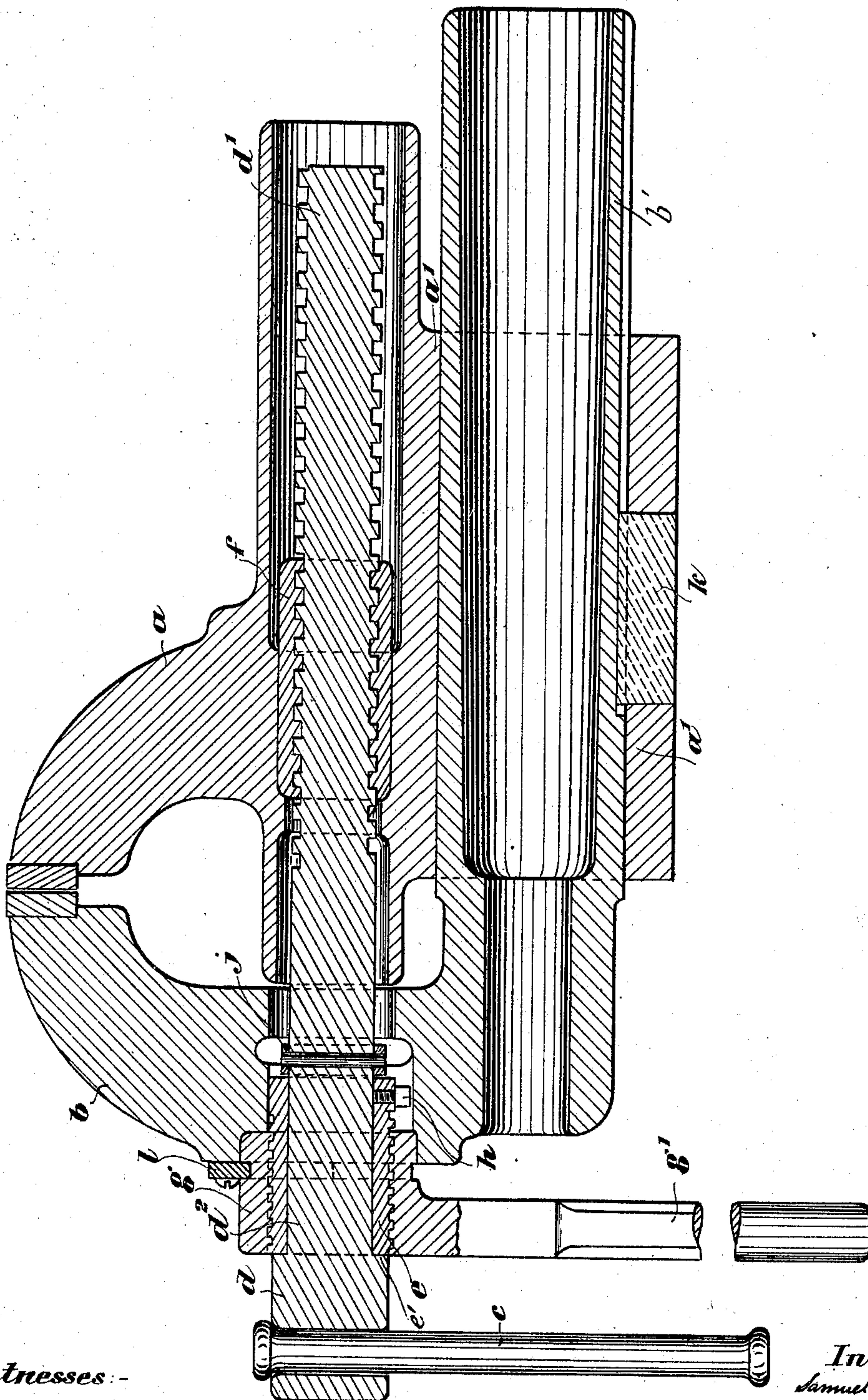


(No Model.)

S. HARRISON.
PARALLEL VISE.

No. 584,872.

Patented June 22, 1897.



Witnesses:-

Arthur Woodman.
Oliver Henry Pocock

Inventor
Samuel Harrison.

per
John W. O'Donnell
Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL HARRISON, OF RIPON, ENGLAND.

PARALLEL VISE.

SPECIFICATION forming part of Letters Patent No. 584,872, dated June 22, 1897.

Application filed October 31, 1896. Serial No. 610,776. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HARRISON, a subject of the Queen of Great Britain and Ireland, residing at Kirkgate, Ripon, in the county of York, England, have invented a new and useful Improvement in Parallel Vises, of which the following is a specification.

This invention has reference to improvements in parallel quick-acting vises, so as to secure a firmer grip without sacrificing speed in opening or closing the jaws.

The ordinary quick-acting vises used in fitting-shops are not found suitable for holding articles which require large pieces to be cut off them by the act of chipping, the vibration from this operation being sufficient to slacken back the quick-pitched screw or cam in its nut, thus causing failure to hold the work securely.

In order to quicken the speed of the movable jaw, I make the main screw of quick pitch, and I fit at its end a short handle instead of the longer one usually fitted, the said short handle being found to provide sufficient leverage for holding articles for filing or scraping. The novel feature of my invention, however, consists in fitting the main screw with a sleeve for operations requiring greater holding power than is obtained by the ordinary vise, the said sleeve being prevented from rotation in the sliding jaw by means of a feather. The remainder of the outside of this sleeve is cut with a screw-thread of finer pitch than the main screw, and a screwed nut provided with a handle enables the sliding jaw to be closed or opened over a short distance, the action of moving the said handle acting as a kind of locking-nut or double security for keeping the movable jaw in a fixed position.

A slight depression of the handle and screwed nut is all that is requisite for securely fixing the work in the vise.

My invention may be applied to vises of various kinds.

In order that my invention may be better understood and more readily carried into effect, I will describe it with reference to the accompanying drawing.

The drawing illustrates a longitudinal sec-

tion through the center of a parallel vise, illustrating its application for a fitting-bench.

In the figure, *a* is the fixed or permanent jaw.

b is the movable jaw, provided with a shank *b'*, sliding through the barrel *a'* of the fixed jaw.

c is the short handle.

d is the spindle or main screw, the end *d'* being cut with a quick-pitch screw-thread, the part *d''* working loose through the sleeve *e*. *f* is a screwed collar. The end of the screwed sleeve *e* at the outside is of finer pitch than the main screw *d*.

g is a nut terminating in the handle *g'*, working round the screwed sleeve *e*.

h is a feather, the head being in a recess cut in the movable jaw *b*, to prevent the screwed sleeve *e* from rotating.

j is a collar secured on the main screw for the rear end of the sleeve to bear against. The front end of the sleeve *e* bears against a shoulder *e'* on the screw.

l is a plate secured to the jaw *b* and engaging with a circumferential groove in the nut *g*, thereby preventing it from moving longitudinally.

k is a key secured in the barrel *a'* and engaging with a longitudinal groove in the shank *b'*, so that the jaw *b* is held opposite the jaw *a*.

Briefly the working of my invention is as follows: The drawing shows the jaws closed. For the purpose of opening them the handle *c* is rotated and the movable jaw *b*, together with the parts connected therewith—that is, the nut *g*, handle *g'*, and sleeve *e*—move away from the fixed jaw *a*. When an article is placed between the jaws and it is required to get the extra gripping power, the handle *g'* of the nut *g* is slightly revolved, working round the screwed sleeve *e* and forcing the loose jaw *b* tighter to the fixed jaw *a*.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a vise, the combination, with a movable jaw, and its actuating-screw; of an externally-screw-threaded sleeve journaled on the said screw and splined to the said jaw,

a nut provided with an operating-handle and engaging with the said sleeve, and means for preventing the said nut from moving longitudinally with respect to the said jaw, substantially as set forth.

2. In a vise, the combination, with a movable jaw, and its actuating-screw; of an externally-screw-threaded sleeve journaled on the said screw and splined to the said jaw, the said screw being provided with a shoulder and a collar to prevent the said sleeve

from moving longitudinally on it, a nut provided with an operating-handle and engaging with the said sleeve, and a plate secured to the said jaw and engaging with a circumferential groove in the said nut, substantially as set forth.

SAMUEL HARRISON.

Witnesses:

GEORGE HENRY HARRISON,
MATTHEW BURTON.