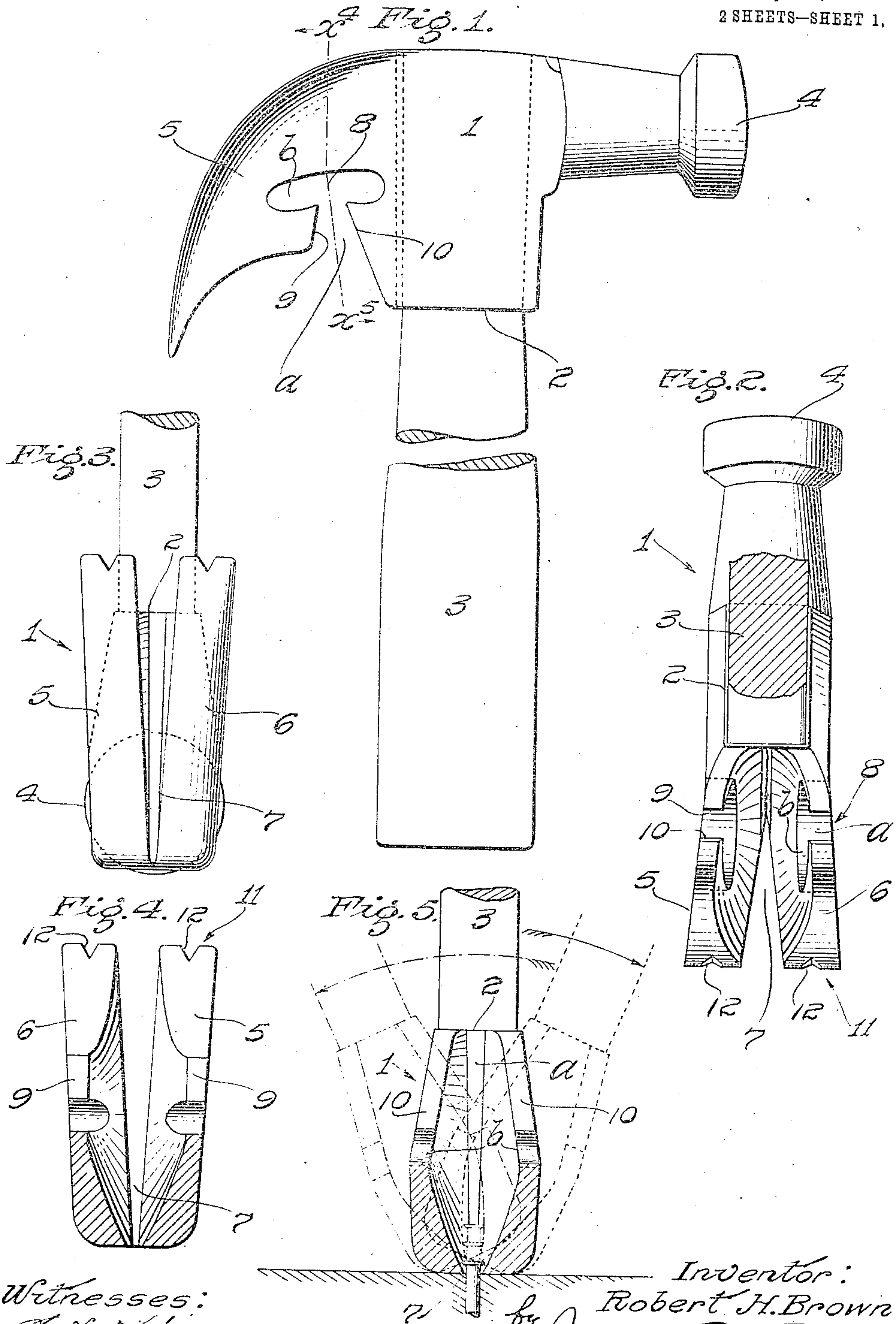


R. H. BROWN.  
LINEMAN'S COMBINATION TOOL.  
APPLICATION FILED MAY 19, 1908.

921,792.

Patented May 18, 1909.

2 SHEETS—SHEET 1.



Witnesses:  
H. N. Kiskiey  
M. Beulah Townsend.

Inventor:  
Robert H. Brown  
by James R. Townsend  
his atty.

921,792.

Fig. 6.

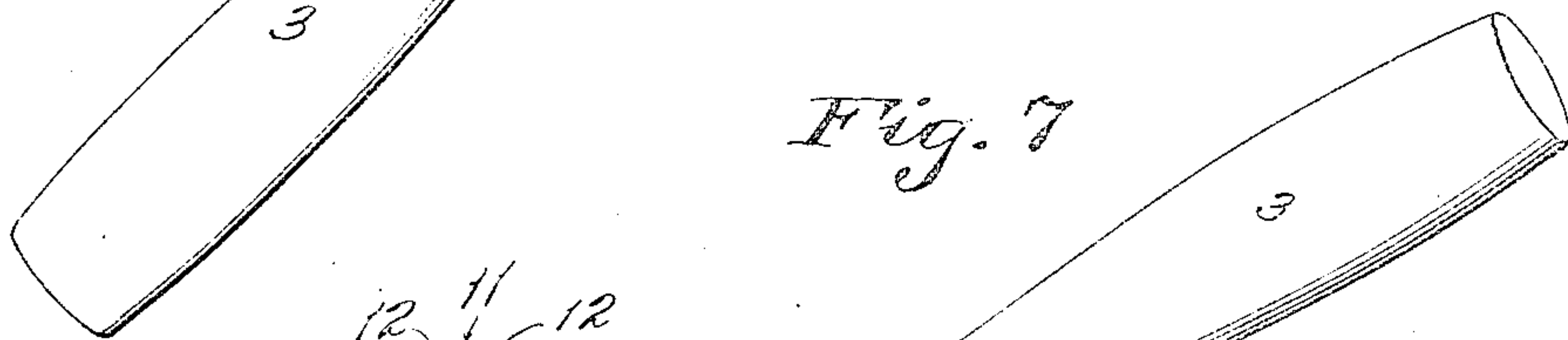


Fig. 7

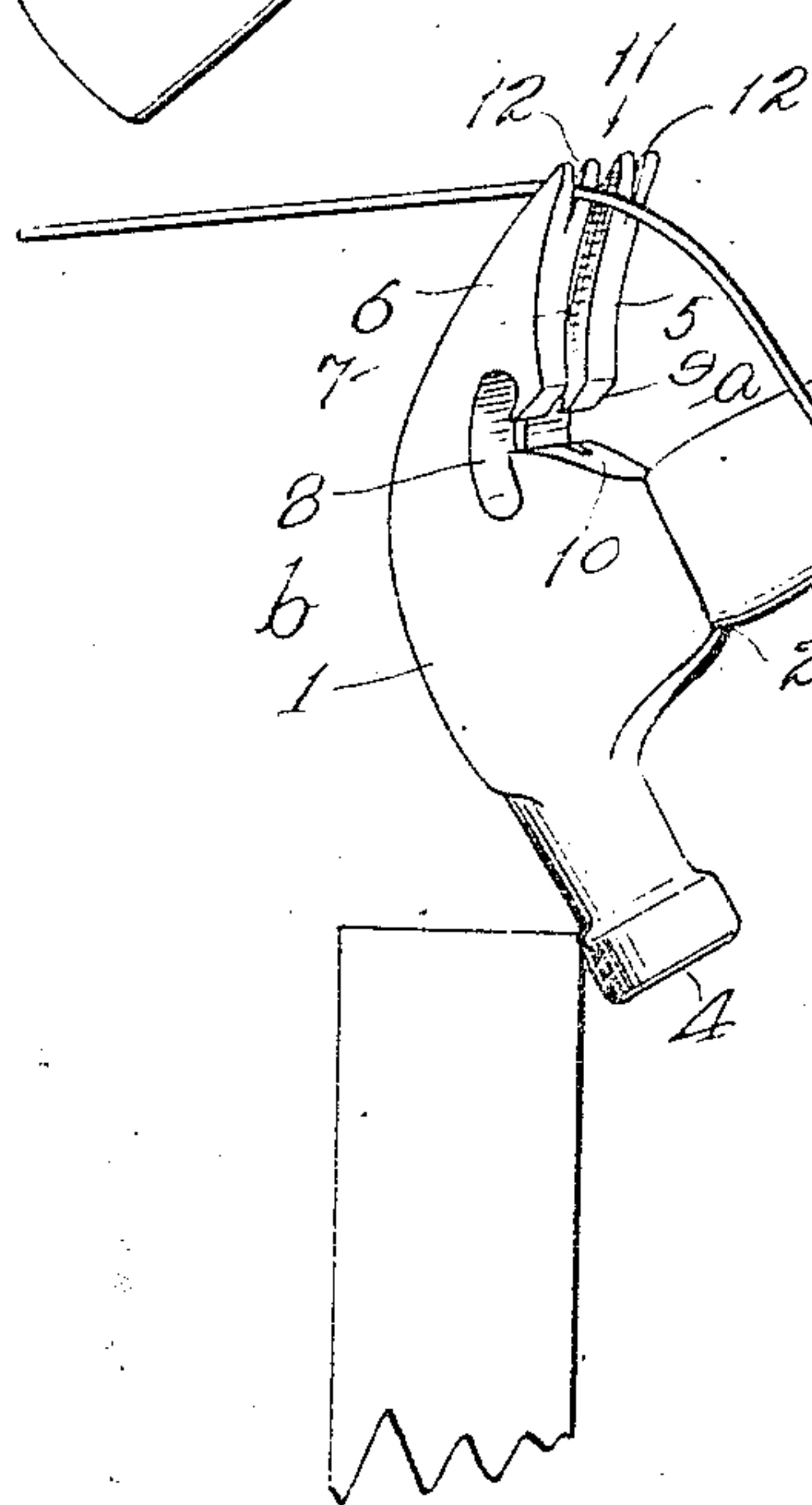
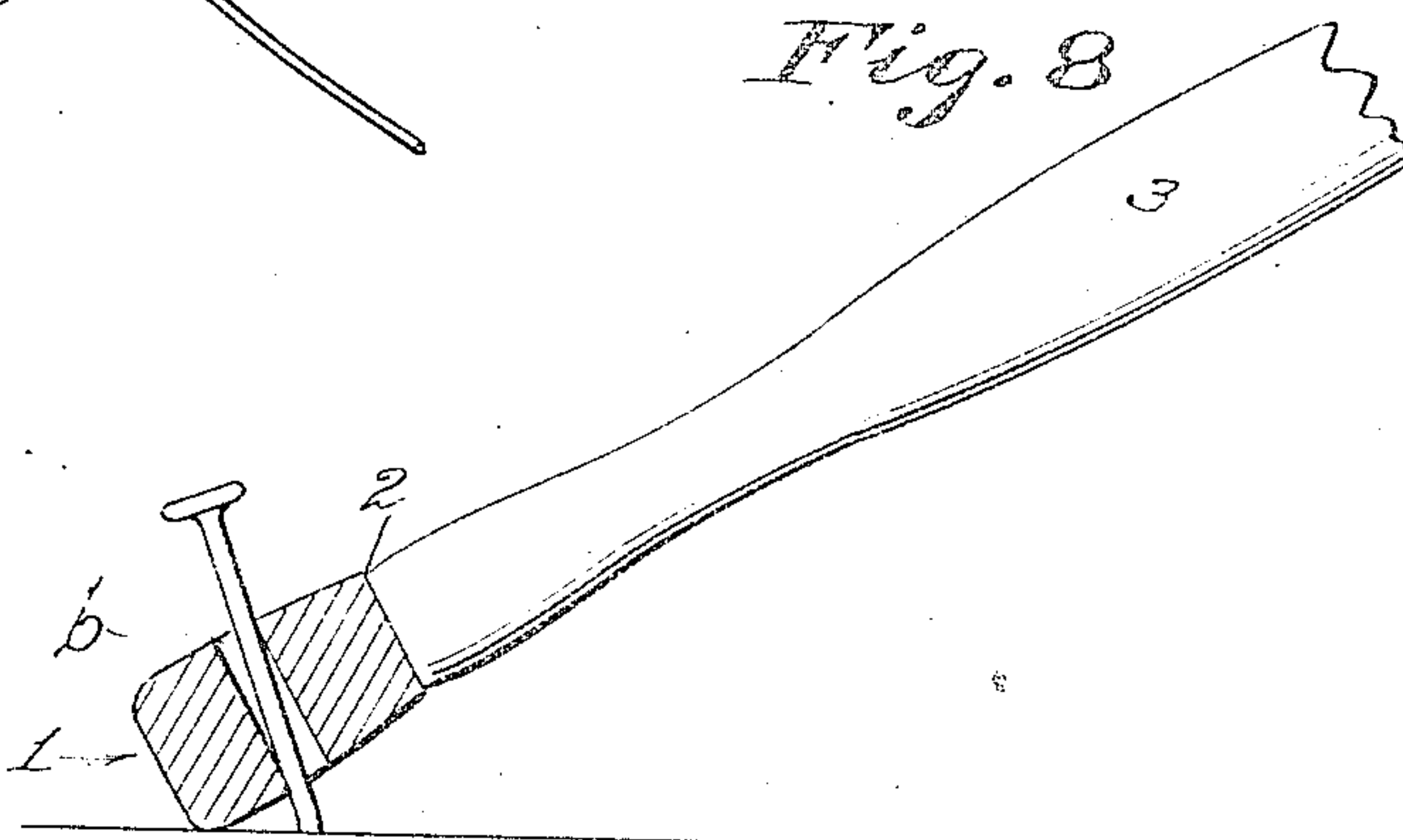


Fig. 8



Inventor  
Robert H. Brown  
by James R. Townsend  
his Atty.



# UNITED STATES PATENT OFFICE.

ROBERT H. BROWN, OF LOS ANGELES, CALIFORNIA.

## LINEMAN'S COMBINATION-TOOL.

No. 921,792.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed May 19, 1908. Serial No. 433,776.

To all whom it may concern:

Be it known that I, ROBERT H. BROWN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Lineman's Combination-Tool, of which the following is a specification.

This invention is intended for the use of mechanics, but more particularly for those constructing and repairing telegraph, telephone, or other aerial wire-lines for telegraph, telephone, or other electric systems.

The tool is in the nature of a claw hammer so constructed as to facilitate the operation of drawing nails, of gripping a wire to draw the same tight without cutting or crimping the wire, and also to enable the lineman to hook the hammer on a horizontal wire for temporary support to enable him to use his hands freely for other purposes.

An object of the invention is to provide in the simplest form an implement answering to the above requirements.

A further object of the invention is to provide improved means for pulling headless nails or screws, and in a general way to facilitate the pulling of any character of nail or screw.

An advantage aimed at by this invention is the ready pulling of long nails without the necessity of blocking up the hammer-head. The nail-pulling device in this tool is adapted to grip and simultaneously cramp the nail and afford a continuous purchase for successive movements in drawing the same; and to rapidly take successive and renewed holds of the nail along its length as the nail is partially drawn by successive movements, so that by an oscillating movement of the hammer-handle, thereby rocking the hammer-head sidewise, the same can be made to cramp and draw the nail by a rapid succession of movements of the hand.

The accompanying drawings illustrate the invention.

Figure 1 is a view of one side of a combination tool constructed in accordance with this invention; a portion of the hammer-handle is broken to contract the view. It is to be understood that both sides of the hammer are alike. Fig. 2 is a rear view of the hammer in position for starting a nail. The handle is broken away for clearness of illustration. Fig. 3 is a rear view similar to Fig. 2, excepting that the hammer is rocked to bring the handle toward an upright position. Fig. 4 is

a section on line  $x^1-x^5$ , Fig. 1, looking to the left. Fig. 5 is a section on line  $x^1-x^5$ , Fig. 1, looking to the right. The tool is shown in position for pulling a nail. Dotted lines designate successive positions in the operation of pulling the nail. Fig. 6 is a side elevation of the tool hanging upon a wire. Fig. 7 is a perspective view of the tool. In this view a wire is shown bent over one of the claws of the tool for the purpose of stretching the wire. Fig. 8 is a sectional view of the tool hooked onto a nail which is brought into the inner end of a limb  $b$  of the T-shaped clutching slot in the operation of pulling a partially-driven or partially-drawn long nail. The line of section upon which this view is taken is such as to avoid cutting the cloven part of the hammer-head.

1 designates a hammer-head provided with the usual eye 2 in which the handle 3 is secured in the usual way.

4 is a hammer-face of the usual construction.

5 and 6 designate the claws of the hammer between which is a V-shaped slot 7 resembling the usual form of slot in a claw hammer. In the preferred construction this slot extends as near to the eye 2 of the hammer-head as may be practicable, so that the body of the nail may be brought close to the eye.

The claw portion of the hammer-head is rocker-shaped, substantially as with former hammer-heads, but is different from former hammer-heads in that it is convex in transverse section as well as in longitudinal section, so that the workman may readily rock the head laterally as well as longitudinally thereof. The claws are provided with a T-shaped clutching slot 8 opposite the convex face of the claw portion and opening into the space between the claws and eye of the head. The teeth 9 and 10 at the opposite sides of the stem of the T-shaped clutching slot converge toward the head of such slot to facilitate the admission of the wire for the purpose of hooking the implement onto a horizontal wire, or on a nail, pin, or peg which may be convenient for supporting the hammer.

One limb  $a$  of the clutching slot extends transversely relative to the claw and longitudinally relative to the handle, and the other limb  $b$  extends transversely relative to the handle and longitudinally relative to the claw.

In practical use, a wire may be gripped by the implement by bringing the implement



into position on the wire with the wire inside the T-shaped clutching slot, and then by drawing the implement by its handle lengthwise of the wire, the margins of the clutching slot will cramp and clutch the wire and prevent the implement from slipping therealong, and this is accomplished without wedging the wire in the implement, and also without kinking or cutting the wire. By a reverse movement of the handle, the implement may be made to release the wire and slip therealong for taking a new hold as may be required.

The tips of the claws may be individually claw-shaped, as indicated at 11, notches 12 being provided and the claw coming to a thin edge at its extremity so that the tip of the claw can be inserted under the head of a tightly-driven nail, thus to start such nail from its seat. When the nail has thus been started it may be caught by the claws in the usual way, and the handle may then be rocked in the usual way to further draw the nail, as is customary.

By providing the notches 12 the tool is fitted for use in the operation of stretching a wire in the manner shown in Fig. 7. A fulcrum or support is found for the face of the tool, the wire placed in a notch 12 and bent thereover and the handle worked up and down. The notches prevent the wire from slipping sidewise off the claw, and the sharp edge of the notch engages the bent wire to prevent the claw from slipping along the wire upon the down-stroke of the handle. On the up-stroke of the handle the notch slips along the wire, whereupon the wire may bend in a new place behind the notch and at the succeeding down-stroke the wire is further stretched. Thus, by working the handle down and up the wire may be rapidly pulled taut.

As the work of pulling a nail proceeds, the operator instead of rocking the hammer in the usual way, may rock the handle transverse of the head, whereupon the inner edges of the claws clamp the nail between them and will hold the same tightly as the head is rocked transversely. The leverage thus exerted upon the nail is much greater than that exerted when the hammer is oscillated in a line parallel with the claws. Consequently, at each oscillation the nail will be drawn with greater force than, though not so far as, would be the case with an oscillation lengthwise of the head; but the claws take hold each time the handle moves away from the vertical line, and this is done automatically and without shifting the implement so that the workman can rapidly oscillate the implement transversely of the claws, thereby rapidly drawing the nail by numerous oscillations as compared with the lengthy pulling and separate shiftings of the implement necessary to draw the nail when the handle is

oscillated in a direction lengthwise of the head.

The implements which this implement is intended to displace are the most frequently-used tools required by the linemen when on the pole, both before and after the insulators are in place on the cross-arms. In either case, neither the pole nor the cross-arms afford a satisfactory resting place for the tool when not in actual use. This is especially true when the insulators are in place, because there is no room on the cross-arms or pole in or on which the hammer may be placed and from which it will not fall toward the ground.

When the wires are in place on the insulators the difficulty is further increased with hammers of former constructions. Consequently it has heretofore been necessary for the workman to return his hammer to his belt whenever he wishes to free his hands for other purposes. With this implement all that difficulty is obviated in any case where one or more wires are strung within reach of the workman, for he simply has to bring the claws above the wire and then allow the hammer to come to place on the wire which will be caught by the T-shaped clutching slot, and thereupon the hammer is safely held until intentionally removed from the wire.

In the hammers heretofore in use the ball or face 4 overbalances the handle so that the hammer cannot be hung on a wire or nail as illustrated in Fig. 6, because the wire will slide along the inclined inner faces of the claws, and this is a very important matter especially with linemen. The peculiar form of the slot 8 will cause the hammer to hang upon any wire or peg and balance itself regardless of the relative weight of the face of the hammer and the handle. In repairing electric lines it is important that the repairmen have a convenient wire-stretcher, and this wire-stretcher for repair purposes must meet entirely different requirements from the tools used in running a new line of wire.

In Fig. 7 I have illustrated the use of my tool as a wire-stretcher. The tool is placed against a cross-arm or any convenient support, and the wire placed in one of the notches 12 at the tips of the claws, and then the handle used as a lever, and as the wire comes along it may be raised, the tool returned to its forward position to get a new hold, and the wire again lowered into the notch. In this way good leverage is secured and at the same time the wire may be rapidly pulled.

In Fig. 8 I have illustrated the process of pulling a long nail, by inserting the nail in the clutching slot and working the handle up and down from nearly a horizontal position to an angle of 45°. It is obvious that the edges of the slot will clutch the nail as the handle swings upwardly, and will re-



lease the nail as the handle swings downwardly, thereby operating like a ratchet upon the nail.

I claim:—

- 5 1. A lineman's combination tool comprising a claw-hammer having a T-shaped clutching slot transversely of the inner faces of the claws, and adapted to receive and clutch the body of a nail.
- 10 2. A lineman's combination tool comprising a claw-hammer having teeth extending

from the claws toward the hammer-head so as to form hooks to engage a wire and support the tool.

In testimony whereof, I have hereunto set 15 my hand at Los Angeles, California, this 4th day of May, 1908.

ROBERT H. BROWN.

In presence of—

JAMES R. TOWNSEND,  
JULIA TOWNSEND.