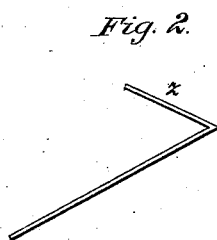
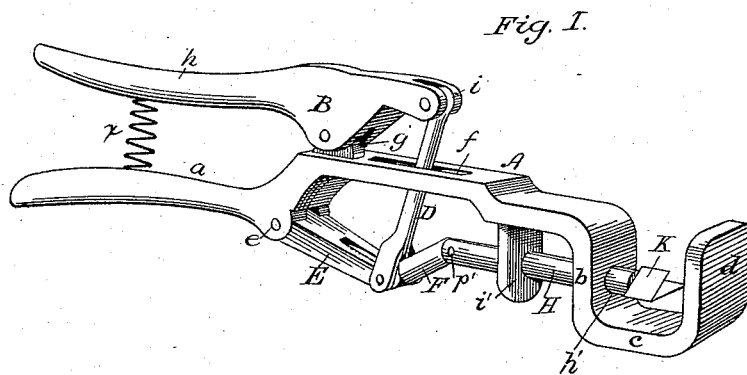


C. M. KINGSBURY.
Pruning and Grafting Implement.
No. 219,403. Patented Sept. 9, 1879.



Attest:
Clarence Poole
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Inventor:
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Per atty
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UNITED STATES PATENT OFFICE.

CHARLES M. KINGSBURY, OF TAMA CITY, IOWA.

IMPROVEMENT IN PRUNING AND GRAFTING IMPLEMENTS.

Specification forming part of Letters Patent No. **219,403**, dated September 9, 1879; application filed January 2, 1879.

To all whom it may concern:

Be it known that I, CHARLES M. KINGSBURY, of Tama City, Tama county, Iowa, have invented a new and Improved Pruning and Grafting Implement for Nurserymen; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the instrument. Fig. 2 is a view of the blade to be used with the cutter. Figs. 3 and 4 are details to be referred to.

The object of my invention is to provide a cutting implement for grafting and pruning wherein the blade can be actuated by a system of levers, so as to gain great power and make a clean cut; and it consists, first, in two pivoted arms, one bearing a curved end, against which the cut is made, and on which are bearings for a sliding bolt, which bears the knife on its end, the other arm bearing a link-rod, which operates a toggle-lever, by which the knife-bolt is thrust forward and the cut made.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a forging, having at one end the handle *a*, and at the other end a three-sided bend, *b c d*, and a bearing, *e*, and a slot, *f*.

Pivoted to A at *g* is another forging, B, provided with a handle, *h*, and a bifurcated end, *i*, in which is pivoted one end of a link, D. The other end of link D passes through slot *f*, and is pivoted to a toggle-joint lever, E F, as shown. One arm, E, is pivoted in bear-

ing *e*, and the other arm, F, has its end pivoted to the end of a sliding bolt, H, which carries the knife K, the said bolt having its supports or bearings in *i'* and a hole, *h'*, in *b*.

The knife is fastened in any desirable manner to the end of the bolt, so that its cutting-edge will project toward the side *d* of the bent end, which serves as an anvil or block against which to cut, and which may be shielded by a veneer block, layer of straw-board, or other means to protect the edge of the knife.

The operation is as follows: When handles *a* and *h* are brought together by grasping them tightly, the link D is brought down, and with it the toggle-jointed lever is straightened, the bolt is forced forward, and the cut is made.

A coiled spring, *x*, serves to withdraw the knife-bolt after the cutting by forcing the handles apart.

It is evident from the construction that the cut of the knife may be readily and easily reversed by simply knocking out pivot-pin *p*, Fig. 1, turning the bolt H half-way round, and reinserting the pin.

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

In a grafting implement, the piece A, provided with handle *a* and bent end *b c d*, and the pivoted jaw or lever B, in combination with the link D, toggle-joint lever E F, sliding bolt H, and a knife, K, substantially as set forth.

CHARLES M. KINGSBURY.

Witnesses:

E. S. CARMICHAEL,
W. C. MURRAY.