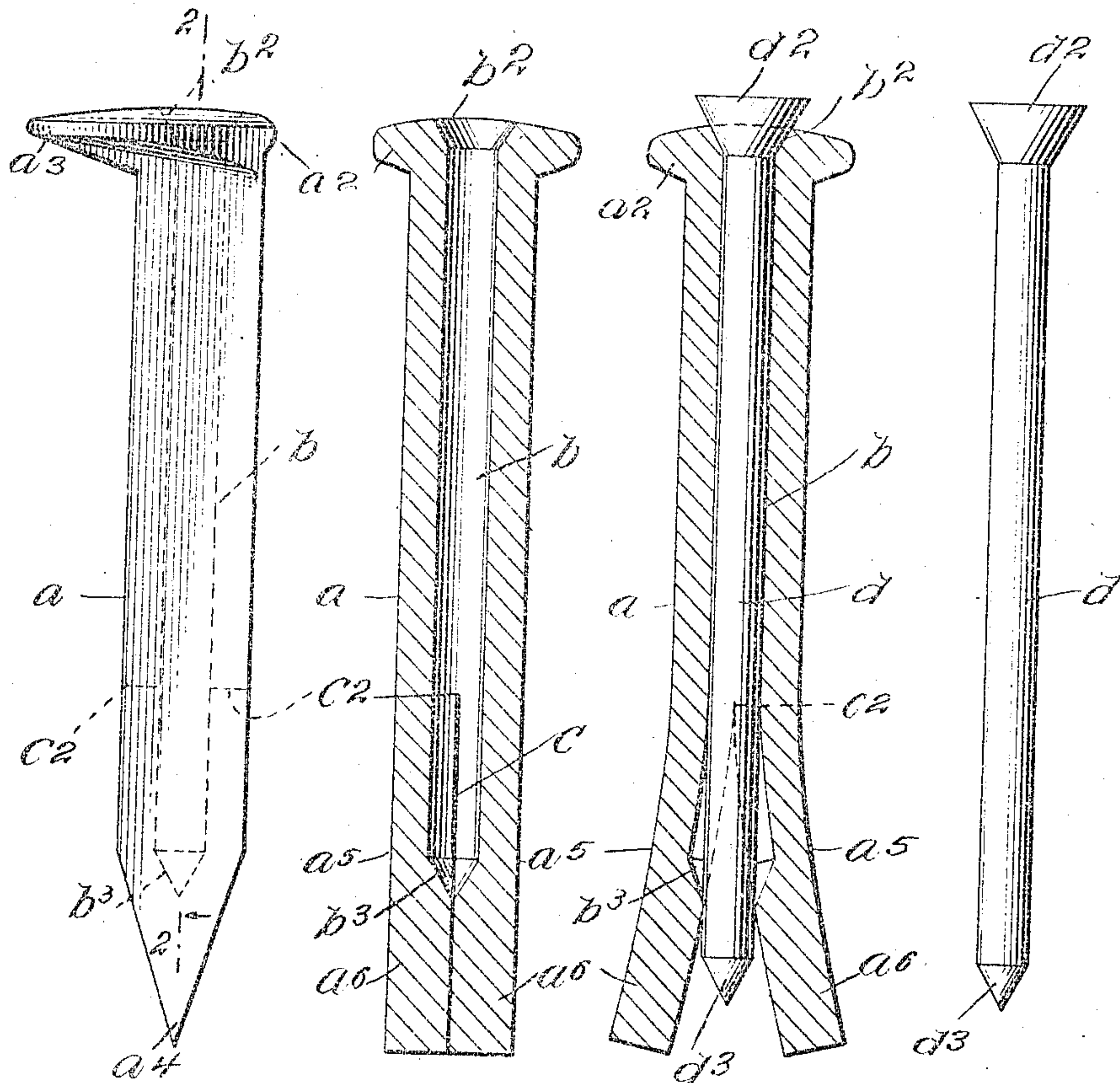
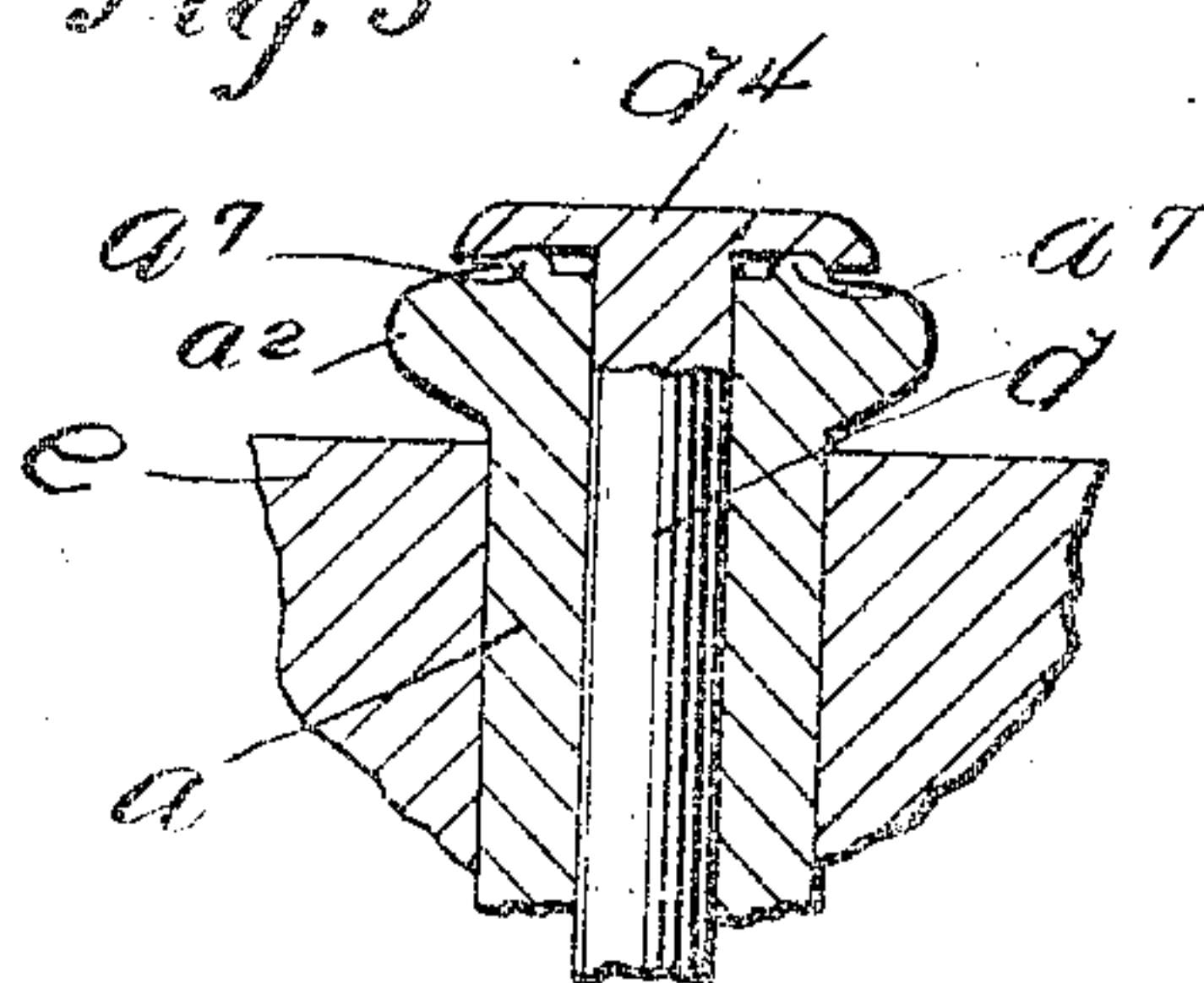


Fig. 5.



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RAILWAY-SPIKE.

998,781.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK P. ROBERT, a citizen of the United States, and residing at Amityville, Long Island, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in Railway-Spikes, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to spikes and particularly to railway spikes, and the object thereof is to provide an improved spike of this class which consists of two parts, a main spike part and a locking pin part, the main spike part being of the form and appearance of an ordinary spike of this class; a further object being to provide a spike of this class which when driven into a railway tie or other wood may be securely locked therein and cannot be withdrawn without the exercise of three or four times the amount of force necessary to withdraw an ordinary spike, and which will remain firmly in position until the tie or wood into which it is driven decays sufficiently to permit the spike to be easily withdrawn.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a side view of a railway spike made according to my invention but showing only the main part thereof; Fig. 2 a central longitudinal section on the line 2—2 of Fig. 1; Fig. 3 a view similar to Fig. 2 but showing the locking pin driven into position and the method of the operation of said pin in locking the spike in the tie or wood into which it is driven; Fig. 4 a side view of the locking pin detached; and, Fig. 5 a view similar to Fig. 2 but showing only the top or head end of the spike with the locking pin driven thereinto and showing also a part of the railway tie, or other piece of wood.

In the practice of my invention, I provide a railway spike a , which is of the same general form as other spikes of this class, said spike being provided with the usual head a^1 which is projected at the front side as shown

at a^2 so as to overlap the base flange of a railway rail; and the spike a is also made wedge-shaped in form at the bottom thereof, or at the end thereof opposite the head a^1 , and the edge a^3 at said end of the spike is at right angles to the projecting portion a^2 of the head a^1 so that when said spike is driven into wood it will cut the fiber transversely and will not split the wood.

The body of the spike a is provided with a longitudinal bore b which opens outwardly through the head a^1 , and the end of said bore which opens outwardly through said head is made flaring or enlarged as shown at b^2 , and the opposite end of said bore extends approximately to the point a^5 where the wedge-shaped portion of the said end of said spike begins or to within approximately one inch or less of the edge end of the spike, and the said end of said bore terminates in a conical recess b^3 .

The pointed or wedge-shaped end of the spike is split longitudinally thereof and transversely of the end edge thereof, and in the plane of the projecting portion a^2 of the head a^1 as shown at c , thus dividing said end of the spike into separate parts a^6 , and the split, or slit forming said split, extends upwardly to a predetermined point at c^2 above the lower termination at b^3 of the bore b , the length of said split from the lower end of said bore upwardly being greater than the distance from the lower end of said bore to the corresponding end or edge of the spike.

I also provide a locking pin d which is cylindrical in form, and the transverse diameter of which is approximately the same as the transverse diameter of the bore b , and the length of said pin is slightly greater than the distance between the bottom of the bore b and the outer or top surface of the head a^1 of the spike. The locking pin d is provided with a beveled head d^1 at one end, and the other end thereof is pointed or conical in form as shown at d^2 , and, in practice, after the spike has been driven into the tie, or other wood, a piece of which is shown at e in Fig. 5, the locking pin d is driven downwardly through the spike as shown in Fig. 3, and the lower end portions a^6 of the spike formed by the slit or slot c^2 are spread outwardly as shown in Fig. 3, and form keys by

which the spike is securely locked in the tie or other wood into which it is driven.

I have demonstrated by actual experiment that when a spike of this class is made in the manner shown and described and locked in a railway tie, or other piece of wood into which it is driven, it requires an exertion of from three to four times the amount of force to draw the spike as would be ordinarily necessary with spikes of this class as usually constructed, and the spike will remain in the wood until the latter decays sufficiently to permit of the easy withdrawal of the spike.

When the locking pin and spike are made in the manner shown in Figs. 1 to 4 inclusive, a part of the head d^2 of the locking pin projects above the spike when said pin is driven inwardly through said spike as shown in Fig. 3, and a suitable tool or implement may be applied to the head of the locking pin, and said locking pin may be withdrawn from the spike, if desired, after which the spike itself may be withdrawn by applying sufficient force thereto, to press the parts a^3 together, as said spike is withdrawn from the wood.

In Fig. 5, I have shown a modification in which the head a^2 of the spike is provided on the top surface with knobs or projections, or an annular bead a^7 , and the locking pin d is provided with a flat head d^4 which overlaps the knobs, projections or annular bead a^7 , and a suitable tool or instrument may be applied to said head to withdraw the locking pin, when desired.

Having fully described my invention,

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

A spike of the class described, one end portion of said spike being provided with a head, and the other end portion being wedge-shaped in form to produce a cutting edge as long as the transverse thickness of the spike, the body of the spike being also provided with a central longitudinal bore one end portion of which opens out through the head of the spike, and the other end portion of which extends to within approximately one inch from the cutting edge end thereof and terminates in a conical recess, the edge end of the spike being also split longitudinally and in a plane at right angles to said edge, and into and longitudinally of said bore to a predetermined distance from said conical recess greater than the distance from said recess to the edge of the spike, and a locking pin provided with a pointed or tapered end and adapted to be driven into said bore and to force the side portions at the edge end of the spike outwardly so as to lock said spike in the material into which it is driven, said pin being also provided at one end with a head which projects from the head of the spike when said pin is driven into said bore.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 19th day of November 1910.

FRANK P. KOBERT.

Witnesses:

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B. M. RYERSON.