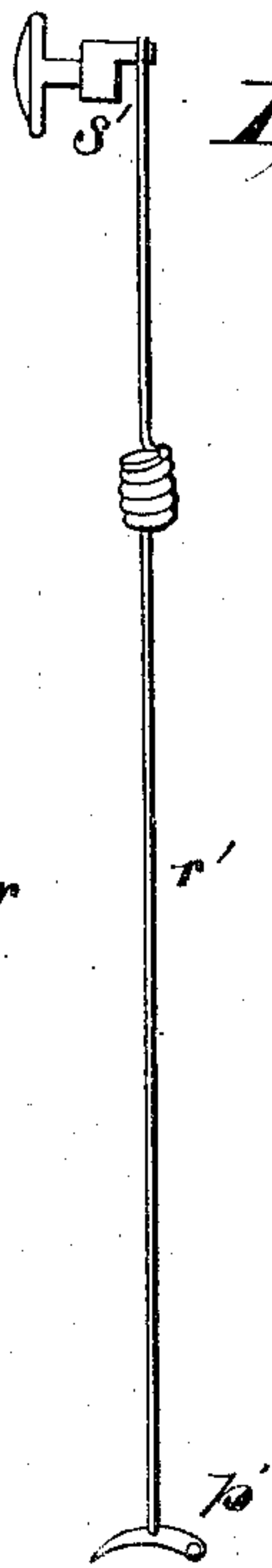
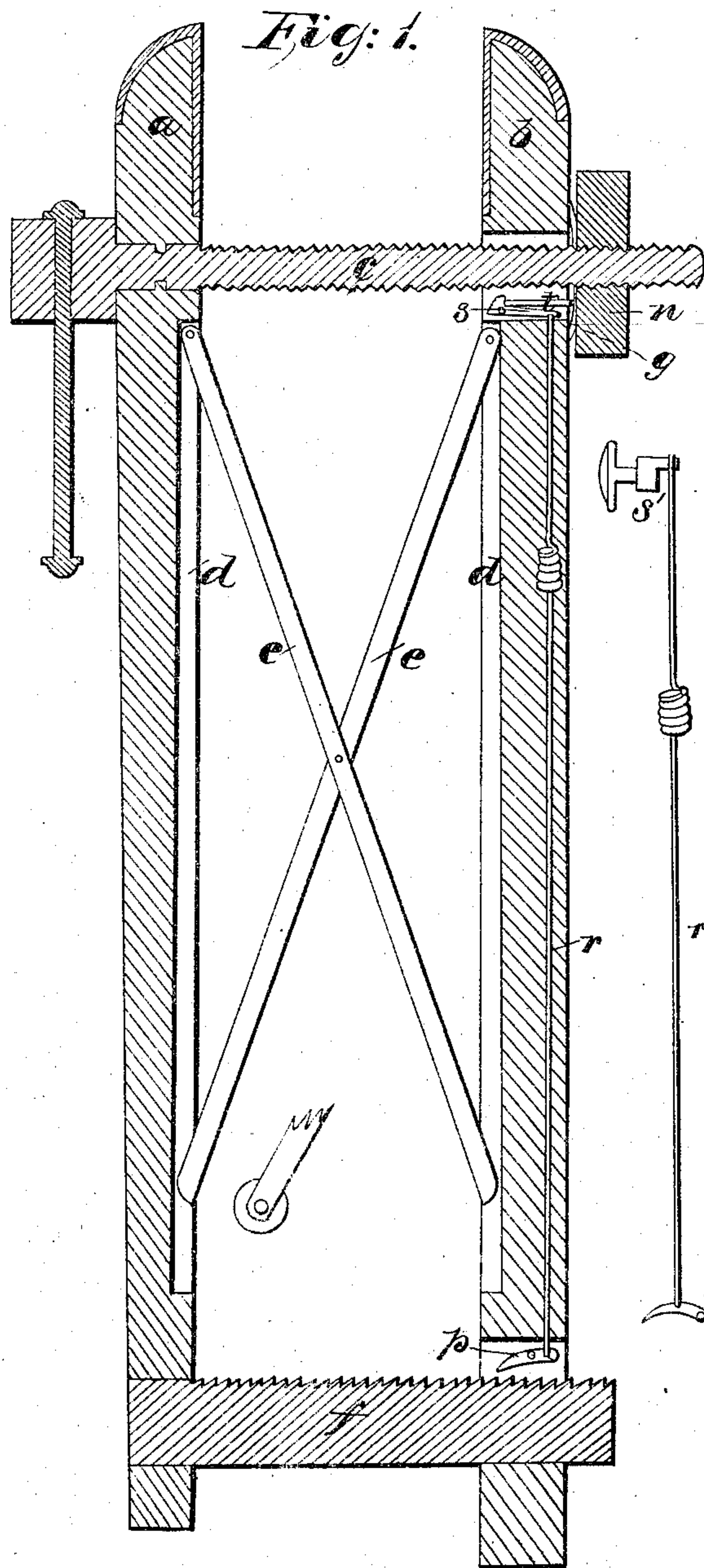


W. H. TAYLOR & A. P. NORTON.

Vertical Saw Vise.

No. 4,053.

Patented May 16, 1845.



UNITED STATES PATENT OFFICE.

W. H. TAYLOR, OF ROCHESTER, AND ANSON P. NORTON, OF WATERVILLE, NEW YORK.

PARALLEL BENCH-VISE.

Specification of Letters Patent No. 4,053, dated May 16, 1845.

To all whom it may concern:

Be it known that we, W. H. TAYLOR, of Rochester, in the county of Monroe and State of New York, and ANSON P. NORTON, of the town of Waterville, in the county of Oneida and State of New York, have invented a new and useful Improvement in the Common Vise; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of the same, in which—

Figure 1, is a vertical section. Fig. 2, a detached apparatus showing a modification for moving the pawl that holds the lower ends of the jaws a proper distance apart.

The invention consists in an addition of a jointed cross lever placed between the jaws for opening them parallel and an apparatus for holding the lower ends of the jaws a proper distance apart when anything is gripped between them while they are allowed free play to approach or recede from each other when not gripping.

The jaws *a*, *b*, and screw *c*, are made like those of a common bench vise of wood or metal, in the inner faces of said jaws below the screw there are grooves *d*, plowed nearly down to the bar *f* below; in the grooves above named (one in each jaw) are jointed by their upper ends two steel or other metal bars *e*; these cross each other and are jointed at their center so that when their upper ends are opened by the screw in the jaws, their lower ends are also opened in the same proportion, sliding up in the grooves above named, and clearly shown in Fig. 1; as the jaws are screwed toward each other the levers or bars *e*, close in at the bottom, and allow the lower end of the movable jaw *a*, to follow in equally; the bar *f* at the lower end is toothed like a rack on its upper edge, and the motion in the stationary jaw *b*, through which it slides is long enough to receive a pawl *p*, above it; to the short arm of this pawl, opposite the click, a small rod of wire *r*, is attached that extends up to near the screw *c*, it having two or three spiral turns in the middle of its length to render it elastic; the upper end of this rod is affixed to the long arm of a small lever *s*, which is in a horizontal po-

sition under the screw; a short arm of this lever turns up at right angles from its fulcrum and a short rod *t*, bears against it; this rod *t*, projects a little beyond the outside of the stationary jaw and is connected with a spring *q* that keeps it out and also bears off the nut *n*, on the screw, from the jaw, when not gripping—in this position (as shown in the drawing) the pawl is raised so as to allow the rack *f*, to move back and forth in the mortise but when anything is pinched in the vise, the nut *n*, is drawn up against the stationary jaw, and the rod *t*, is pushed in against the lever *s*, which raises its long arm causing the click of the pawl to descend and catch in the rack and thus prevent its moving in while in operation—as soon as the jaws are relieved the parts resume the position shown in the drawing, and the rack can be moved out or in till something else is gripped; this takes place at whatever distance the jaws may be apart.

If it is not desired to have the rack and pawl self operating as above described, the pawl may be connected by the rod *r'* see Fig. 2, with a button or axle *s'*, on one side of the vise near the top which can be turned by hand. There is a variety of ways for arranging this but we deem none of them essential.

What we claim as our invention and desire to secure by Letters Patent is—

1. The combination of the cross levers *e*, with the rack *f*, and pawl *p*, substantially as herein described; we do not wish to be understood as claiming this apparatus for a parallel motion but in combination with the bench vise as described we believe it to be new.

2. We also claim the combination of the pawl *p*, for holding the rack, with the nut on the screw of the vise, so that when the nut is pressed up in gripping anything between the jaws the pawl will act, and brace the lower end of said jaws, in proper position.

W. H. TAYLOR.
A. P. NORTON.

Witnesses:

LAFAYETTE CALDWELL,
T. C. DONN.