

S. S. ROCKWELL.

Root Graft Cutter.

No. 21,700.

Patented Oct. 5, 1858.

Fig. 1.

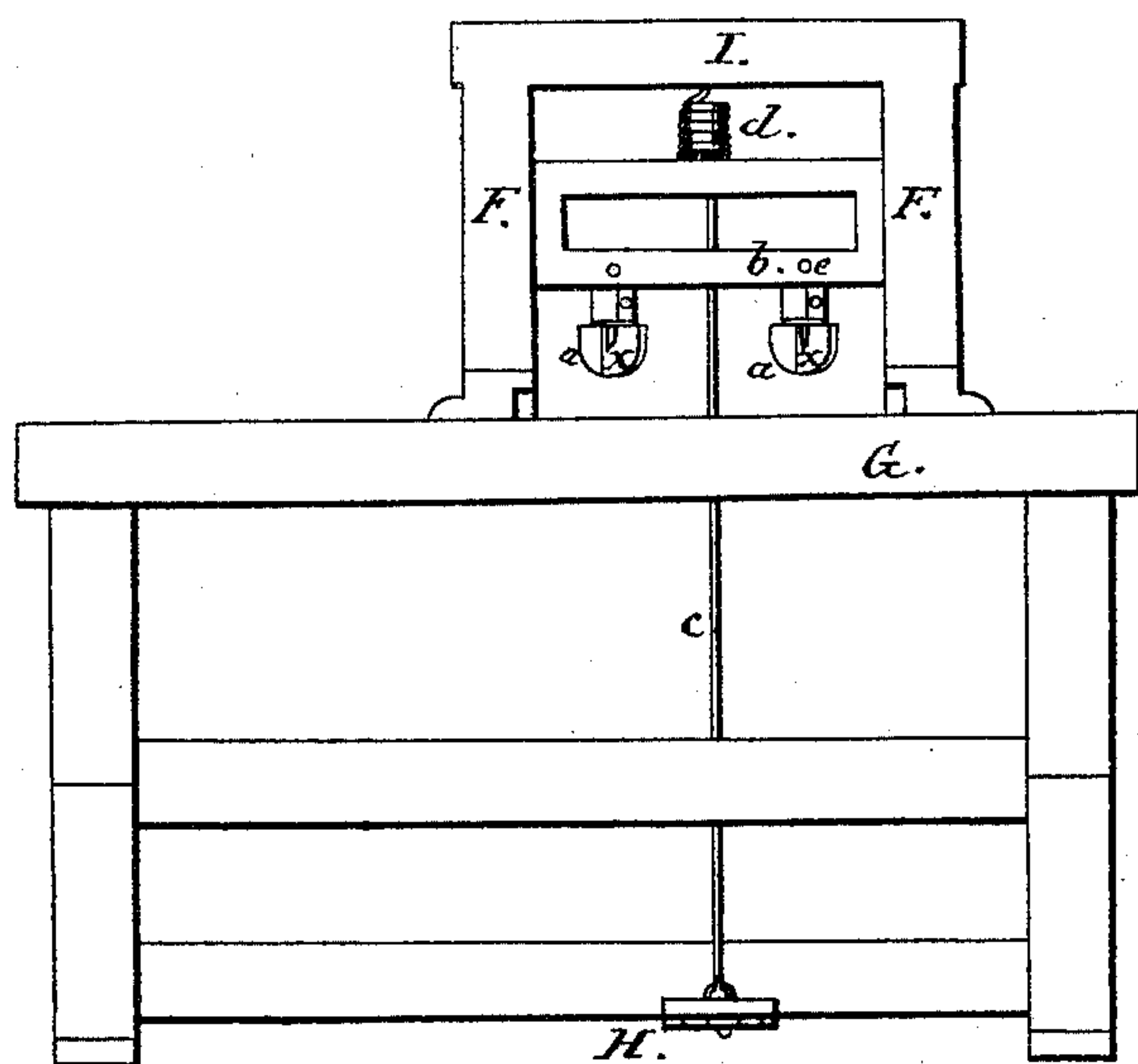


Fig. 2.

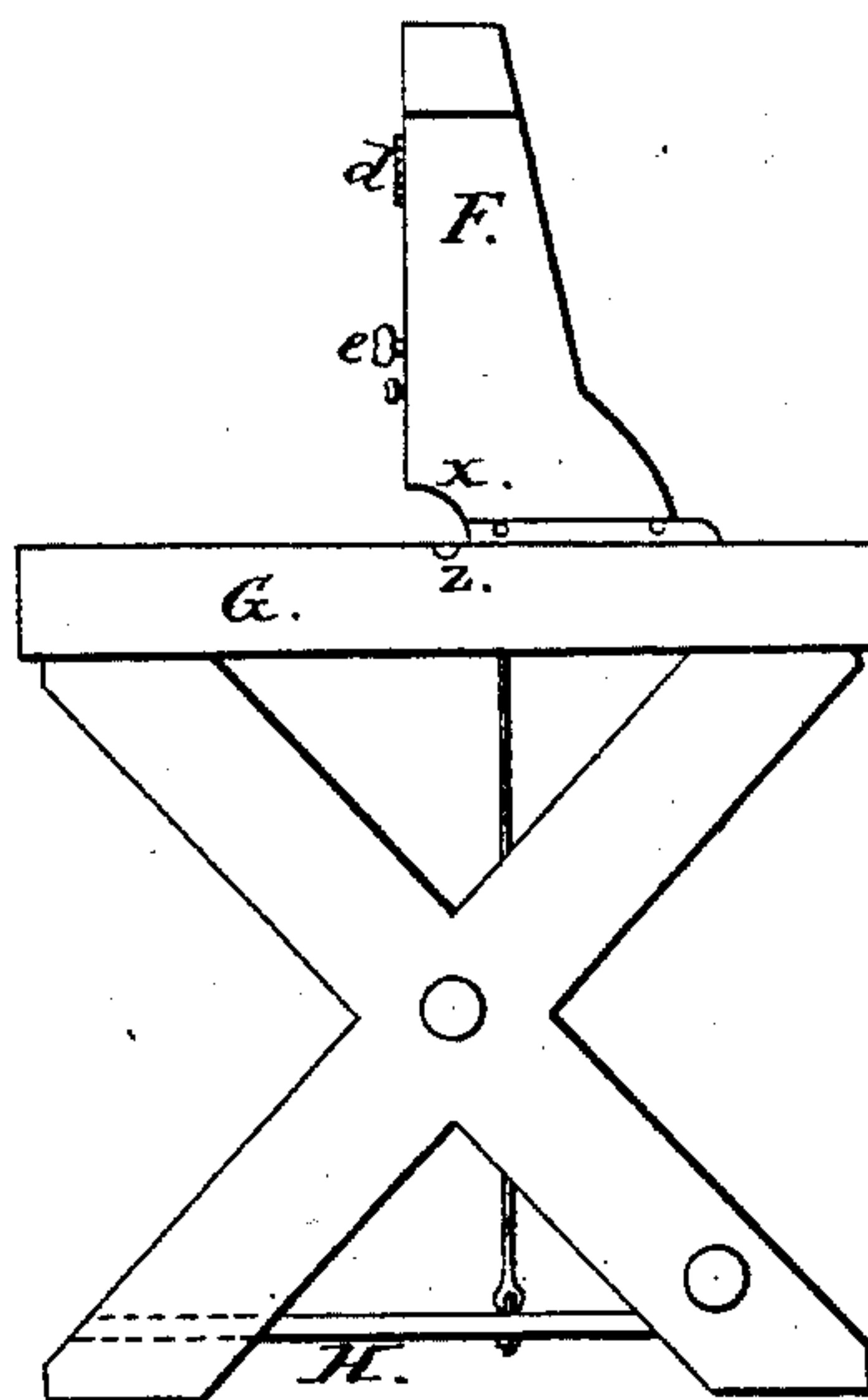
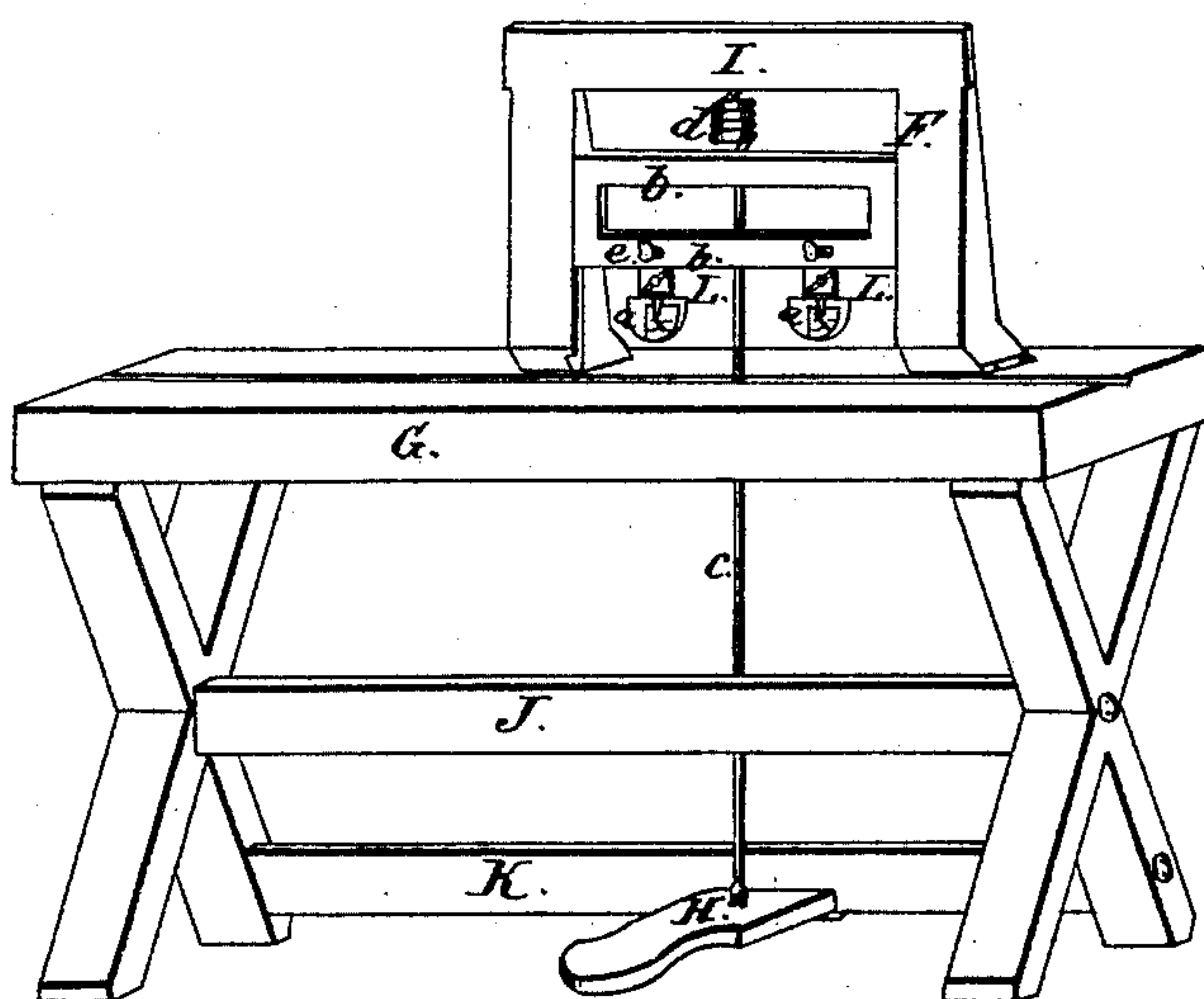


Fig. 3.



UNITED STATES PATENT OFFICE.

SIDNEY S. ROCKWELL, OF VERMONTVILLE, MICHIGAN.

IMPROVEMENT IN MACHINES FOR CUTTING ROOT-GRAFTS.

Specification forming part of Letters Patent No. **21,700**, dated October 5, 1858.

To all whom it may concern:

Be it known that I, SIDNEY S. ROCKWELL, of the township of Vermontville, in the county of Eaton and State of Michigan, have invented a new and useful Machine for Cutting Root Grafts, styled the "Root-Graft-Cutting Machine;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front elevation; Fig. 2, a side elevation; Fig. 3, a perspective view.

The machine consists—

First. Of a table or stand (letter G) two feet four inches in height, twenty inches in width, and thirty inches in length, constructed of any light and durable wood. The legs of the table are strengthened by a wooden cross-bar, J, mortised into the legs at the point where they cross each other. On the top of the table, through the center lengthwise, is cut a groove, *z*, about one-fourth of an inch in width and depth.

Second. On the top of the table, commencing two inches from the right end and with the groove running immediately in front of it, is placed an iron frame-work consisting of two upright posts, F F, six inches in height, one inch in thickness at the top, and increasing in width on the back side to one and a half inch in width at the foot. Said posts are placed eight inches apart from inside to inside, and connected at the top by a cross-bar, I, of iron, of the same size as the top of the posts, the cross-bar and the posts being one solid casting. Said frame-work is attached to the table by flanges, which are a part of the posts and cast with them, and on the outside and back side of them, through which flanges screws are inserted to fasten the frame-work to the table. One inch and a half from the table on the front side of each post commences the arc *x'* of a circle, the center of which is one-half inch from the table with one inch radius. Said arc *x'* extends to the table and strikes the same one-fourth of an inch from the center of the groove *z*.

Third. An iron gate, *bb*, two inches in width from outside to outside, plays up and down

between said posts, by means of a lip on each end of the gate, three-eighths of an inch in width and depth, and fitting grooves made for the purpose on the inside of said posts. The front of said gate is made even with the front of the posts, and directly over the center of the groove in the table. The bars of said gate are three-fourths of an inch square. At the center and on the back side of the upper bar of the gate is a half-circle knob, with three-eighths of an inch radius, to which is fastened an iron rod, C, extending down through the table to a treadle, H, below, to which treadle the rod is fastened. This treadle may be made of wood or iron, and is attached to a cross-bar, K, which is mortised into the legs of the table two and a half inches from the foot. On the top of the gate, and in the center thereof is fastened one end of a spiral spring, *d*, the other end of which is fastened to the under side of the cross-bar I of the frame-work. On the under side of the lower cross-bar of the gate, and one inch and a half from each end thereof, are attached two blades, *a a*, by means of shanks L L, which pass through the bar and are made secure by thumb-screws *e e*. Said shanks are one and a half inch long, the upper one-half, which enters the lower cross-bar, is round and one-half of an inch in diameter, and the lower one-half, to which the blades *a a* are permanently attached, is three-fourths of an inch square. In the center of the lower end of each shank is permanently attached a semicircular blade, *aa*, with one and a half inch radius. There are two other blades, *x x*, called "movable" blades, belonging to the permanent blade, which are attached to the shanks L L, one on each side of the permanent blades *aa*. The shanks of these movable blades *x x* enter an orifice made for that purpose in the lower end of shanks L L, and are made secure by means of thumb-screws *s s*, which enter the shanks from opposite sides. The movable blades *x x* may be placed at such angles with the permanent blades *a a* as the operator may desire. The movable blades *x x* are one and three-eighths inch long and one-half of an inch in width, and extend down to one eighth of an inch of the lower edge of the permanent blades *a a*. The outer edge of the movable blades *x x* is slightly rounding.

One of the movable blades to each permanent blade is called the "tongue-blade," and is made with a triangular shoulder, which rests upon the permanent blade *a a*, so as to prevent the edge of the movable blades *x x* from turning down against the permanent blades *a a*.

To use said machine, the operator places it before him, takes his seat, places his foot upon the treadle *H*, the root or scion to be cut is placed in the groove in the table directly under the blades, then a motion of the foot downward brings down the gate, and the root or scion is cut in the manner required for graft-

ing. Then by removing the foot from the treadle *H* the spiral spring *d* brings up the gate to its former position.

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement of the shanks *L L* and blades *a a*, and movable blades *x x* in the manner herein specified, and for the purpose set forth.

SIDNEY S. ROCKWELL.

Witnesses:

HOMER G. BARBER,
F. A. CHURCH.