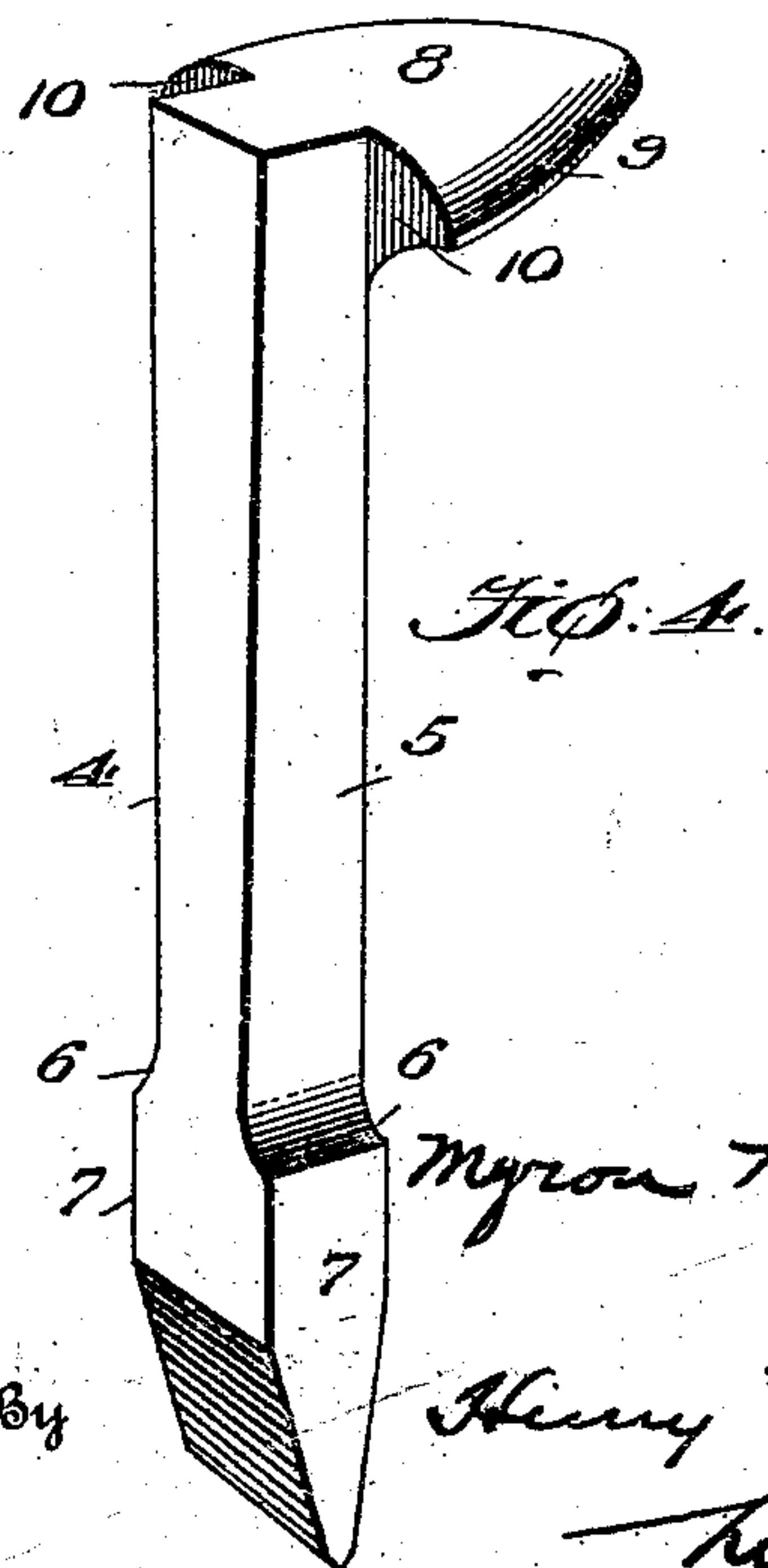
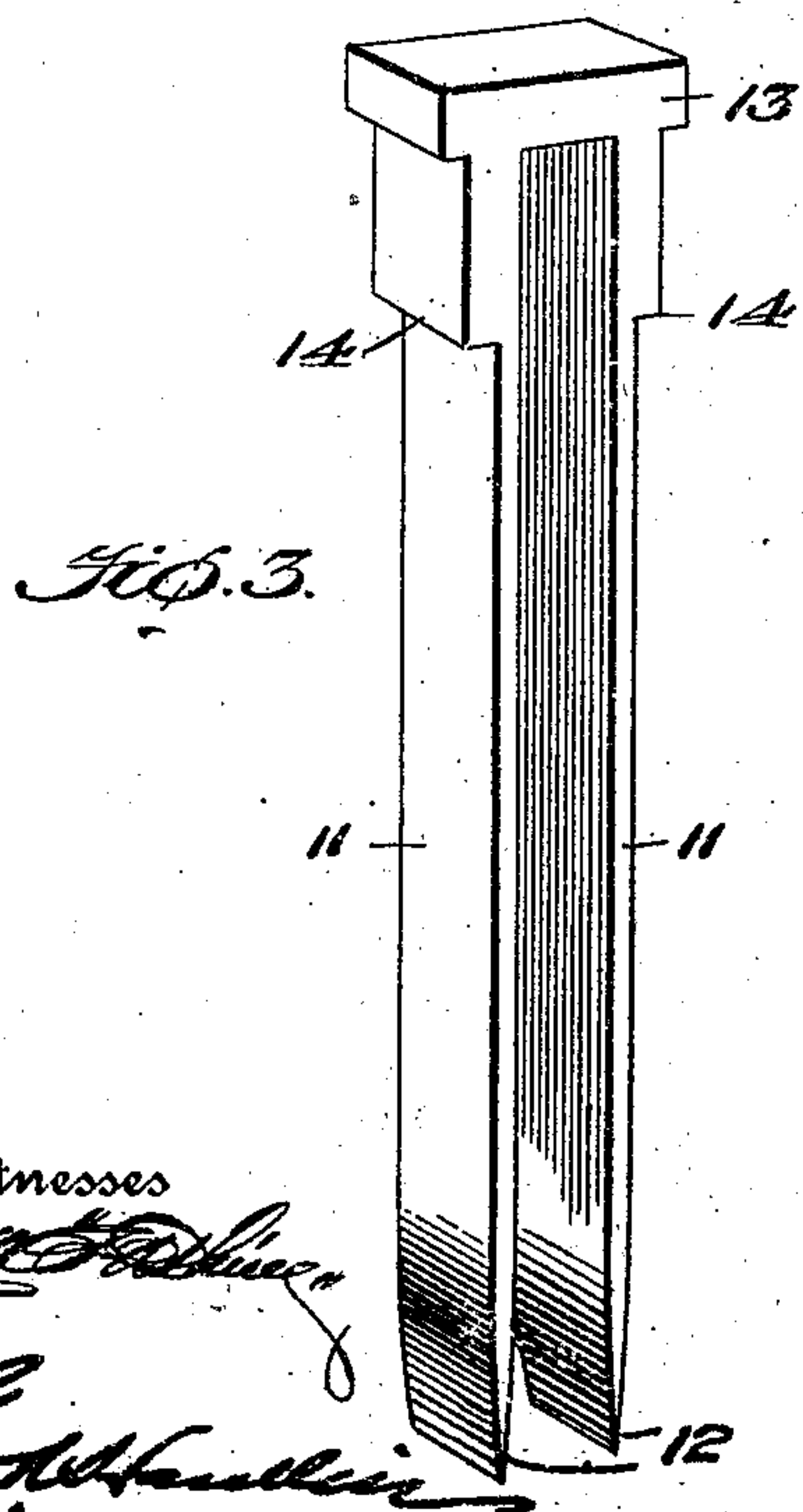
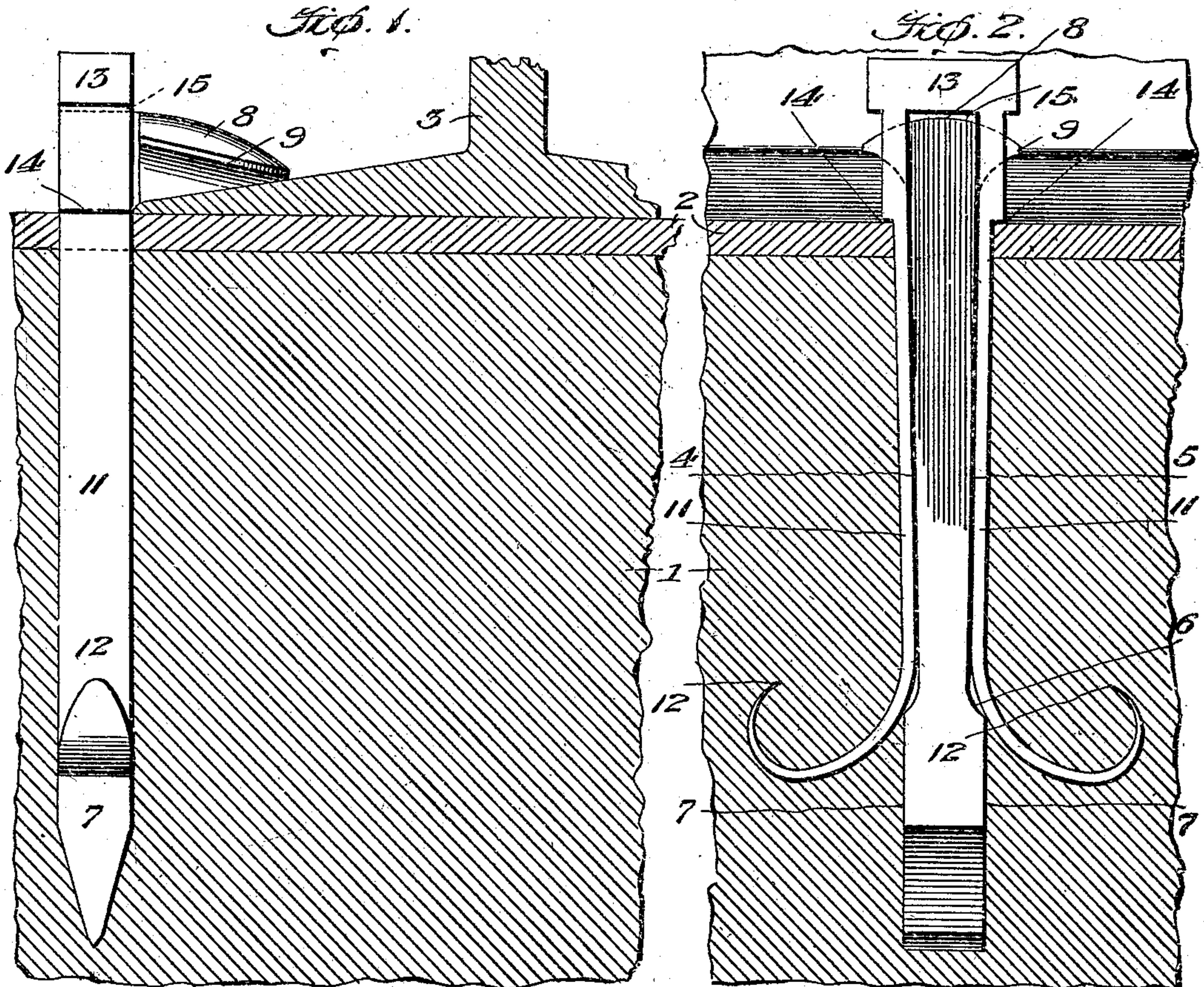


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RAIL SPIKE.

APPLICATION FILED SEPT. 24, 1909.

956,233.

Patented Apr. 26, 1910.



Witnesses
Wm. B. [Signature]
Chas. [Signature]

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UNITED STATES PATENT OFFICE.

MYRON TOPLIFF, OF WALLACE, IDAHO.

RAIL-SPIKE.

956,233.

Specification of Letters Patent.

Patented Apr. 26, 1910.

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To all whom it may concern:

Be it known that I, MYRON TOPLIFF, a citizen of the United States, residing at Wallace, county of Shoshone, and State of Idaho, have invented certain new and useful Improvements in Rail-Spikes, of which the following is a specification.

This invention relates to rail spikes.

The ordinary rail spike becomes loosened in time and unless carefully watched and the defect remedied, serious accidents result from spreading of the rails, particularly on curves where the lateral thrust of the train is very great but in an effort to remedy this defect, spikes have been heretofore constructed with retaining devices but such devices, whatever their effect as retainers, have not been capable of inexpensive manufacture, the spike has to be of such modified form to adapt it to the use of the retainer that its cost is too great or it can not be readily driven, and the retainer is not adapted for removal when it is desired to withdraw the spike for any purpose, this latter being a serious defect, because new rails are set from time to time, lined up, or otherwise require operations necessitating removal of the spike and retainer.

The present invention seeks to overcome the defects of rail spikes and retainers heretofore provided by the provision of a spike of simple and inexpensive construction, capable of being easily manufactured by spike forming machinery, and a novel retainer adapted for use in connection with the spike which is adapted to spread and enter the wood in which the spike is driven and to retain the spike therein but which is so constructed that the said retainer may be pried out when it is necessary to remove or reset the spike.

The invention is set forth fully hereinafter and its novel features are recited in the appended claims.

In the accompanying drawings:—Figure 1 is a cross-section of a rail and tie, showing the spike and retainer in use; Fig. 2, a view taken at right angles to Fig. 1; Fig. 3, a perspective detail of the retainer; and Fig. 4, a perspective detail of the spike.

An ordinary wooden rail tie is indicated at 1, which is preferably surmounted by a metal plate 2 on which the rail 3 rests. The plate 2 may be omitted, although it is preferably used as it forms a firm abutment for the retainer, as will presently appear.

The spike, which is shown in Fig. 4, is of the ordinary construction except that its opposite sides 4 and 5 are cut away, converge downwardly, and at their lower parts they are curved or inclined outwardly at 6 and merge into the flat parallel sides 7 at the lower part of the spike, while the said cut away sides 4 and 5 extend clear up to the outer or driving face 8 of the spike head 9, thereby providing abrupt shoulders 10.

The retainer which is shown in Fig. 3 in its original form, is composed of parallel bendable prongs 11 which are made wedge shape at their lower ends 12, said prongs having a driving head 13 and shoulders 14 at their upper part. The distance between the prongs 11 is such that when they are made to straddle the spike and the retainer is driven down, the points 12 will engage the inclined parts 6 and be spread into the wood.

The plate 2, when used, is provided with an opening of sufficient size to receive the spike and retainer. The rail having been set, the spike is driven down through the opening in plate 2 and into the tie 1 until the head 9 properly engages the rail base. Prongs of the retainer are then made to straddle the spike and the retainer is driven downwardly, sliding along the faces 4 and 5, the points 12 eventually striking the inclines 6 and being thereby spread so that subsequent blows on the head 13 will cause the prongs to enter the tie 1 in the manner shown in Fig. 2, the shoulders 14 eventually striking the plate 2, or the tie if the plate is not used. The distance between the shoulders and the under side of the head 13 is such that a space 15 is left above the upper end of the shank of the spike into which an implement may be inserted when it is desired to pry out the retainer, as when the spike is to be extracted for any purpose.

The spike is provided with no channels or bands or other projections, such as heretofore known to the art, which interfere with its being driven or tear the wood so that it will not properly hold and the faces 4 and 5 being closer together than the faces 7, 7, there are provided channels, as it were, in the tie into which the prongs 11 can be readily driven. The provision of the shoulders 14 as related to the under face of the head 13 is of importance because the opening 15 is thereby provided which enables the easy insertion of an extracting

tool and yet the retaining action of the retainer is in no wise detracted from.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. The combination with a rail spike, of a retainer therefor consisting of prongs having a connecting head, provided with a stop, the prongs being adapted to straddle the spike shank, said shank having means to spread the prongs when the retainer is driven, and the stop being positioned so that it will engage the tie and limit the driving of the retainer so that when the latter is completely driven the connecting head will be disposed above the tie.

2. The combination with a rail spike having its shank of reduced size from its upper end to points above the driving point thereof and provided with abrupt inclines where said reduced part joins the lower part

of the shank and also provided with a driving head which is entirely offset from the spike shank, of a retainer consisting of prongs and a connecting driving head and shoulders on said prongs, said prongs being adapted to straddle the reduced part of the spike shank and the extremities of the prongs to be engaged and spread by the inclined parts of the spike shank and the shoulders being adapted to limit the position of the retainer, when driven, so that the upper open part of said retainer will afford a place for the insertion of an extracting implement.

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

MYRON TOPLIFF.

Witnesses:

H. C. TOPPING,
S. L. GALBRAITH.