

C. B. Rogers,

Mortising Machine,

No. 18,521,

Patented Oct. 27, 1857.

Fig. 1

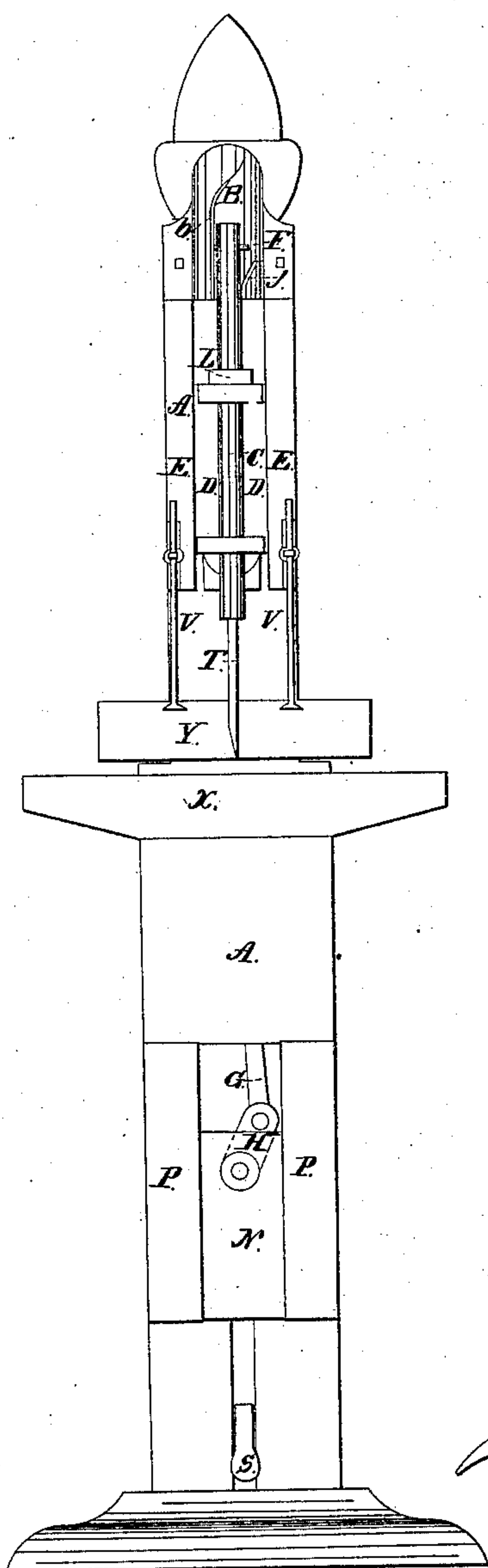


Fig. 2

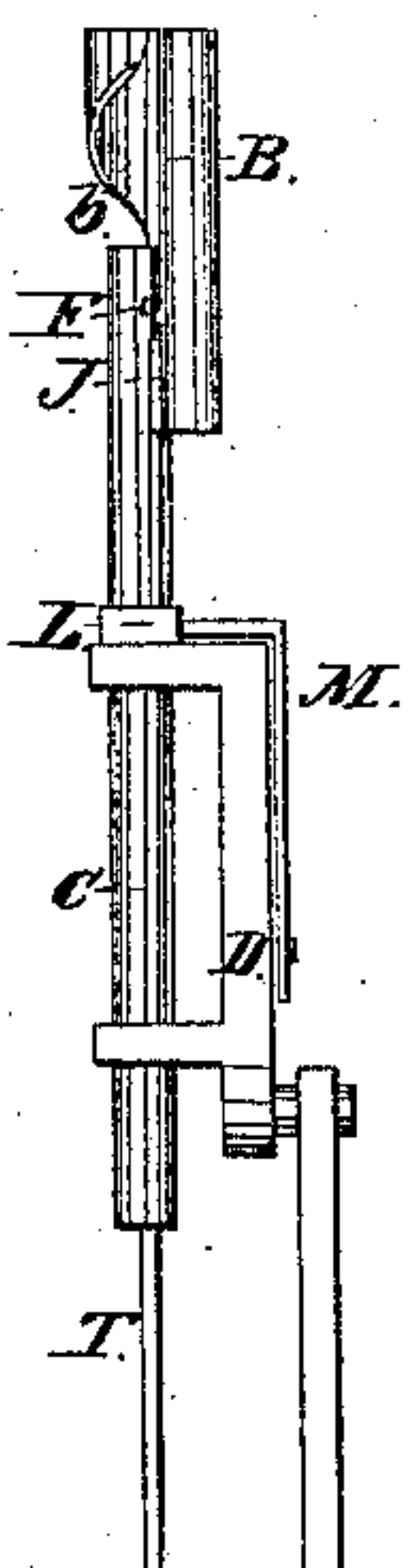
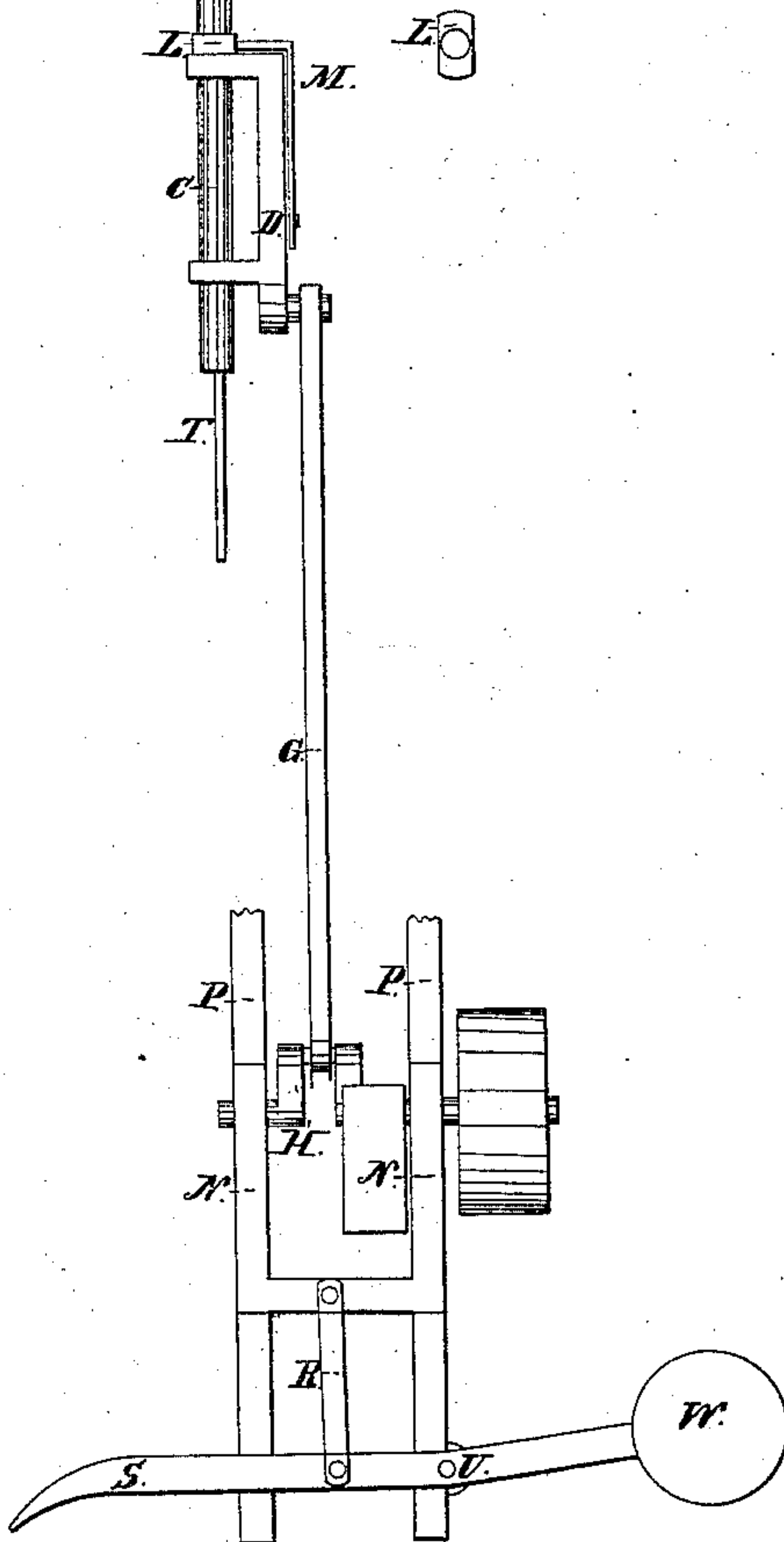


Fig. 3



UNITED STATES PATENT OFFICE.

CALEB B. ROGERS, OF NORWICH, CONNECTICUT.

DEVICE FOR REVERSING THE CHISEL IN MORTISING-MACHINES.

Specification of Letters Patent No. 18,521, dated October 27, 1857.

To all whom it may concern:

Be it known that I, CALEB B. ROGERS, of Norwich, in New London county and State of Connecticut, have invented a new and useful Improvement in the Mortising-Machine; and I do hereby declare that the following is a clear and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

My improvement consists in the peculiar construction and application of a spiral way or guide, acting on a reversing check pin, to reverse the position of the chisel or mortising tool, for cutting opposite ends of the mortise.

Figure 1 is a front surface view of the machine. A, A, is an iron pedestal or case, inclosing and sustaining the principal working parts thereof. Fig. 2 is a side view of the working parts, mostly divested of the case or stock. The construction and action of this is nearly similar in character to such as are in general use. But the device for sustaining the tool in its proper angular positions, while at work and also to reverse its position when required in changing from one end of the mortise to the other, possesses peculiar features of novelty and utility and may be described as follows:

C is the shaft or spindle holding the chisel T, and is carried by a sliding stock D which reciprocates vertically within the ways E, E, it being connected by the sweep or connecting rod G, to the crank H. A sliding check pin F passes through the spindle C so as to project on one side about one-quarter of an inch, but so adjusted that it may be pressed in, and project in like manner from the opposite side. The check pin being acted on by a spring within the cavity through which it passes, in such manner that it cannot change its position therein, without some adequate normal force acting therein.

B is a vertical way or plain guide along which the check pin passes freely, while the spindle is forced up and down.

J is a check guide whose face is set perpendicular to the plane of the former guide B, and acts against the end of the check pin, whenever that pin passes so low in its traverse as to reach it; and since one end of this guide is in contact with the shaft while it diverges upward therefrom at an acute angle the sliding check pin will be forced inward where brought down and will

project from the opposite side, or so as to slide along the guide or way b, the spindle still maintaining the same angular position as before while acting along the lower or plane part of this guide. The upper part of this guide is curved spirally, in such manner that by its action on the check pin when in contact therewith it will cause the shaft to perform one half a revolution while passing to the vertice, and will bring the check pin again in contact with the plane guide B along which it will traverse, the chisel having been by this action completely reversed, so that having completed the mortise at one end it is now in action to complete the other end.

L is a check collar, attached firmly to the spindle, a horizontal section of which is shown at Fig. 3. A stiff spring M, Fig. 2, is set so as to act with some force against this collar, so that when pressing against one of the parallel plane sides it will tend to hold it in place and prevent it from turning easily.

The stock N holding the driving shaft and crank may be moved vertically in guides P, P and is connected by straps R, to a foot lever S, whose fulcrum is at u, and the whole including the sliding stock D, is balanced by the weight W, so as to incline to remain upward; but by pressure on the front of the lever by the foot, the whole may be brought down to any proper position required in the act of forming a mortise; and the vertical position of this action can at any time be varied by varying the position of the lever.

X is a joist forming a bed on which the piece to be mortised is placed. This can be moved upward or downward and may be sustained by bolts or clamps in any required position.

Y is an adjustable guide which may be set to agree with the dimensions of the stuff, and to bring the mortise at the proper distance from the edge.

V, V, are check rods to be set down on the article to be mortised, to prevent its rising with the tool while in the process of mortising.

The proper action of this machine is as follows, viz: Having adjusted the height of the bed x, so that when the tool T reaches the bottom of the mortise the check pin shall come in full contact with the changing guide J, the timber to be mortised is in-

serted while the foot lever is elevated so as to allow the chisel to act on the upper surface, and the lever may be forced down by the foot as the mortise progresses the attendant moving the timber laterally under the tool, and when the bottom is reached, and the end of the mortise is completed, the check pin being at the same time forced into the spindle on the right side and made to project therefrom on the opposite side, so that when the foot is removed from the lever the whole is forced upward, and by the action of the spiral guide *b*, on the pin F, as it approaches the vertex, the spindle and consequently the chisel T, will be reversed and by the action of the spring M, Fig. 2,

on the check collar, and by the contact of the check pin along the plane guide B, it will be held in this position while cutting the reverse end of the mortise; and when completed, the position of the tool may in like manner be again changed if desired.

What I claim as my invention and for which I solicit Letters Patent is—

The application of the sliding check pin F and the check guide J and the spiral reversing guide B to the objects and for the purposes set forth.

CALEB B. ROGERS.

Witnesses:

GEO. W. ROGERS,
N. SCHOFIELD.