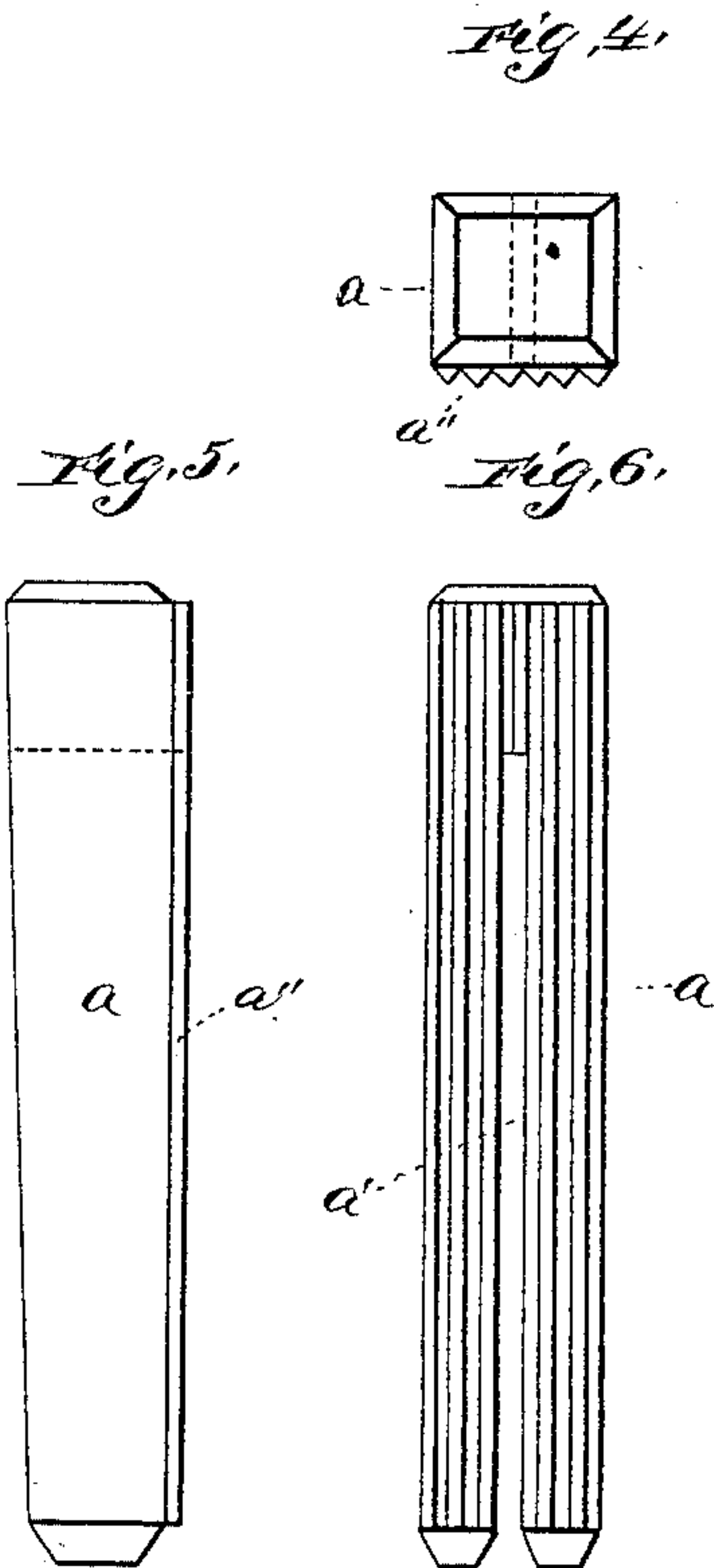
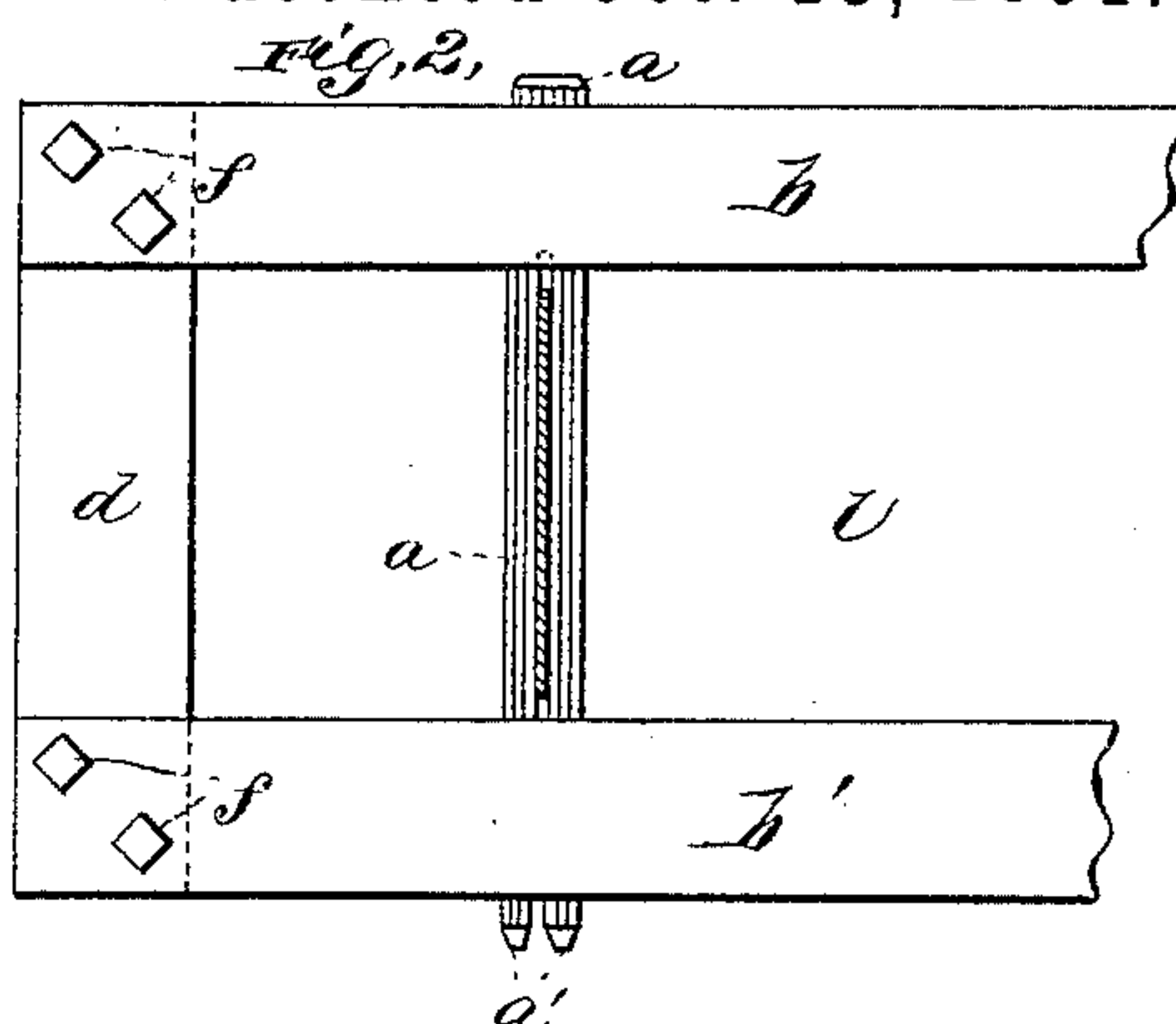


C. L. WALTER.  
STONE SAWING MACHINERY.

Patented Oct. 13, 1891.



*Inventor:*

K. O. Wilson  
H. J. Simon

Charles Louis Walton

# UNITED STATES PATENT OFFICE.

CHARLES LOUIS WALTER, OF KANSAS CITY, MISSOURI.

## STONE-SAWING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 461,123, dated October 13, 1891.

Application filed February 24, 1891. Serial No. 382,502. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LOUIS WALTER, a citizen of the United States, residing at Kansas City, county of Jackson, and State of Missouri, have invented a new and useful Improvement in Stone-Sawing Machinery, of which the following is a specification.

My invention relates to improvements in stone-sawing machinery in which a number of independently-adjustable slotted keys are used in conjunction with a stationary slotted frame-work fastened to both inner sides of the cross-heads of the saw-sash; and the objects of my invention are, first, to secure and retain a perfectly vertical position for the saw-blades, and, second, to facilitate the proper spacing of the saw-blades while the same are being set. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the mechanism, showing also a section through a portion of the usual channel-iron cross-head of a saw-sash. Fig. 2 is a front view of one end of the mechanism, showing a key in position straddling a saw-blade. Fig. 3 is a top view of one end of the mechanism, showing also a portion of the usual channel-iron cross-head and side piece of a saw-sash, and also two saw-dogs and a portion of two saw-blades with two keys in position. Figs. 4, 5, and 6 are respectively enlarged top, front, and side views of a key.

Similar letters refer to similar parts throughout the several views.

The frame-work of my invention is composed of two front horizontal bars *b* and *b'*, having on their inner sides a series of regularly-spaced vertical V grooves or notches *b''*, and of two rear horizontal bars *c* and *c'*, with smooth inner sides, all rigidly fixed by means of the bolts *f* to two vertical spacing-bars *d*, thereby forming an upper horizontal slot *m* and a lower horizontal slot *m'* for the reception of a vertical key *a*, hereinafter described, and forming, further, a space *l* between the upper and lower pair of horizontal bars, through which the ends of the saw-blades *e* are passed when setting same. The vertical spacing-bars *d* are slightly tapering in thickness, causing the slot *m*, formed by the two upper

bars *b* and *c*, to be somewhat wider than the slot *m'*, formed by the two lower bars *b'* and *c'*.

The keys *a*, of which there may be any number, have on their front faces a series of V grooves or notches *a''*, corresponding inversely in spacing and contour with the V grooves or notches *b''* of the inner faces of the two front horizontal bars *b* and *b'*. The back faces of the keys *a* are smooth and are tapered in thickness to correspond with the taper of the spacing-bars *d*, thereby causing the keys *a*, when placed vertically and lowered in the horizontal slots *m* and *m'*, to gradually engage its grooved front face with the grooved inner faces of the horizontal bars *b* and *b'*, assuming when down in place a stationary vertical position. The keys *a* are slotted from front to back for a greater portion of their length, forming the slot *a'*, with which to closely straddle and hold vertically the saw-blades *e*.

The frame-work of my invention, as before described, may be fastened to the cross-head or the side pieces of the saw-sash by any suitable device.

I prefer to fasten the frame-work, as described, to the usual channel-iron cross-heads of the saw-sash by the device shown, though I do not claim same, in which the hanger *g* is fastened to the sides of the frame-work by means of the bolts *f'*, and also fastened to the clamps *h* by means of the bolts *g'*, which clamps *h* are fastened to the channel-irons *k* of the cross-head by means of the locked bolts *h'*.

In saw-gangs where the cross-heads are made of wood the hanger *g* can be fastened directly to the sides of same by means of the bolts *g'*.

I operate my invention as follows: The ends of the saw-blades *e* are drawn through the space *l*, formed by the upper and lower horizontal bars, and held loosely in place by the saw-dogs *e'*. After the permanent position of the saw-blade has been determined the saw-blade is momentarily held in position by hand, and the slotted key *a* is let down in the upper slot *m* between the two upper bars *b* and *c*, with its grooved face toward the correspondingly-grooved inner face of the bar *b* directly over the saw-blade, which latter it



straddles closely, and is then allowed to further drop, or by slight hammer blows driven into place, so that the grooves *a''* at its lower face engage with the corresponding  
5 grooves *b''* on the inner face of the lower bar *b'*, thereby securely holding the saw-blade *e* in a permanently vertical position and preventing it from moving out of its proper position sidewise during the tightening of same.  
10 The saw-blades can then be strained to a proper tension without their either losing their vertical position or their sidewise adjustment.

Having described my invention, what I

claim, and desire to secure by Letters Patent, is—

In stone-sawing machinery, the combination of a stationary frame-work having an upper and a lower horizontal slot, the front bars of both slots having regularly-spaced grooves on  
20 their inner sides, with a number of adjustable slotted vertical keys having corresponding grooves on front faces of same, as described.

CHARLES LOUIS WALTER.

Witnesses:

OTTO W. KUNTZ,  
ROBT. BECKER.