R. H. KNETTLE & C. FORCE.

HEDGE-TRIMMERS.

No. 194,249. Patented Aug. 14, 1877.

Fig. 1.

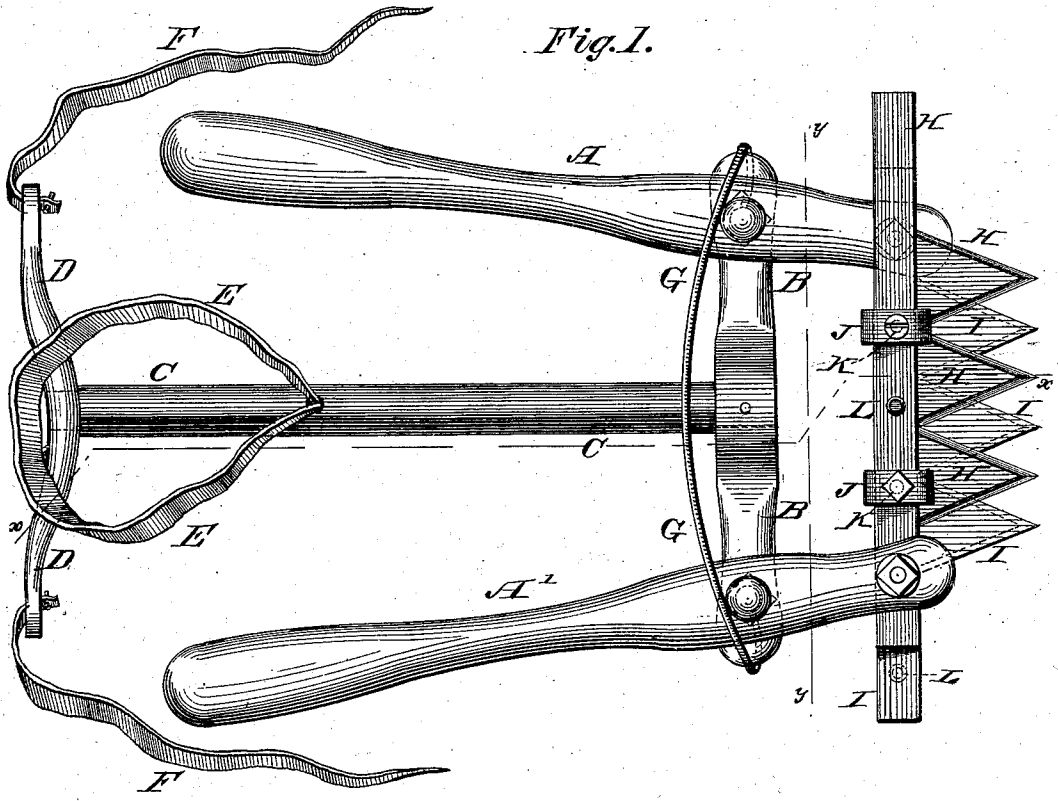


Fig. 2.

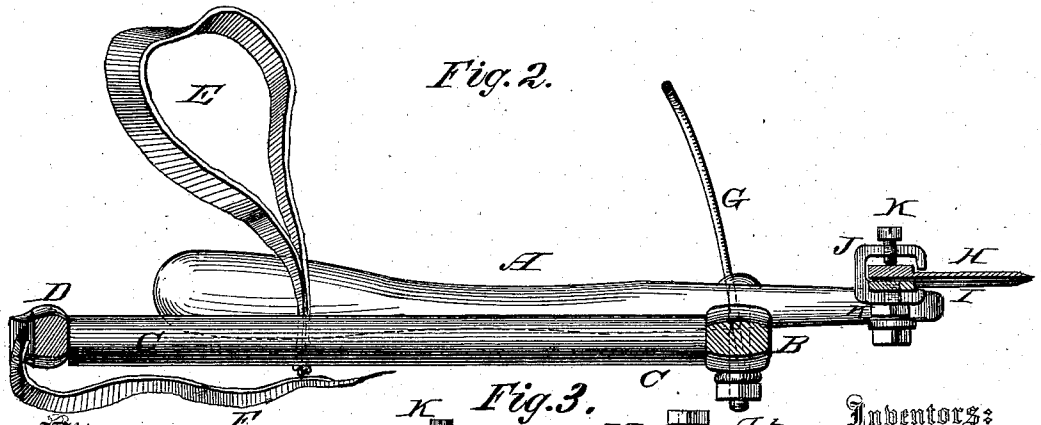


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT H. KNETTLE, OF LONE ELM, AND CHRISTIAN FORCE, OF BUNCETON, MISSOURI.

IMPROVEMENT IN HEDGE-TRIMMERS.

Specification forming part of Letters Patent No. **194,249**, dated August 14, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that we, ROBERT H. KNETTLE, of Lone Elm, and CHRISTIAN FORCE, of Bunceton, in the county of Cooper and State of Missouri, have invented certain new and useful Improvements in Hedge-Trimmers; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to hedge-trimmers, having for its object to furnish a machine by which one person can hold and operate the same while trimming hedges, the same being simple in construction, efficient in use, and not liable to get out of repair.

It consists in the employment of two small sickles, one working above the other, and in the means used for operating the same, as will be hereinafter more fully described.

In the annexed drawings, Figure 1 represents a plan view; Fig. 2, a longitudinal section taken on line *x x* of Fig. 1; and Fig. 3 a transverse section taken on line *y y*, Fig. 1.

A A′ represent two levers pivoted at either end of the cross-bar B. C represents a rod pivoted at or near the center of the cross-bar B, having at its rear end the swivel-bar D.

Near the rear end of the rod C is a strap or yoke, E, and the ends of the swivel-bar D are provided with straps F. The cross-bar B is provided with a rod or bail, G, and the levers A A′ are provided at their front ends with cutting-blades H I, similar to those used in harvesting-machines, one arranged above the other, and pivoted to the ends of the levers A A′. These cutting-blades are held in proper relation to each other by means of the clamps J and set-screws K, and the motion of the knives is limited, in their movement back and forth, by means of the stops L coming in contact with the clamps J.

The operation of this invention is as follows: The yoke or strap E is placed over the neck; the swivel-bar D is placed in front of the body, the straps F being fastened together, and the hands grasping the ends of the levers, the machine is in condition for operation. By moving the hands in and out, the blades or cutters sever the branches as the levers are moved in either direction; in other words, the blades cut both ways.

The rod or fender G catches the branches or wards them off as they fall, thus keeping them away from the person operating the machine.

The rod C, being arranged to turn in the cross-bar B, allows the machine to be turned in any desired position, which, in connection with the levers, being pivoted to the cross-bar and the cutter-bars pivoted to the ends of the levers, allows the angle of the cutting-edges to be placed in a position desired.

Having thus fully described the invention and its operation, what is desired to be claimed and secured by Letters Patent is—

1. The levers A A′, pivoted to the cross-bar B, in combination with the swivel-rod C, substantially as and for the purpose set forth.

2. The cross-bar B and swivel-rod C, in combination with the bar D, substantially as herein shown.

3. The swivel-rod C, provided with the neck strap or yoke E, in combination with the cross-bar B, bar D, and straps F F, substantially as and for the purpose specified.

4. The cross-bar B, pivoted levers A A′, and the fender G, substantially as and for the purpose set forth.

5. The cross-bar B, levers A A′, in combination with the fender G, and pivoted rod C, as and for the purpose set forth.

6. The combination of the cutter-bars and clamps J with the stops L, substantially as and for the purpose herein specified.

7. The bar D, swivel-rod C, cross-bar B, pivoted levers A A′, and fender G, in combination with the cutter-bars, stops L, and clamps J, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ROBERT H. KNETTLE.
CHRISTIAN FORCE.

Witnesses:
JOHN F. ROGERS,
A. J. HENLEY.