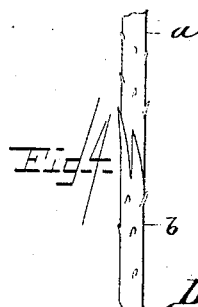
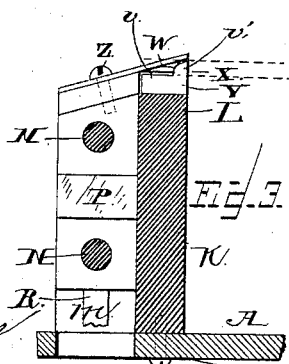
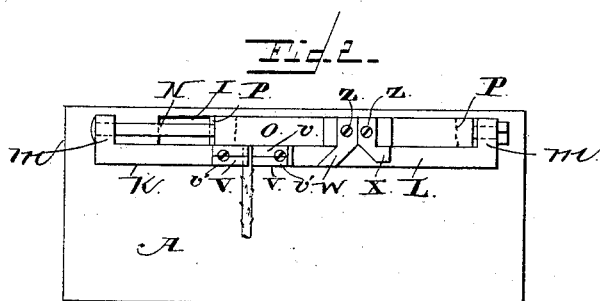
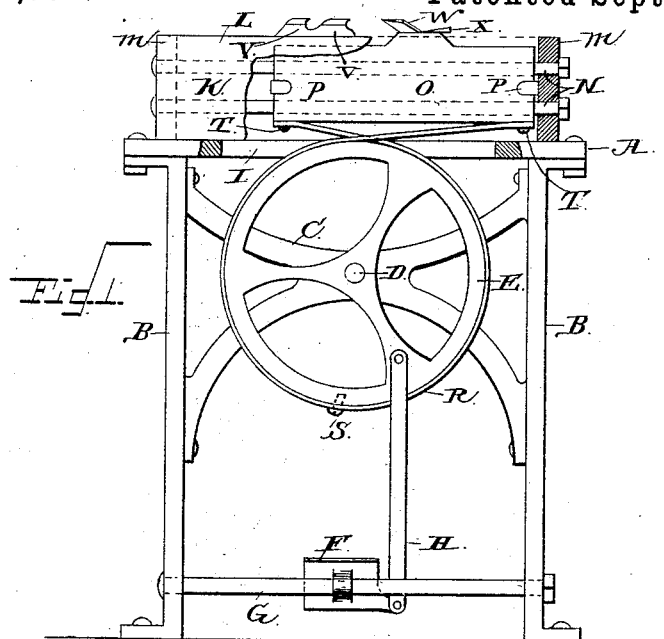


(Model.)

D. B. SPEER.  
GRAFTING MACHINE.

No. 348,592.

Patented Sept. 7, 1886.



Witnesses  
M. E. Fowler

J. W. Garner<sup>I</sup>

Inventor  
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By His Attorneys

C. A. Snowden

# UNITED STATES PATENT OFFICE.

DARIUS B. SPEER, OF BLUE GRASS, IOWA.

## GRAFTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 348,592, dated September 7, 1886.

Application filed February 5, 1886. Serial No. 190,929. (Model.)

### *To all whom it may concern:*

Be it known that I, DARIUS B. SPEER, a citizen of the United States, residing at Blue Grass, in the county of Scott and State of Iowa, have invented a new and useful Improvement in Grafting-Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in grafting-machines for cutting scions and roots, so that they may be spliced together; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is an elevation of a grafting-machine embodying my invention, parts being broken away. Fig. 2 is a top plan view of the same. Fig. 3 is a detailed view. Fig. 4 is a diagram of the splice.

A represents a stand or table having the legs B. A metallic brace or casting, C, is bolted to the legs on the rear corners of the table, and on a stud, D, that projects inwardly from the said casting is journaled a wheel, E.

F represents a treadle, that is journaled on a rod, G, which connects two of the legs of the table. A pitman, H, connects the treadle and the wheel.

I represents a transverse slot that is made in the top of the table, near the rear edge thereof, and K represents a frame on the upper side of the table. This frame consists of a body part, L, arranged on one side of the slot, and end pieces, M, at the ends of the body part and extending across the ends of the slot, as shown at Fig. 2.

N represents guide-rods, that extend across the frame K, above the slot and in a vertical line with each other, the ends of the said rods being secured in the end pieces, M.

O represents a reciprocating cutter head or block, that works on the rods N, being provided with longitudinal openings, through which the said rods pass. In the ends of the cutter-head are recessed buffers P, which are made of rubber or other suitable material.

R represents a strap, which is secured to the periphery of the wheel by a screw, S. The ends of the strap are crossed, as shown at Fig. 1, and are secured to the opposite ends of the

cutter-head by screws T. The upper edge of the wheel and the ends of the straps work in the slot I. The treadle is operated so as to cause the wheel to partly rotate first in one direction and then in the contrary direction, which causes the cutter-head to move back and forth on the guide-rods across the table, as will be very readily understood.

V represents notches on the upper edge of the body part L of the frame K, near the center thereof, to form rests and supports for the scion and root.

On the upper side of the cutter-head, near the center thereof, are secured cutting-knives W and X, by means of set-screws Z. The outer ends of these knives project from the front side of the cutter-head and over the upper edge of the flange L. The knife W is set at an incline, as shown at Fig. 3, so as to make a sloping cut, and the knife X is horizontal, so as to make a split cut. The upper sides of the rests are each provided with a horizontal portion, *v*, for the knife X to pass over, and an inclined outer portion, *v'*, for the knife W to pass over, as shown in Fig. 3. The cutting-edge of the knife W travels in a higher plane than the knife X.

The operation of my invention is as follows: The scion *a* and the root *b* to be grafted together are held in the rests V by the operator, with their ends in the paths of the knives, and the cutter-head is caused to move across the table. As the knives pass over the rests they come in contact with the ends of the scion and root and slope and slit the ends of the said scion and root respectively, to enable them to be spliced together, as shown in Fig. 4.

By changing the construction and arrangement of the knives the machine may be caused to cut the ends of the scions and roots in any manner desired, in order to adapt the machine for making splices in any of the well-known and preferred forms.

Having thus described my invention, I claim—

1. The combination, in a grafting-machine, of the table or stand, the frame provided with the rests or supports, the reciprocally-movable cutter-head, the knives attached thereto, the wheel, and means connecting the said wheel with the cutter-head, to actuate the latter

when the wheel is operated, substantially as described.

2. The combination, in a grafting-machine, of the table or stand, the frame provided with the rests or supports and the guide-rods, the reciprocally-movable cutter-head on the guide-rods, the knives attached thereto, the wheel, and the strap on the said wheel, having its ends crossed and secured to the ends of the cutter-head, substantially as described.

3. The combination, in a grafting-machine, of the table or stand, the frame K, provided with rests or supports and the guide-rods, and the reciprocally-movable cutter-head on the guide-rods, and the knives, substantially as described.

4. The combination, in a grafting-machine, of the table or stand, the frame K, having the

body part L, provided with the rests V, and the reciprocating cutter-head, having the knives that work over the upper edge of the body part, substantially as described.

5. In a grafting-machine, the reciprocating head having the knives X and W projecting from one side, the knife X being horizontal and the knife W being arranged at an angle thereto, in combination with means for reciprocating the head, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

DARIUS B. SPEER.

Witnesses:

F. L. DODGE,  
MOSES E. MOORHEAD.