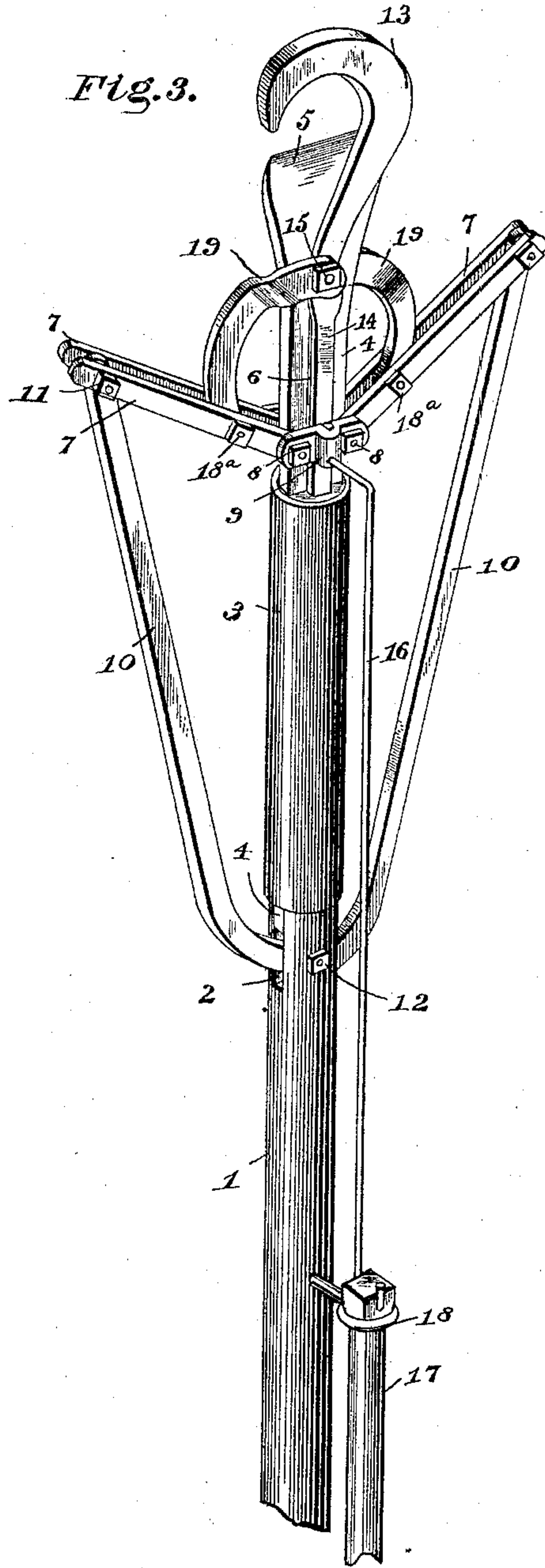
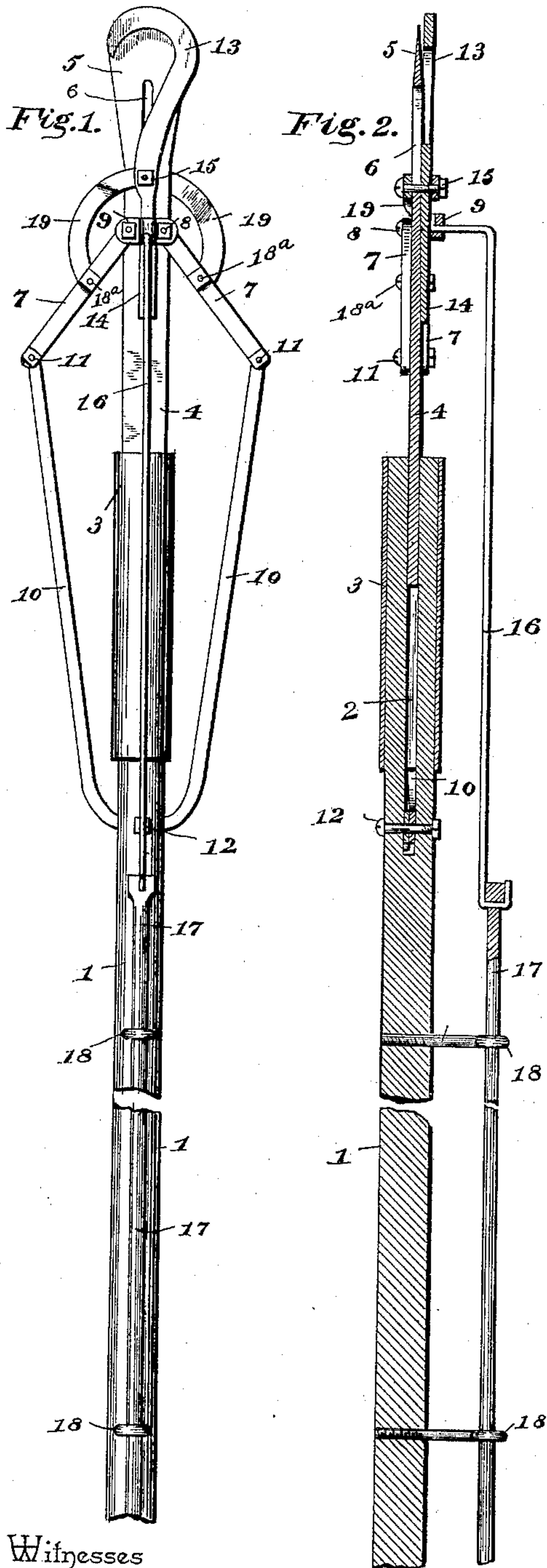


(No Model.)

S. A. O'NEIL.
PRUNING IMPLEMENT.

No. 474,505.

Patented May 10, 1892.



Witnesses

J. M. McJr.
Jno. H. Liggers.

By his Attorneys,

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UNITED STATES PATENT OFFICE.

STEPHEN A. O'NEIL, OF BURLINGTON, KANSAS, ASSIGNOR OF ONE-HALF TO
CHARLES A. JAPHET, OF SAME PLACE.

PRUNING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 474,505, dated May 10, 1892.

Application filed February 13, 1892. Serial No. 421,420. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN A. O'NEIL, a citizen of the United States, residing at Burlington, in the county of Coffey and State of Kansas, have invented a new and useful Pruning-Knife, of which the following is a specification.

My invention relates to pruning-instruments, the objects in view being to provide a cheap and simple device for engaging the limbs of trees and cutting the same, and, furthermore, to adapt the instrument for expeditiously, painlessly, and without great exertion dehorning cattle.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of an instrument constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a detail in perspective of the upper portion or head of the instrument.

Like numerals of reference indicate like parts in all the figures of the drawings.

The pole or handle 1 may be of any desired length, and the same is provided at its upper end with a longitudinal kerf or slot 2, which is encircled from its upper end to a point near its lower end by a metal ferrule or band 3. Located in the slot or kerf is the flat shank 4, which is widened toward its upper end and beveled, thus forming a knife or blade 5. The knife is provided below its cutting-edge and for a portion of its length with a longitudinal slot 6. Below the slot the knife is embraced at opposite sides or faces and at its edges by the inner ends of pairs of links 7, through which inner ends and the knife bolts 8 are passed, whereby the links become pivotally connected with the shank of the knife. At one side the bolts also pass through a transverse keeper 9, which constitutes, in conjunction with the shank of the knife and the inner ends of the links 7, a recess or guide. Connecting-levers 10 have their upper ends pivoted, as at 11, between the outer ends of the links and their lower ends lapped, entered into the lower end of the kerf or slot 2, and

there pivoted or fulcrumed upon a transverse bolt 12.

13 designates a limb-engaging hook located at that side of the blade at which the keeper 9 is situated, and the lower end of said hook, being reduced to form a shank 14, passes downwardly through and is movable within the recess formed by the keeper 9. A transverse bolt 15 passes through the shank of the hook 13 and transversely through the guide-slot 6 of the blade. A rod 16 is loosely connected at its upper end to the keeper 9, for which purpose the rod is bent, as shown, and at its lower end is connected to a reciprocating handle 17, mounted in a pair of longitudinally-opposite eyes or guides 18, which extend from the main handle 1. Pivot-bolts 18^a pass through the links 7 at opposite sides of the shank of the blade 5 and also through the lower ends of short bent links 19, located between the links 7. The links 19 have their upper halves deflected in opposite directions, so as to take at opposite sides of the hook and blade, and through their upper ends passes the extremities of the bolt 15. By depressing the rod 17 it will be obvious that the knife will be drawn inwardly and the hook forced away from the end of the handle, being thus forced outwardly through the medium of the links. A similar movement upon the part of the pole 1 causes a reversal upon the parts of the hook and knife—namely, the hook is drawn inwardly and the knife forced outwardly until its edge passes the hook. Thus it will be seen that the cut through the limb is made, the hook tightly clamping against the opposite side of the limb to where the cut is made and holding firmly while the knife passes through and joins the hook. The arrangement of levers permits of pruning or trimming with great facility and with very little power.

It will be seen that the invention may be employed as a dehorner or for severing the horns of animals. In this employment, also, the prime objects of dehorners are secured—namely, forming a smooth cut without injury to the head-bones of the animal, causing the same little pain, and requiring but slight power.

Having described my invention, what I claim is—

1. In a device of the class described, the combination, with the handle, the knife having the shank mounted for reciprocation therein, and the slot formed in the knife, of the main links pivoted to the knife-shank, the levers pivotally connected to the main links at the outer ends of the latter and having their lower ends connected to the handle, the hook located at one side of the knife, a bolt passed through the same and into the slot of the knife, and links connected to the bolt of the hook and at their outer ends to the main links, substantially as specified.

2. In a device of the class described, the combination, with the handle and the reciprocating shank terminating at its outer end in a knife or blade, of the opposite links pivoted to the blade, the levers pivoted to the outer ends of the links and at their lower ends to the handles, the hook mounted at one side of the blade, guides for the same, whereby the blade and hook are movable with relation to each other, and short links pivoted at their upper ends to the hook and at their lower ends to the main links, substantially as specified.

3. In a device of the class described, the combination, with the handle having the upper

slotted end, the ferrule mounted on the slotted end and extending nearly the length of the slot, and the flat shank mounted for reciprocation in the slot and terminating at its upper end in a blade provided with a longitudinal slot, of opposite pairs of links 7, pivoted by bolts at their inner ends to the opposite sides and edges of the shank, levers pivotally bolted to the outer ends of the links and terminating in the lower end of the slot of the handle, a bolt passed therethrough, a keeper connecting the bolts at the inner ends of the links and forming a guide, a hook having a reduced shank mounted for movement in the guide, a bolt passed through the hook and slot of the knife and short links loosely connected to the ends of the bolt and loosely bolted between the pairs of main levers, the guides upon the handle, and the rod mounted in the guides and connected at its upper end to the keeper, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

STEPHEN A. O'NEIL.

Witnesses:

H. D. FRAZIER,
JOHN MCLEAN.