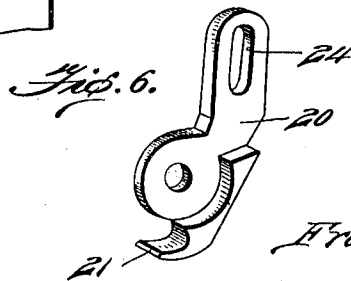
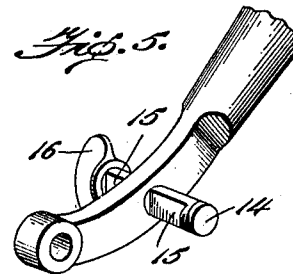
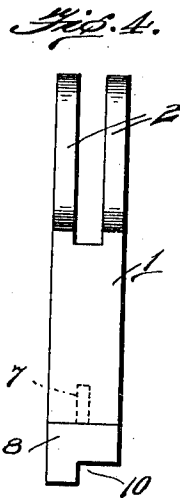
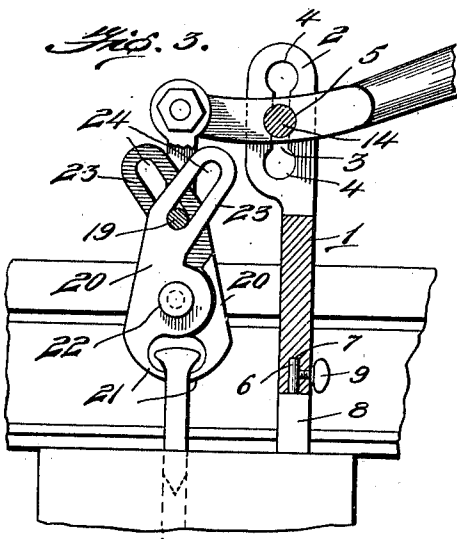
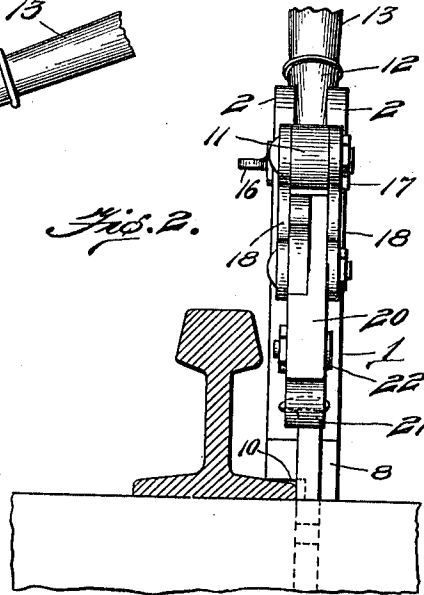
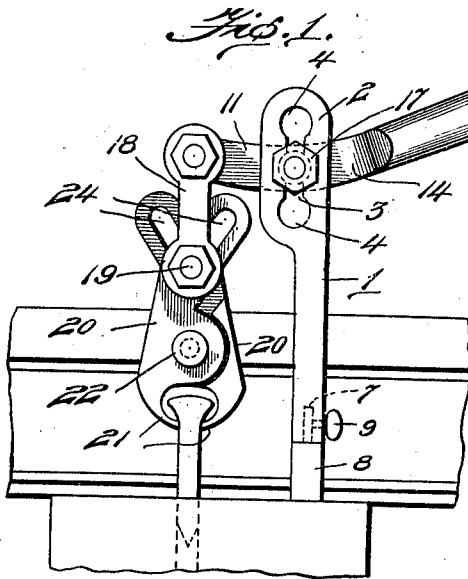


F. M. WILLIAMS.
SPIKE PULLER.
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978,684.

Patented Dec. 13, 1910.



Witnesses
W. M. Offutt
C. H. Grubauer

Inventor
Francis M. Williams

by *A. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

FRANCIS M. WILLIAMS, OF BROWNSVILLE, PENNSYLVANIA.

SPIKE-PULLER.

978,684.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed May 5, 1910. Serial No. 559,462.

To all whom it may concern:

Be it known that I, FRANCIS M. WILLIAMS, a citizen of the United States, residing at Browns-ville, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Spike-Pullers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in spike pullers.

One object of the invention is to provide a device of this character by means of which railroad and other forms of spikes may be readily drawn.

Another object is to provide a spike pulling device having means whereby the fulcrum point of the spike pulling lever may be adjusted to different heights, to facilitate the drawing of long spikes.

A further object is to provide a spike puller having an adjustable rail engaging foot on the lower end of the fulcrum standard whereby the device may be properly set on either side of the rail.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings: Figure 1 is a side view of my improved spike puller showing the same in operative position and in the act of drawing a spike; Fig. 2 is a front view of the device with the parts in the position shown in Fig. 1; Fig. 3 is a side view of the device showing the fulcrum standard in section to illustrate the construction of the fulcrum bolt for the spike pulling lever and its engagement with the bearing apertures in the standard and the construction of the adjustable foot of the standard; Fig. 4 is a front view of the fulcrum standard showing the rail engaging foot of the same in a reverse position to that shown in Fig. 2; Fig. 5 is a detail perspective view of the spike pulling lever showing the construction of the fulcrum bolt therein; Fig. 6 is a detail perspective view of one member of the spike pulling tongs.

Referring more particularly to the drawings 1 denotes the fulcrum standard of my

improved spike pulling device, said standard having a bifurcated upper end which is of greater width than the main portion of the standard as shown, thereby forming parallel fulcrum plates 2 in which are formed aligned slots 3. The upper and lower ends of the slots 3 are enlarged to form circular bearing openings 4 and midway between the ends of the slots are formed pairs of oppositely disposed segmental notches which form enlarged bearing openings 5. The enlarged portions of the slots or bearing openings 4 and 5 are provided to form adjustable bearings for the fulcrum bolt of the spike pulling lever hereinafter described.

In the lower end of the standard is formed a centrally disposed vertical socket 6 with which is engaged the shank 7 of a revolubly mounted foot piece 8 arranged on the lower end of the standard as shown. The shank 7 of the foot piece is secured in the socket 6 by a set screw 9. In the lower end of the foot piece is formed a right angular rail engaging notch 10 which is adapted to be engaged with the outer edges of the rail flange. By revolubly mounting the foot piece 8 in the lower end of the standard said foot piece may be turned upon loosening the set screw to bring the notch 10 opposite either edge of the standard thus facilitating the engagement thereof with the flange on either side of the rail.

Arranged between the bifurcated upper end of the standard is a spike pulling lever 11 having on one end a handle socket 12 adapted to receive the handle 13 which may be of any suitable length. Revolubly mounted in the standard engaging portion of the lever is a fulcrum bolt 14 said bolt being flattened or cut away on each side of the lever to form flat slot engaging portions 15 which, when in vertical position or in line with the slots, will permit the lever to be raised and lowered in the latter to the desired elevation. When opposite the bearing openings 4 the bolt is turned in the lever to bring the widest part of the bolt into said openings wherein it is supported to fulcrum the lever 11. The bolt is provided on one end with an operating head 16 and on its opposite end with a clamping nut 17 whereby the bolt may be secured after being adjusted to the desired bearing opening. By forming the fulcrum bolt in the manner described it will be readily seen that the same

may be adjusted to any of the bearing openings in the slots 3 thereby fulcruming the lever at the desired elevation.

Pivottally connected to the outer end of
5 the lever 11 is a pair of links 18 in the lower
ends of which is arranged the operating
bolt 19 which carries tongs 20. The tongs
consist of two spike gripping jaws or mem-
bers 21 the upper portions of which are cut
10 away or recessed to form overlapping bear-
ing lugs which are pivottally connected to-
gether by a pivot bolt 22. On the upper
ends of the jaws are formed inwardly pro-
jecting handle portions 23 which overlap
15 and cross each other and are provided with
slots 24 through which is inserted the oper-
ating bolt 19 in the lower ends of the links
18 whereby when said bolt is drawn up-
wardly by the links the lower spike engag-
20 ing jaws of the tongs are forced into oper-
ative engagement with the head of a spike
thereby firmly gripping the same so that
when further pressure is applied to the lever
the spike will be extracted.
25 From the foregoing description taken in
connection with the accompanying draw-
ings, the construction and operation of the
invention will be readily understood with-
out requiring a more extended explanation.
30 Various changes in the form, proportion

and the minor details of construction may
be resorted to without departing from the
principle or sacrificing any of the advan-
tages of this invention as defined in the ap-
ended claim.

Having thus described my invention what
I claim is:

In a spike puller, a fulcrum standard bi-
furcated at its upper end to form parallel
bearing plates having formed therein 40
alined slots and bearing openings in the
walls of the slots, a fulcrum bolt having
flattened slot engaging portions intermedi-
ate its ends whereby the bolt may be ad-
justed in said slots and turned into operative 45
engagement with the bearing openings
formed therein, a turning knob on one end
of said bolt, a securing nut on the opposite
end of the bolt, a spike pulling lever pivot-
ally mounted on said fulcrum bolt, and a 50
pair of spike pulling tongs connected with
the lever.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

FRANCIS M. WILLIAMS.

Witnesses:

HARRY A. CARTOM,
JOHN S. GRIFFITHS.