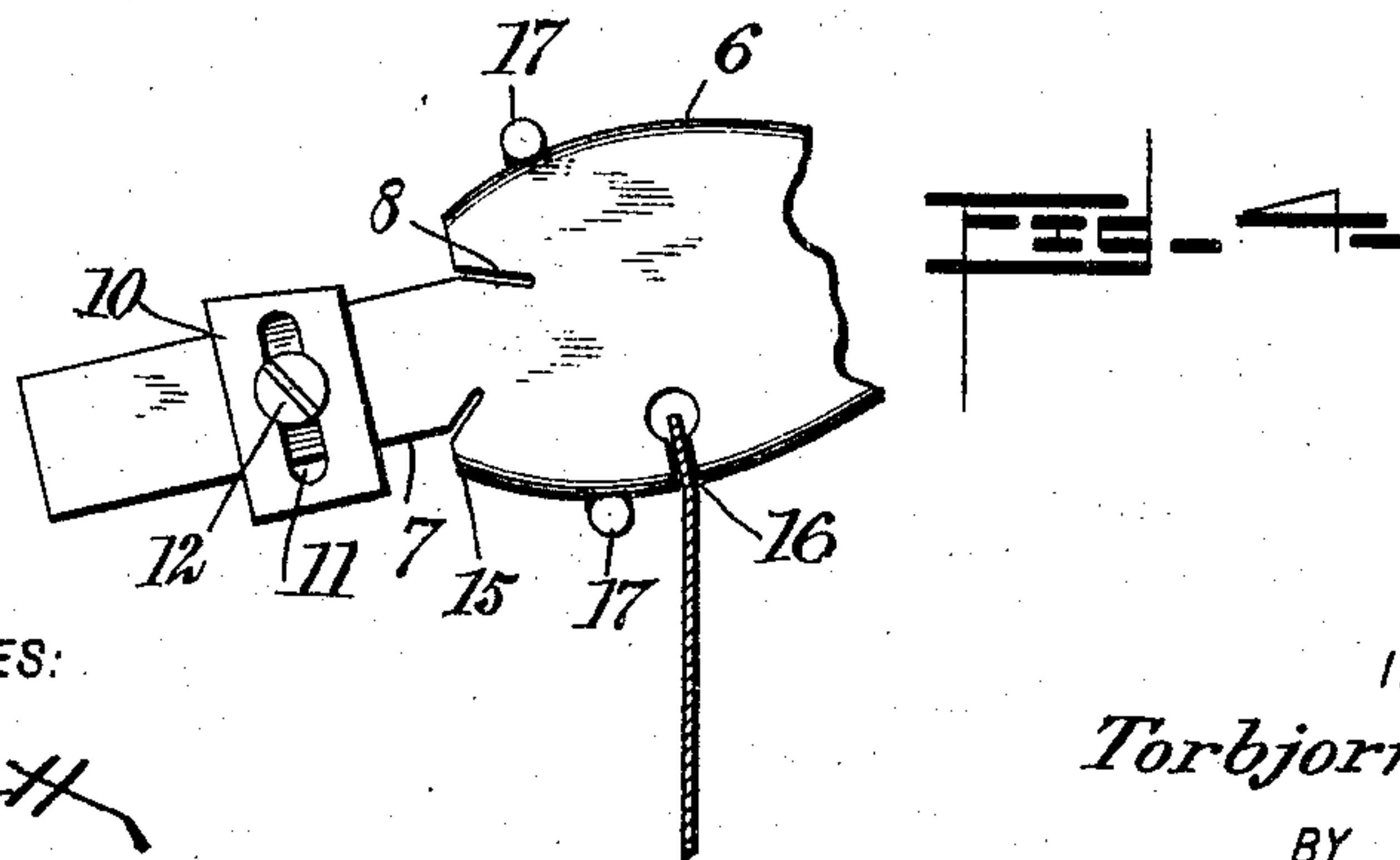
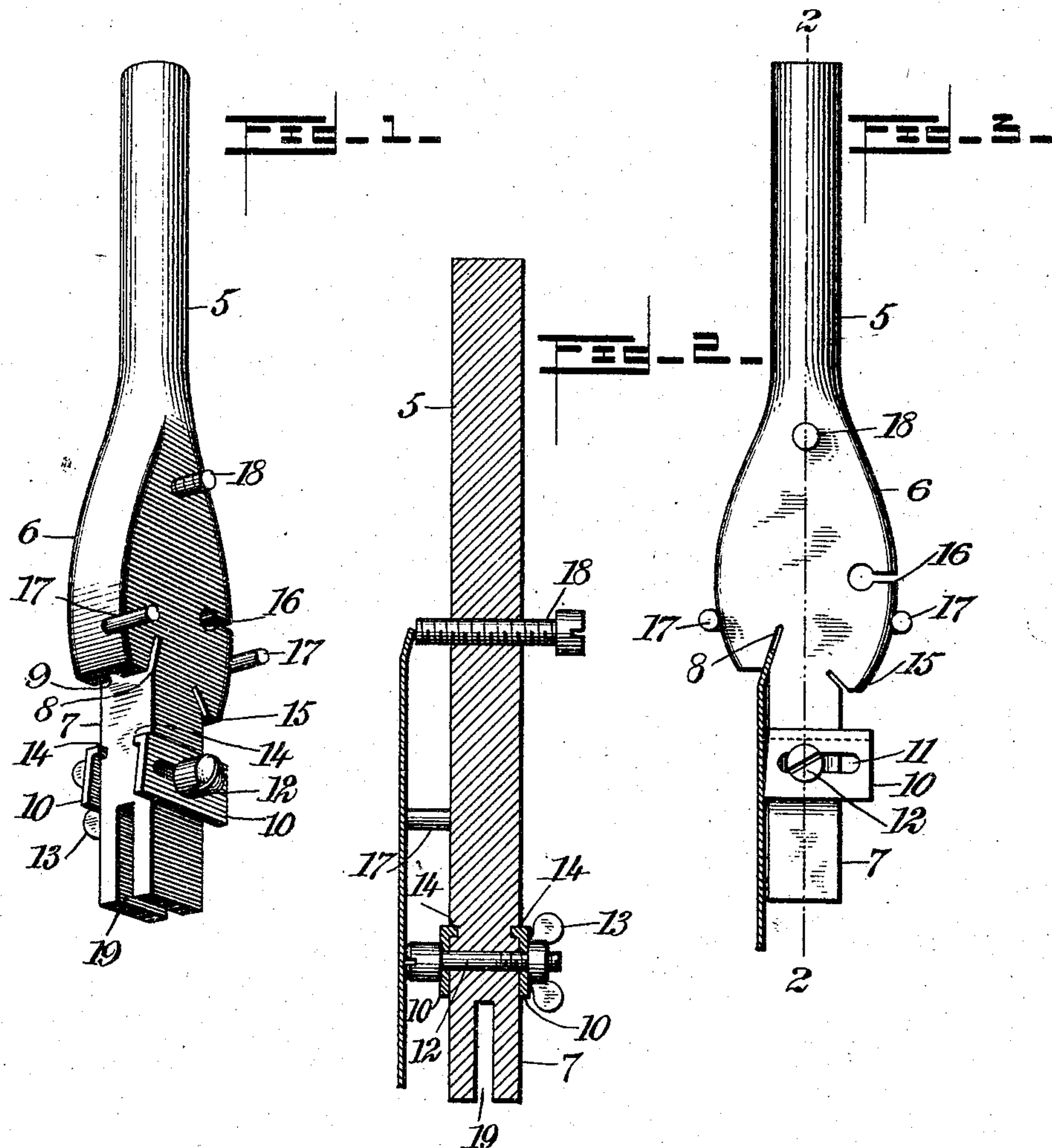


No. 782,690.

PATENTED FEB. 14, 1905.

T. OLSEN.  
SAW TOOTH TOOL.  
APPLICATION FILED MAY 24, 1904.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

TORBJORN OLSEN, OF MANISTEE, MICHIGAN.

## SAW-TOOTH TOOL.

SPECIFICATION forming part of Letters Patent No. 782,690, dated February 14, 1905.

Application filed May 24, 1904. Serial No. 209,587.

*To all whom it may concern:*

Be it known that I, TORBJORN OLSEN, a citizen of the United States, and a resident of Manistee, in the county of Manistee and State of Michigan, have invented a new and Improved Saw-Tooth Tool, of which the following is a full, clear, and exact description.

This invention relates to improvements in tools for operating on the teeth of saws, particularly crosscut-saws, an object being to provide a tool of this character having a part or parts for setting teeth, a swaging part or parts, and a set-gage, thus providing a very convenient and handy tool.

I will describe a saw-tooth tool embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a saw-tooth tool embodying my invention. Fig. 2 is a section thereof on the line 2 2 of Fig. 3. Fig. 3 is a side elevation, and Fig. 4 is a fragmentary view indicating the tool as in use for straightening a tooth.

The tool comprises a body or shank 5, having an enlarged portion 6 and a reduced end portion 7. Extended into the end of the enlarged portion at its junction with the reduced portion is a slot 8, which is arranged at an inward incline with relation to the axis of the tool, and the outer wall of this slot is provided with a channel 9 to receive the point of a tooth or to fit over the same, so that when the saw-tooth is inserted in the slot the tool will not touch the sharp point of the tooth, and thus dull or break it.

On opposite sides of the reduced portion 7 set-plates 10 are mounted to slide, the ends of these set-plates being inclined upward and inward substantially on the angle of the slot 8, and these plates are designed to regulate the degree of set for the teeth. The plates are longitudinally slotted, as indicated at 11, and a locking-bolt 12 passes through these slots and through an opening in the reduced portion. The large threaded end is provided with a thumb-nut 13. To hold the plates in

proper position—that is, to prevent rotary movements—the said plates at their upper edges have inwardly-extended flanges 14, which engage in transverse channels formed in the reduced part 7. On the opposite side to the slot 8 in the tool is a pointed swaging-tooth 15 for drag-teeth, and the ends of the plates 10 at adjacent sides will form abutments against which the side of the saw-tooth may be placed and the degree of lateral set to the points of the drag-teeth regulated or made even. I find that by setting the points of the drag-teeth laterally in opposite directions the shavings are cut out of the kerf instead of drawn out, thus permitting the saw to work easier and faster. At one side of the enlarged portion 6 is a slot 16, in which a tooth may be placed when it is desired to reduce its set or to straighten it, the shank portion 5 of the tool at this time serving as a lever.

I will now describe a gage used in connection with the device for determining whether or not the several teeth of a saw are equally set.

Extended outward from the lower portion of the enlarged part 6 are pins 17, the ends of which are on a plane with the end of the screw-bolt 12. Thus these pins 17 and the screw-bolt form abutments for engaging against the side of a saw-blade. Above the pins 17 a gage-screw 18 engages in a tapped hole formed in the enlarged portion 6. Of course this screw may be turned in or out, and then when it is desired to see if the several teeth are evenly set the screw-bolt and the plates 10 are to be placed against the saw-blade and with the end of the screw 18 moved against a tooth. Of course if there is no variation the screw will either escape the tooth or the pins 17 will be moved away from the blade. After gaging the teeth along one side the tool may be reversed and moved along the opposite side.

The extension 7 is provided with a slot 19 for receiving a drag-tooth for the purpose of swaging. After inserting a drag-tooth a sharp tap on the opposite end of the tool will cause the swaging of the tooth.

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

1. A saw-tooth tool comprising a shank

having an enlarged portion and a slot formed in the end of said enlarged portion, a reduced extension from the enlarged portion, gage-plates mounted to slide on opposite sides of the reduced extension, said extension having channels, flanges on said plates for engaging in said channels, and a screw for holding said plates as adjusted.

10 2. A saw-tooth tool comprising a body or shank, a slot formed in the body for receiving the teeth for setting, set-plates movable transversely on said body, a screw for locking

the plates as adjusted, the said screw having a projecting head, pins extended outward from the body, the ends of said pins being on a plane with the end of the screw-head, and a gage-screw arranged in the body. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TORBJORN OLSEN.

Witnesses:

ALBERT ERICKSON,

GUST R. FREEDLUND.