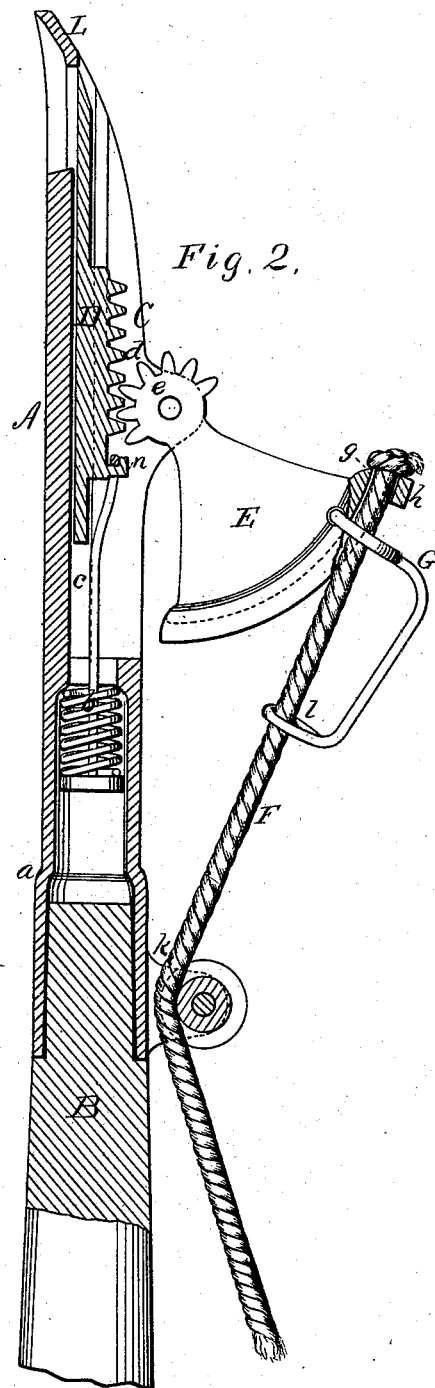
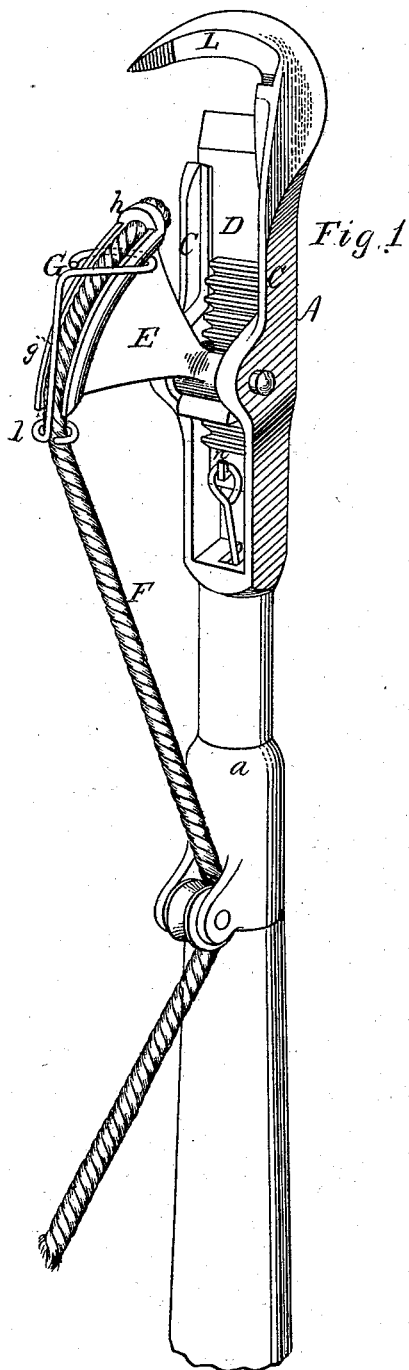


I. N. BABBITT, Jr.
Pruning-Implement.

No. 215,312.

Patented May 13, 1879.



WITNESSES

Villege Anderson.
W. C. Masi

INVENTOR

Isaac W. Babbitt Jr.
By E. W. Anderson,

ATTORNEY

UNITED STATES PATENT OFFICE.

ISAAC N. BABBITT, JR., OF FAIRHAVEN, MASSACHUSETTS.

IMPROVEMENT IN PRUNING IMPLEMENTS.

Specification forming part of Letters Patent No. **215,312**, dated May 13, 1879; application filed February 10, 1879.

To all whom it may concern:

Be it known that I, ISAAC N. BABBITT, JR., of Fairhaven, in the county of Bristol and State of Massachusetts, have invented a new and valuable Improvement in Pruning-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of this invention. Fig. 2 is a longitudinal section of the same.

This invention has relation to pruning-machines; and it consists in the construction and novel arrangement of the hook-plate having grooves or guideways, the rack-knife, and the retracting-spring and the pinion-sector for the operating-rope, having a guide or guard, all as hereinafter fully shown and described.

In the annexed drawings, the letter A designates the hook-plate, which is provided at its lower end with a hollow socket, *a*, to receive the end of the pole B, and forming a seat for the retracting-spring *b*. Above the socket, at each side of the plate, are formed strong sides or ribs C, at the bases of which are longitudinal inside grooves or guideways *c*, in which the edges of the reciprocating knife D play. This knife has a chisel edge at its upper end, and a rack, *d*, formed on its back for engagement with the pinion end *l* of the rope-sector E. The sector is provided on its curved edge with a groove, *g*, terminating at its front end in a perforated lug, *h*, to which the end of the rope F is attached, said rope then passing in the channel *g*, over the sector, and hanging down alongside the pole, being kept in place by means of eyes *k k*, one of which, having a pulley attached, is shown at the base of the socket.

The sector-pinion is journaled in the flanges

or sides C of the hook-plate, and, being in engagement with the rack of the knife, serves to move the same upward when the rope is pulled downward. The knife is retracted by means of a spring, *b*, seated in the hollow socket and connected to a stud, *n*, on the lower end of the knife shank or plate. By releasing the stud from the spring-loop the knife is left free to be taken out of its grooves for sharpening.

Near the upper end of the segment-lever E is pivoted a wire guide or guard, G, which extends over the channel to the rear and downward, terminating in a loop, *l*, through which the operating-rope passes. The guide serves to prevent the rope from being dislodged from its seat in the channel, and insures its return to the channel after the lever has been pulled down in making the stroke with the knife. The spring keeps the knife always retracted and ready for operation, and when the branch stem is taken within the hook L, at the upper end of the back-plate, the cut is made by simply pulling the rope, which forces the knife through the stem to the hook.

What I claim as new, and desire to secure by Letters Patent, is—

1. The back-plate A, having the end hook L, the grooved side flanges C, and the spring-seat below the same, in combination with the sector-pinion E, rack-knife D, spring *b*, and rope-guide G, substantially as specified.

2. A sector-lever for pruning-machines, having a rope-channel and a pivoted guide, G, serving to keep the rope in line with said channel, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ISAAC N. BABBITT, JR.

Witnesses:

HENRY N. WISE,
GEO. DUNHAM.