

H. BARRON.

MACHINES FOR JOINTING SAWS.

No. 182,266.

Patented Sept. 19, 1876.

Fig 1.

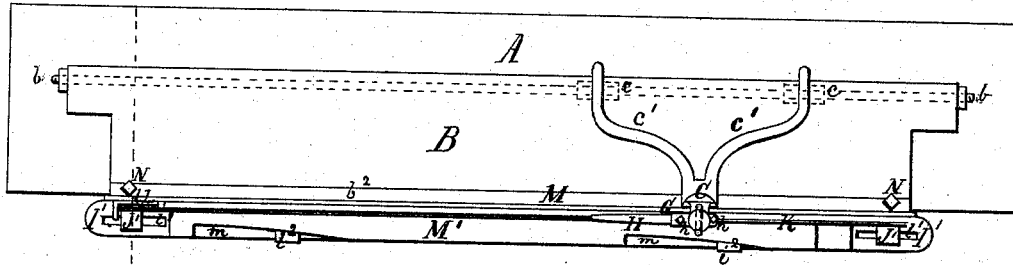


Fig 2.

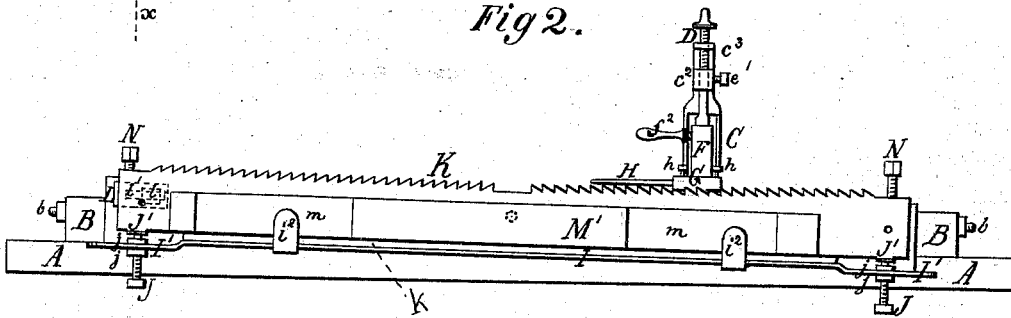


Fig 3.

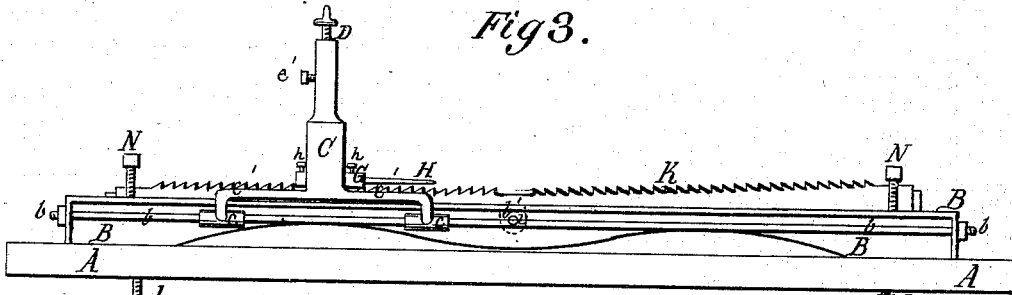


Fig 4.

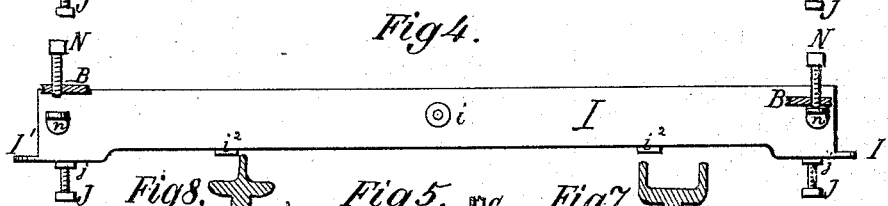


Fig 5.

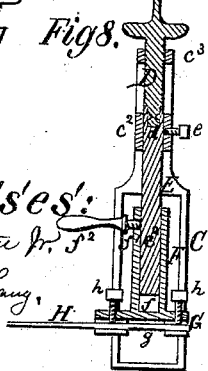


Fig 6.

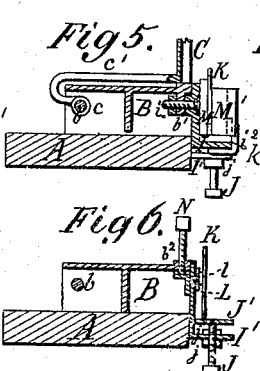
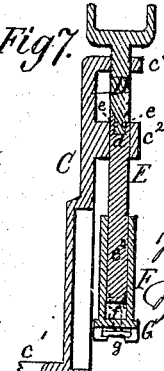


Fig 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

HORTON BARRON, OF EAU CLAIRE, WISCONSIN.

IMPROVEMENT IN MACHINES FOR JOINTING SAWS.

Specification forming part of Letters Patent No. 182,266, dated September 19, 1876; application filed August 10, 1876.

To all whom it may concern:

Be it known that I, HORTON BARRON, of Eau Claire, in the county of Eau Claire and State of Wisconsin, have invented a new and useful Improvement in Machines for Jointing Saws, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of my improved saw-jointing machine. Fig. 2 is a front view of the same. Fig. 3 is a back view of the same. Fig. 4 is a detail view of the oscillating saw-clamp. Fig. 5 is a central vertical cross-section of the machine. Fig. 6 is a vertical cross-section of the machine in the line *xx* of Fig. 1. Fig. 7 is a vertical cross-section, on an enlarged scale, of the tool-post in which the file is fastened, and Fig. 8 is a similar vertical section in line with the saw.

The nature of my invention consists in certain constructions, combinations, and arrangements of parts hereafter described and specifically claimed, whereby a very simple and effective machine for jointing "double-cut" saws is produced.

The object of my invention is to file even the points of worn, newly-set, or roughly-refiled saw-teeth on a double-cut saw by aid of a machine which enables the operator to do the said work with more rapidity and accuracy than it could be done by hand alone.

In the drawings, A represents a portion of a work-bench, to which the hollow frame B of my machine is fastened. The said frame B has a horizontal rod, *b*, upon which the hollow slides *c* of a traveling tool post, C, are fitted. The slides *c* are connected with the tool-post C by diverging arms *c'*, made to slide above the frame B, so that the tool-post may be swung around the rod *b* freely. The tool-post C is semi-tubular at its lower half, while its upper half is provided with a vertical guide-head, *c''*, and a brace, *c'''*, through which latter a set-screw, D, is fitted. The foot *d* of the set-screw D is reduced in diameter, and fitted into a cylindrical plunger, E, and secured thereto by one or two pins, *e*, and a groove, *d'*, in the said foot *d*. The plunger E is fitted into the guide-head *c''*, where it is fastened, when necessary, by a set-screw, *e'*. The foot *e''* of the plunger E is square, and

fitted into the vertical bearing *f* of a clamp-head, F, to which it may be secured at any height by a set-screw, *f'*, which, instead of the usual head, is provided with a handle, *f''*. The foot of the clamp-head is provided with the clamp-plate G. The said clamp-plate G has a T-groove, *g*, into which a file, H, is inserted and secured by set-screws *h*. The lower open part of the said T-groove permits the saw which is to be jointed to enter between it and come in contact with the file. The front of the frame B is provided with a bracket, *b'*, as shown in Fig. 5, to which an L-shaped rocking frame, I, is pivoted by a horizontal bolt, *i*. At each end of the rocking frame I, and connected thereto, is a depressed horizontal plate, I', which is slotted longitudinally, as at *i'*, for the reception of a set-screw, J, and check-nuts *j* above and below the plate I'. The upper end of the set-screw J is pivot-shaped, and supports a plate, J', so that it may be raised and lowered by the screw without turning. Upon those plates J' the saw K is placed and vertically adjusted. An elbow-plate, L, fastened to the frame I by a set-screw, *l*, and being adjustable through the means of a slot, *l'*, serves to longitudinally adjust the saw. A board, *k*, below the saw, serves as a support for the back of the saw when it is being filed or jointed. The saw is clamped between wooden cheeks, one of them, M, being between the saw and the frame I, and the other, M', between the other side of the saw and the upright lugs *i''* of the frame I. The cheek M' is provided with inclined surfaces *m*, which, when forced against the lugs *i''*, operate as wedges, and thereby clamp the saw. The back of the frame I is near each end provided with a projection, *n*, and opposite the said projections in the frame B are vertical set-screws N, whereby the oscillations of the frame I are regulated. The frame B has an elevated guideway, *b''*, as shown in Figs. 1 and 6, near the frame I, upon which the tool-post C is horizontally guided.

Operation: The operator places the double-cut saw upon the plates J' centrally with the pivot-bolt *i*, unfastens the plate L, and moves it against the end of the saw, and then fastens the said plate L again, and then brings the saw to a proper height by either lowering or

raising the plates *J'* with the set-screws *J*. A board, *k*, of proper thickness, is now placed under the back of the saw, and upon the rocking frame *I*, the cheek *M* is placed behind the saw *K*, and the cheek *M'* in front of it, and the latter moved against the lugs *i*², whereby the saw is clamped. The frame *I* is then tilted down until it is checked by one of the set-screws *N*, which is then screwed up or down until the points of the saw-teeth on that side are horizontal. The same adjustment is made at the other side of the frame *I*. The file *H* is next inserted into the groove *g* of the clamp-head and fastened by the set-screws *h*, and the tool-post *C* moved to the end of the saw, which is tilted down. The clamp-head *F* is then adjusted vertically by means of the set-screw *D* after the set-screw *e*¹ has been loosened, and the file *H* turned in the right direction, and the set-screw *e*¹ screwed tight. The operator takes the handle *f*², bears upon it, and slides it toward the middle of the saw, thereby filing off the points of the highest saw-teeth, after which he tilts the tool-post *C* over, and slides it back to the end of the saw. This operation is repeated until the saw-teeth have all the same height. If it should be necessary to lower the file after the first setting, the set-screw *f*¹ on the handle *f*² is loosened, the clamp-head is moved down as much as practicable, and fastened in its new position by screwing the set-screw *e*¹ tight. When one side of the saw is jointed it is tilted up, and the file *H* reversed, and the above-described operation is repeated at the other side of the saw.

The saw thus operated upon generally remains clamped tight, and the saw-teeth can receive their finishing touch through the file in the hands of the operator.

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

1. In a saw-jointing machine, a rocking frame, *I*, for clamping and holding in position double-cut saws, substantially as set forth.

2. In a saw-jointing machine, a horizontally-sliding and vertically-swinging tool-post, having a vertically-adjustable and horizontally-swinging file-holder, substantially as and for the purpose set forth.

3. In a saw-jointing machine, the combination of a rocking frame, *I*, and the tool-post *C*, substantially as and for the purpose set forth.

4. The rocking frame *I*, having slotted plates *I'*, set-screws *J*, check-nuts *j*, and plates *J'*, substantially as and for the purpose set forth.

5. The combination of the frame *B*, having a bracket, *b*¹, and set-screws *N*, and the rocking frame *I*, having a pivot-bolt, *i*, projections *n*, substantially as and for the purpose set forth.

6. The tool-post *C*, having a set-screw, *D*, a plunger, *E*, a clamp-head, *F*, and a file-clamp, *G*, constructed and operating substantially as set forth.

7. The combination of the rocking frame *I*, having lugs *i*² and an elbow-plate, *L*, with the board *k* and the cheeks *M M'* for clamping and adjusting a double-cut saw, substantially as set forth.

Witness my hand, in the matter of my application for a patent for a machine for jointing saws, this 31st day of July, 1876.

HORTON BARRON.

Witnesses:

L. M. VILAS,
FRED GORDON.