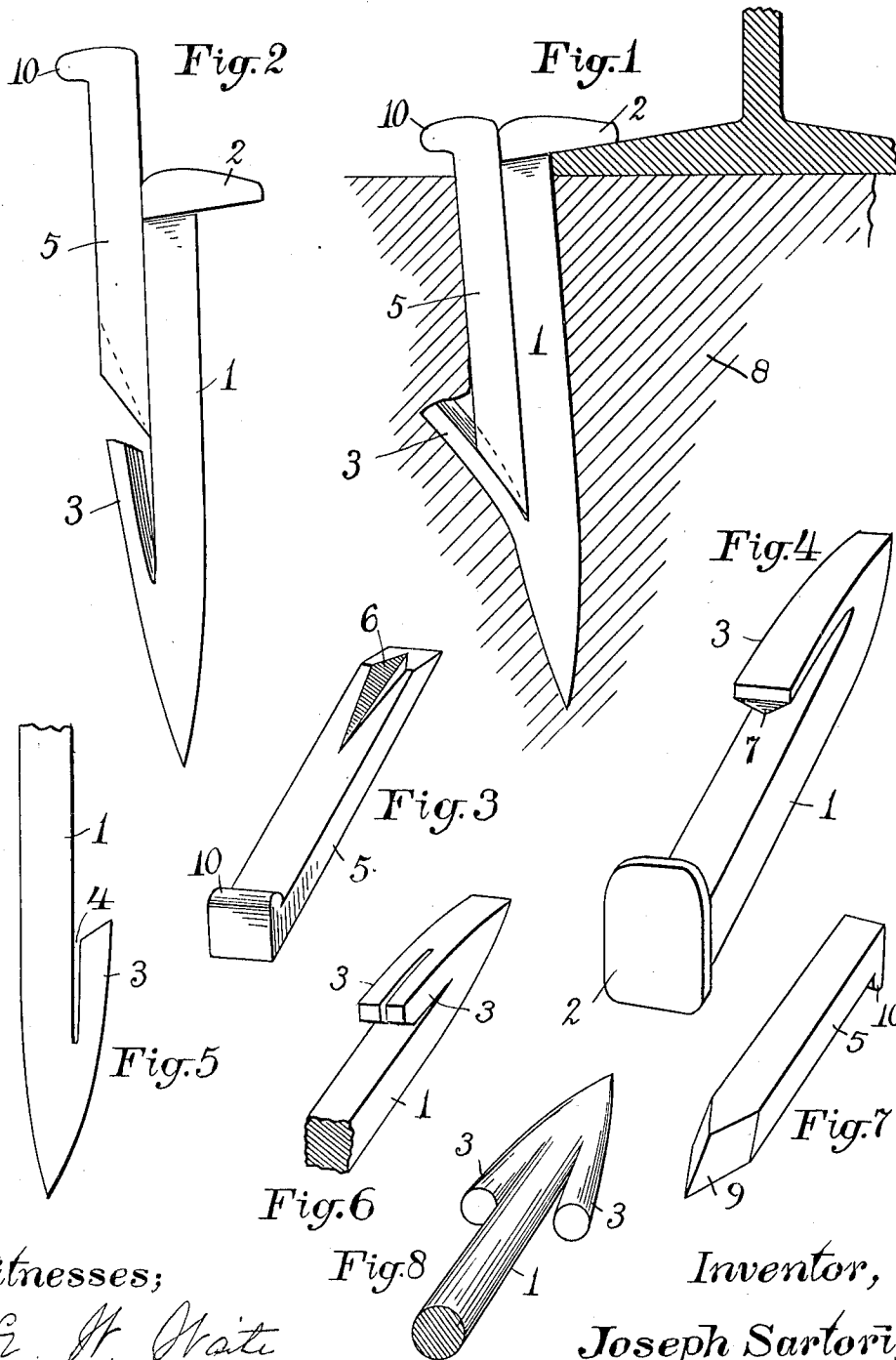


J. SARTORI.
SAFETY SPIKE.
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1,035,644.

Patented Aug. 13, 1912.



Witnesses;

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UNITED STATES PATENT OFFICE.

JOSEPH SARTORI, OF REVERE, MASSACHUSETTS.

SAFETY-SPIKE.

1,035,644.

Specification of Letters Patent.

Patented Aug. 13, 1912.

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To all whom it may concern:

Be it known that I, JOSEPH SARTORI, a citizen of the United States, residing at Revere, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Safety-Spikes, of which the following is a specification.

The object of this invention is the construction of improved and more absolute means for locking spikes and the like into the material into which they have been driven; the same being particularly designed for locking railroad spikes in the wooden ties into which they have been driven, for the purpose of preventing them from working loose.

To this end, my invention consists essentially in forming the spike with one or more flukes adapted to interfere but little with the insertion of the spike, but which flukes can be forced outward into engagement with the surrounding wood by a suitable tool or implement, and thereby lock the spike against any accidental or undesigned withdrawal.

Referring to the drawings forming part of this specification, Figure 1 is a sectional view of parts of a railroad tie and rail showing my improved spike, and the wedge by which its fluke has been forced into engagement with the wood. Fig. 2 is a side elevation of said spike and wedge, with said fluke in its normal condition. Fig. 3 is a perspective view of the wedge designed for the form of spike illustrated in Figs. 1, 2 and 4. Fig. 4 is a perspective view of said spike. Fig. 5 is a side elevation of the lower portion of a slightly modified form of the spike. Fig. 6 is a perspective view of the lower part of another form of the spike. Fig. 7 is a perspective view of the wedge designed to be used in connection with the construction of spike last referred to. Fig. 8 is a perspective view of the lower part of another modified form of the spike.

The spike is preferably of usual construction so far as the shank 1 and head 2 are concerned, but the improvement consists of the fluke 3 formed upon one or more sides of the shank. In the construction illustrated in Figs. 1, 2 and 4, the shank is given but a single fluke, the latter being closely set against the side of the shank and having its contacting surface rather bluntly

V-shaped, as shown in Fig. 4. This provides a V-groove between the fluke and shank at each lateral face, and renders the operation of forging the spikes much more practical than where the groove or slot 4 is a thin one substantially like a saw-kerf, as represented in Fig. 5.

The spike may be formed originally with the fluke 3 lying snugly against it as shown, or with the separating slot more widely separated, for in either case the effect is practically the same inasmuch as when the spike is driven into the wooden tie 8, the resistance of the latter will bend the fluke back tightly against the shank 1. To force the fluke out into engagement with the wood, the tool 5 is driven down behind the spike, as illustrated in Figs. 1 and 2, until the wedge-like end of the wedge enters the slot between the fluke and shank and forces the fluke outward. To insure the proper engagement of the point of the wedge with the fluke, said point is given a central groove 6, as shown in Fig. 3, which, by its contact with the V-part 7 of the fluke is properly guided down between the latter and the spike-shank. Without such guiding means, the wedge may slip out laterally without giving more than a partial bend to the fluke.

In the construction of the invention illustrated in Fig. 6, two flukes are formed upon the same side of the shank, and a pointed wedge such as shown in Fig. 7 employed for forcing the flukes both away from the shank and also away from each other into engagement with the wood. The wedge 5 here shown has its point 9 adapted both to enter between the said flukes and between the same and the spike. Instead of thus having two closely disposed flukes, the shank may be formed with two oppositely located flukes, as shown in Fig. 8, each of which may be engaged, one at a time, and forced outwardly by the wedge 5 shown in Fig. 3. This modification of the invention shows the shank and flukes as circular in cross section, but the rectangular form is the one most commonly used.

While the wedges 5 may be left to remain in the ties behind the spikes, I prefer to withdraw them and fill the space with wooden plugs, so that one or two of the wedges will serve for a considerable length of track. To this end, the wedge 5 is

formed with a head 10 by means of which it may be withdrawn after performing its task of shaping the flukes.

What I claim as my invention and for
5 which I desire Letters Patent is as follows,
to wit:—

A spike having a fluke projecting there-
from near its lower end and rising upward
toward the head of the spike, and a wedge
10 for forcing said fluke outward after the
spike has been driven into the material de-
signed therefor, said fluke being formed

with a longitudinal edge along its center,
and the said wedge being formed with a cen-
trally grooved wedged end for engaging 15
said longitudinal edge.

In testimony that I claim the foregoing
invention, I have hereunto set my hand this
1st day of February, 1911.

JOSEPH SARTORI.

Witnesses:

A. B. UPHAM,
JOSEPH W. VINAL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
