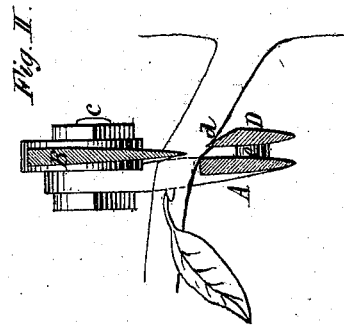
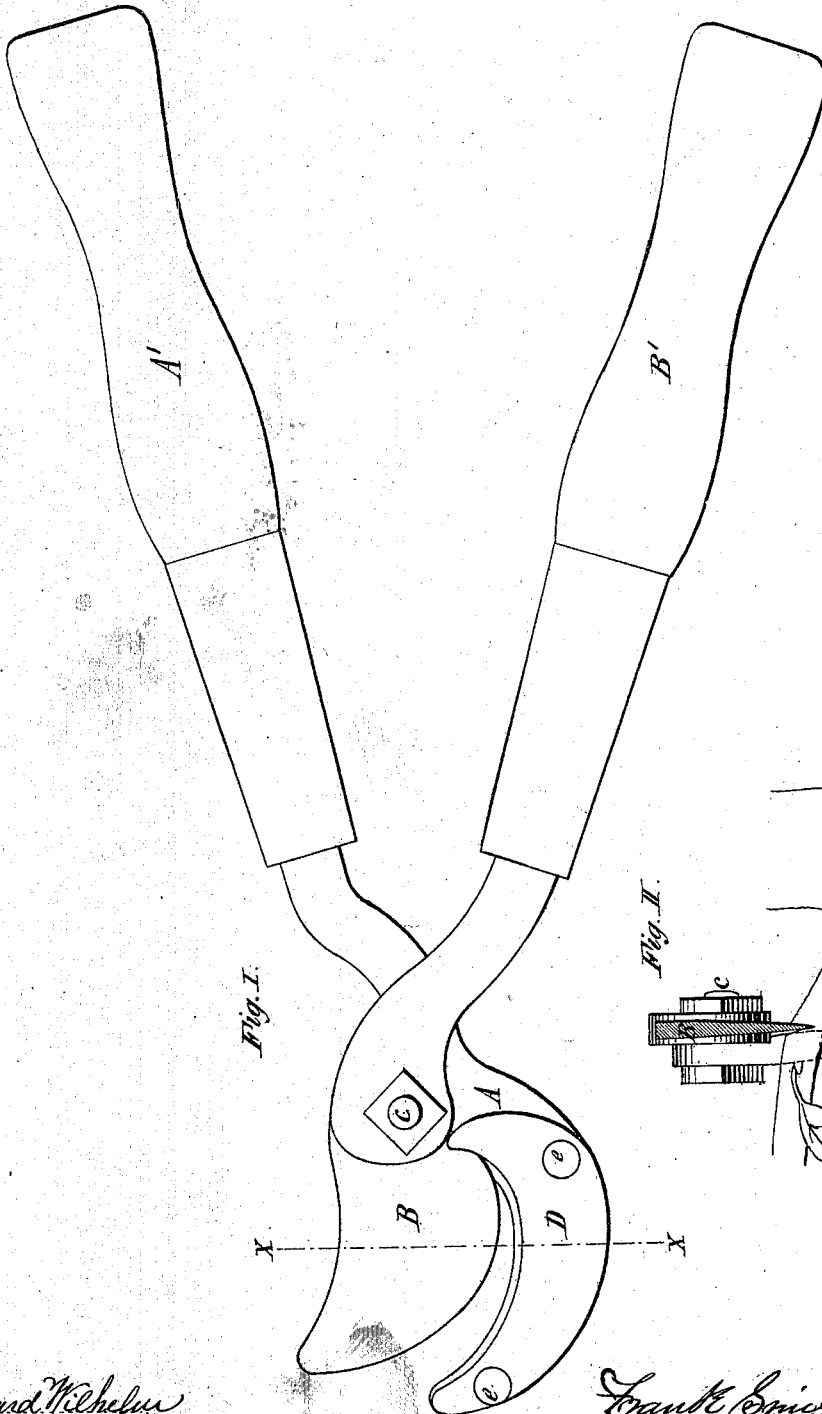


F. Smiley,
Pruning Shears.

No. 112,392.

Patented Mar. 7. 1871.



Edward M. Helms
Jas. J. Bonner } *Witnesses*

Frank Smiley... *Inventor*
by Thomas H. Apple
Attys.

United States Patent Office.

FRANK SMILEY, OF BATAVIA, NEW YORK.

Letters Patent No. 112,392, dated March 7, 1871.

IMPROVEMENT IN PRUNING-SHEARS.

The Schedule referred to in these Letters Patent and making part of the same.

I, FRANK SMILEY, of Batavia, in the county of Genesee and State of New York, have invented certain Improvements in Pruning-Shears, of which the following is a specification.

My invention consists in the arrangement, with the knife or blade and jaw of pruning-shears, of a cutter-plate, attached to one side of the jaw or bearing, with its cutting-edge arranged back of the face of the bearing, for the purpose of insuring a clean slanting cut, substantially as hereinafter set forth.

In the accompanying drawing—

Figure I is a view, in elevation, of my improved implement.

Figure II is a cross-section through the jaws, in line *x x*, fig. 1.

Like letters designate like parts in both of the figures.

A is the crooked jaw, and

A', the handle thereof, of ordinary construction.

B, the knife or blade, with correspondingly-curved cutting-edge, and

B', the handle, the two jaws being pivoted together at *c* in the usual manner.

D is the cutting-plate, secured by rivets *ee*, or otherwise, to the side of the jaw A, leaving a space between sufficient for the free passage of the blade B.

The edge *d* of this plate, adjacent to the edge of the jaw, is beveled off on the outer side, as represented, so as to present a knife-edge to the under side of the limb on the side next to the tree or shrub. This edge is arranged back or below the edge of the adjacent jaw A, as clearly shown.

The edge of the knife B is formed by beveling both sides thereof, instead of one only, as has heretofore been done.

The operation and advantages of my improved shears are as follows:

The shears being applied to the limb to be severed, with the cutter-plate D next to the body of the tree or shrub, the jaw A and the cutter-plate D form a double bearing for the limb, while the arrangement of the edge *d* back of that of the jaw A causes an in-

clination of the shears, which insures a slanting cut, while the double-beveled sides of the knife B prevent the wedging of the knife away from the jaw, and the consequent strain on the pivot by which the two are joined together. This equal pressure on the sides of the knife while cutting in an oblique or slanting direction enables a limb to be severed with the least possible exertion of power.

The knife or beveled edge of the plate D prevents the bruising and peeling off of the bark of the end of the stub that is left, and which results when the bearing surface is flat.

The edge *d*, at the close of the operation of severing the limb, cuts the under or opposite side of the limb sufficiently to prevent any splitting of the end, or any projecting sliver being left attached thereto.

Fig. II of the drawing is intended to illustrate the above-described operation of my improved shears in severing a limb.

It is important that the face of the jaw or bearing A be flat, so as to permit the limb to yield lengthwise as it is being severed by the knife B, which operates to wedge the limb apart from the stub or portion left.

If the jaw A was also beveled off so as to form a cutting edge, the latter would penetrate the limb and cause the knife to wedge between the two bearings formed by the cutter-plate D and edge of the jaw A, thus obstructing the operation of the instrument.

I do not claim, broadly, the combination in pruning-shears of a knife working between two jaws or bearings; but

What I claim is—

The arrangement, with the knife B and bearing A, provided with a flat face, of the cutter-plate D, having a beveled edge, *d*, arranged back of the face of the bearing B, so as to insure a slanting and easy cut, as hereinbefore set forth.

FRANK SMILEY.

Witnesses:

JAY HYATT,
D. W. FARGO.