S. GULICK.

LIFTING JACK.

No. 62,193. Patented Feb. 19, 1867.

Fig: 1.

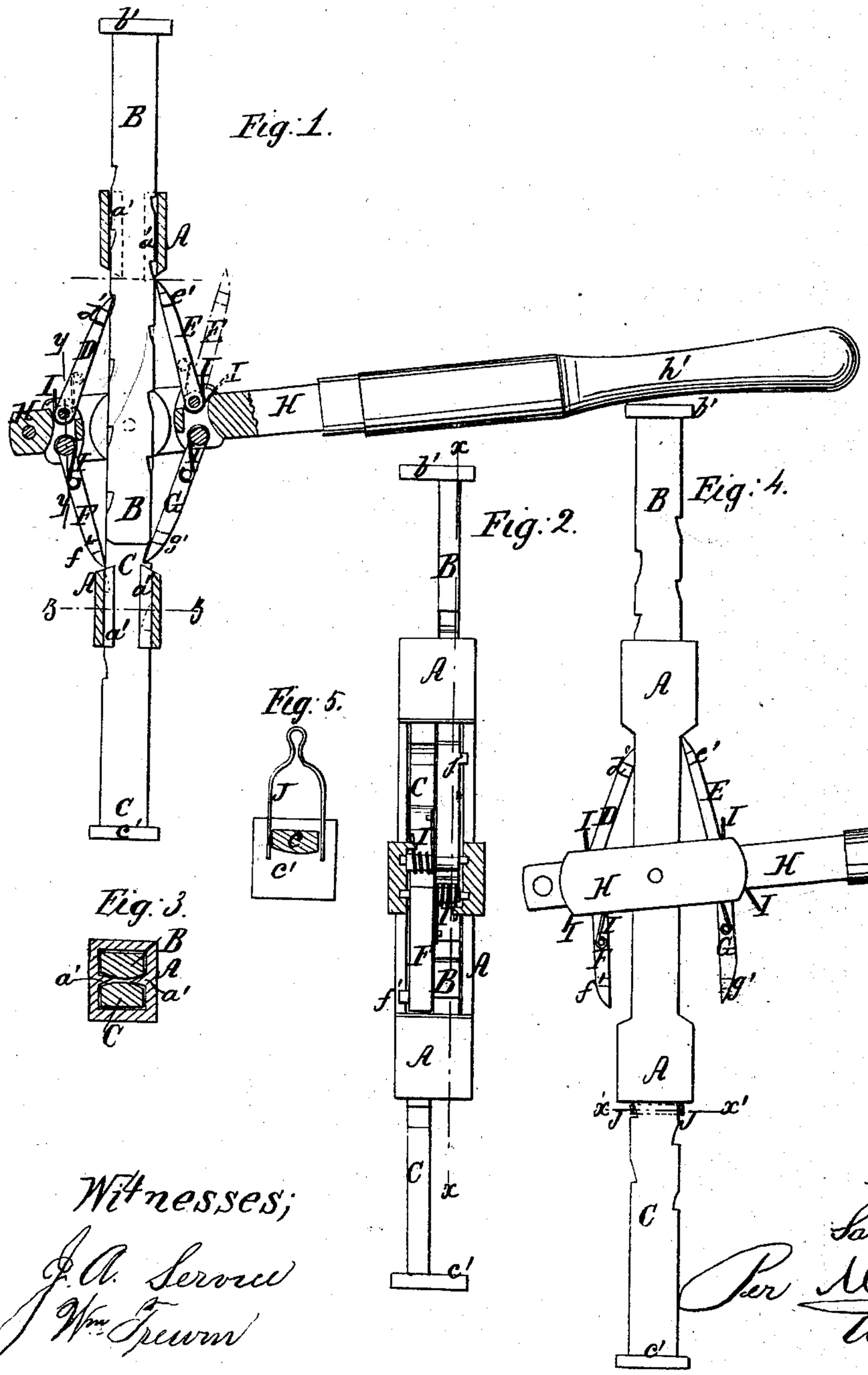

Fig: 2.

Fig: 4.

Fig: 5.

Fig: 3.

Witnesses;

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SAMUEL GULICK, OF KLINE'S GROVE, PENNSYLVANIA.

Letters Patent No. 62,193, *dated February* 19, 1867.

IMPROVEMENT IN LIFTING-JACKS.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL GULICK, of Kline's Grove, in the county of Northumberland, and State of Pennsylvania, have invented a new and improved Lifting-Jack; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical section of my improved lifting-jack taken through the line *x x*, fig. 2.

Figure 2 is a front view of the same, partly in section, through the line *y y*, fig. 1.

Figure 3 is a detail cross-section of the same taken through the line *z z*, fig. 1.

Figure 4 is a side view of the same showing the key in place.

Figure 5 is a sectional view taken through the line *x' x'*, fig. 4, showing the form of the key.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved lifting-jack so constructed as to be adapted to raising heavy machinery, as well as carriages and wagons, and at the same time be capable of raising them to a considerable height; and it consists of an improved lifting jack formed by the combination of notched bars, adjustable pawls, springs, operating lever, and box or frame, with each other, the whole being constructed and arranged as hereinafter more fully described.

A is the box or frame in which the notched bars B and C work. The middle parts of the front and rear sides of the box A are cut away, as shown in figs. 1, 2, and 4, for the reception of the pawls D, E, F, and G. The interior of the box A is formed into two grooves or slides for the bars B and C by inwardly projecting central flanges, *a'*, as shown in figs. 1 and 3. B and C are the sliding or lifting-bars, the edges of which are notched so as to enable the pawls to take hold of them; and upon the outer ends of said bars are formed heads, *b'* and *c'*, corresponding in shape and size to the ends of the box A, as shown in figs. 1, 2, and 4. These bars slide up and down freely in the channels or slides formed for their reception in the interior of the box A, as before described. H is the operating lever, which has a slot formed through its forward end, through which the box A passes, and to which the sides of the said box are pivoted at their middle points, as shown in fig. 1. For convenience in attaching the other parts the lever H may be made in two parts, which may be riveted to each other or otherwise securely attached. *h'* is a handle formed upon or attached to the free end of the lever H for convenience in operating it. The pawls D, E, F, and G, are pivoted in the front and rear ends of the slot, in the end of the lever H, in such positions that the forward ends of the pawls D and E may alternately enter the notches in the opposite side edges of the sliding-bar B; and the forward ends of the pawls F and G alternately enter the notches formed in the opposite edges of the sliding-bar C, as shown in the drawings. *d'*, *e'*, *f'*, and *g'* are lugs formed upon the edges of the pawls to prevent them from dropping into the interior of the box A when the bars B and C are removed. The pawls are held up against the bars B and C by the springs I, which are coiled around the pivoting arms of the said pawls. One end of the springs I is attached to the side of the pawls and the other ends rest in notches formed in the inner edges of the lever H. Two notches are formed for the end of each spring, as shown in fig. 1, and the said end of the spring is moved from one to the other of these notches, as desired. When the end of the spring rests in the forward notch, as shown in black lines in fig. 1, the pawl is held forward against the sliding-bar, but when the end of the spring rests in the rear notch, as shown in red lines in fig. 1, the pawl is thrown out of gear with said bar, as shown.

In using the machine, the bars B and C are adjusted to the height of the object to be raised; then, by working the lever H up and down, the bars are forced out by the pawls and the object raised; or, one of the bars only may be drawn out to adjust the machine and secured in place by placing the key J around it at the end of the box A in such a position that one of its legs may enter one of the notches on the edge of said bar, as shown in fig. 4. The pawls that operate this bar are then thrown out of gear with it, and the other bar forced out by operating the lever H. By throwing this set of pawls out of gear, and pressing them alternately against the bar while operating the lever, the bar may be again drawn in, lowering the object raised to its former position. By withdrawing the bars B and C, and reversing one of them so that the pawls may act upon it to draw

it in, the jack may be used as a wrench the nut or other object to be operated upon being held between the end of the box A and head of said bar.

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

The bars B C, sliding in opposite directions, pawls D F and F G, lever H, and springs I, constructed and arranged and operating as herein set forth.

The above specification of my invention signed by me this 10th day of September, 1886.

SAMUEL GULICK.

Witnesses:

WM. REED,

WM. C. REED.