J. WILZ.

Pruning-Shears.

No. 202,499. Patented April 16, 1878.

*Fig. 1.*

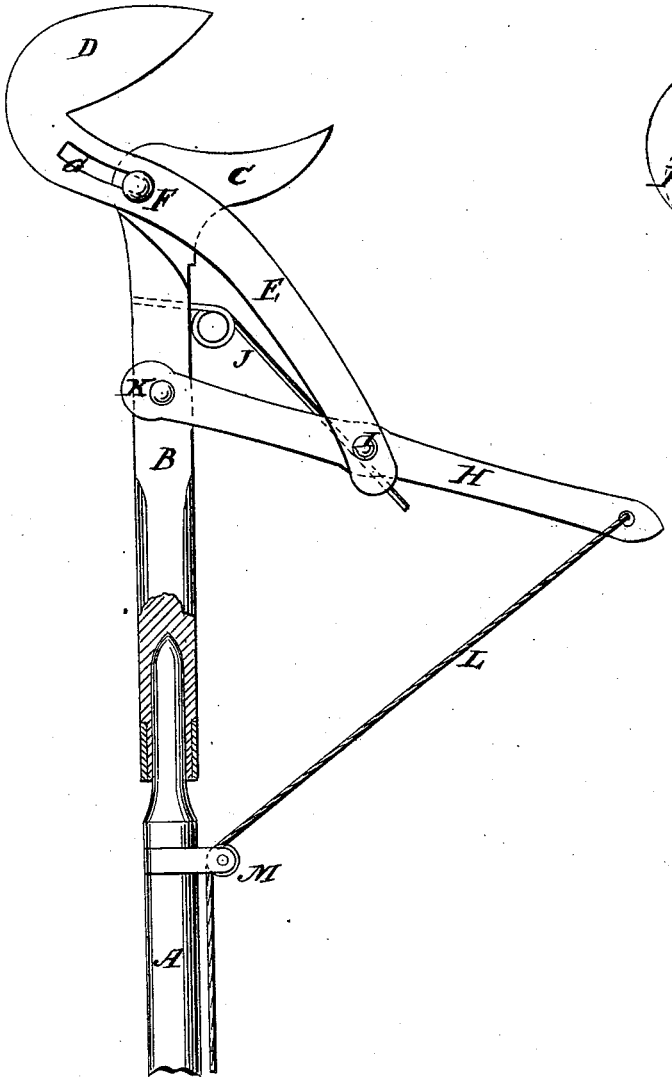
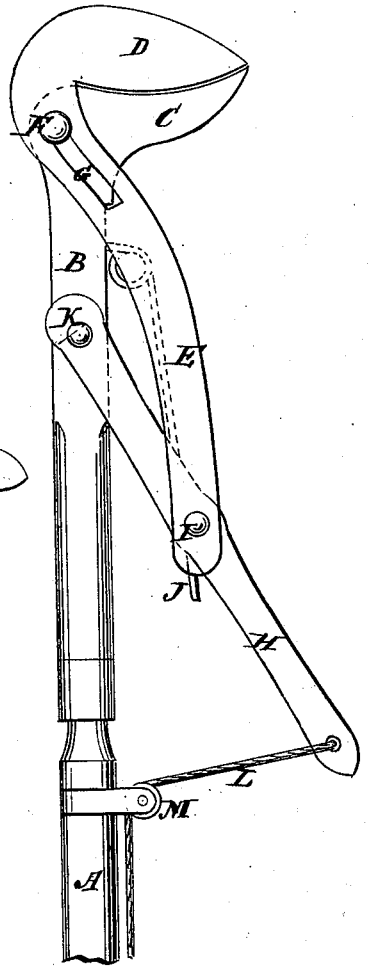



*Fig. 2.*




WITNESSES:

E. Wolff

J. H. Scarborough.

INVENTOR:

J. Wilz.

BY Munn & Co.

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN WILZ, OF SANTA CRUZ, CALIFORNIA.

## IMPROVEMENT IN PRUNING-SHEARS.

Specification forming part of Letters Patent No. **202,499**, dated April 16, 1878; application filed October 23, 1877.

*To all whom it may concern:*

Be it known that I, JOHN WILZ, of Santa Cruz, in the county of Santa Cruz and State of California, have invented a new and useful Improvement in Pruning-Shears, of which the following is a specification:

The object of this invention is to provide an instrument that will be better adapted than the pruning-shears heretofore in use to the removal of the larger branches from the higher parts of trees.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the drawings, Figure 1 represents a pair of pruning-shears with my improvements, with the blades wide open; Fig. 2, the same with the blades closed.

Similar letters of reference indicate corresponding parts.

A is a pole, rod, or arm, of a suitable length to reach the limbs that are to be removed. The lower end is held in the hand of the operator, and the upper end is inserted in a suitable socket in the lower extremity of the arm B of the lower or stationary blade C, the cutting-edge of which blade is at right angles to the line of the arm B, curving upward toward the point in such a manner that when a limb directly above the hand of the operator is to be removed this cutting-edge will be in or nearly in a horizontal position, and the curved points will tend to counteract the usual tendency to slip off the limb.

To the fixed arm B and blade C are connected or pivoted the movable blade D and its arm E by a stud or pivot, F, working in the slot G.

The cutting-edge of the blade D is nearly at right angles to its arm E, and its edge is curved in a manner to coincide, when the shears are closed, with the curved cutting-edge of blade C. The stud F may be provided with a suitable friction-roller.

By the employment of the slot G, a larger limb may be grasped by the shears than if this slot were dispensed with.

The lower end of the arm E is pivoted to the lever H by the pin I, the point of which pin projects through the lever and arm, and is notched or recessed in a suitable manner to receive the sliding end of the spring J. This spring is firmly secured to the arm B, near its upper extremity, in such a manner as to clear the arm E when the shears are closed, as shown in Fig. 2.

One end of the lever H is pivoted to the arm B by the screw or stud K, and to the other end of this lever is attached a line or cord, L, that leads through a guide-pulley, M, attached to rod A near its upper end, and thence downward to within reach of the operator.

The shears are closed by applying power to the lever H through the line L, or otherwise, and if a limb or branch of a tree nearly above the head of the operator is to be removed, the downward sliding motion thus given to the edge of the blade D, of itself very favorable for cutting, is facilitated greatly by the tendency of the limb to fall by its own weight, thereby relieving the upper or movable blade D and pinching the lower blade C.

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

In pruning-shears, the combination of fixed arm B C, having pivot F, slotted movable arm D E, spring J, and lever H, to adapt them to be operated by a cord and pulley, in connection with pole, as specified.

JOHN WILZ.

Witnesses:
H. E. MAKKINNEY,
D. J. CUMMING.