

C. Taylor

Sharpening Rotary Saws.

N^o 62,572.

Patented Mar. 5, 1867.

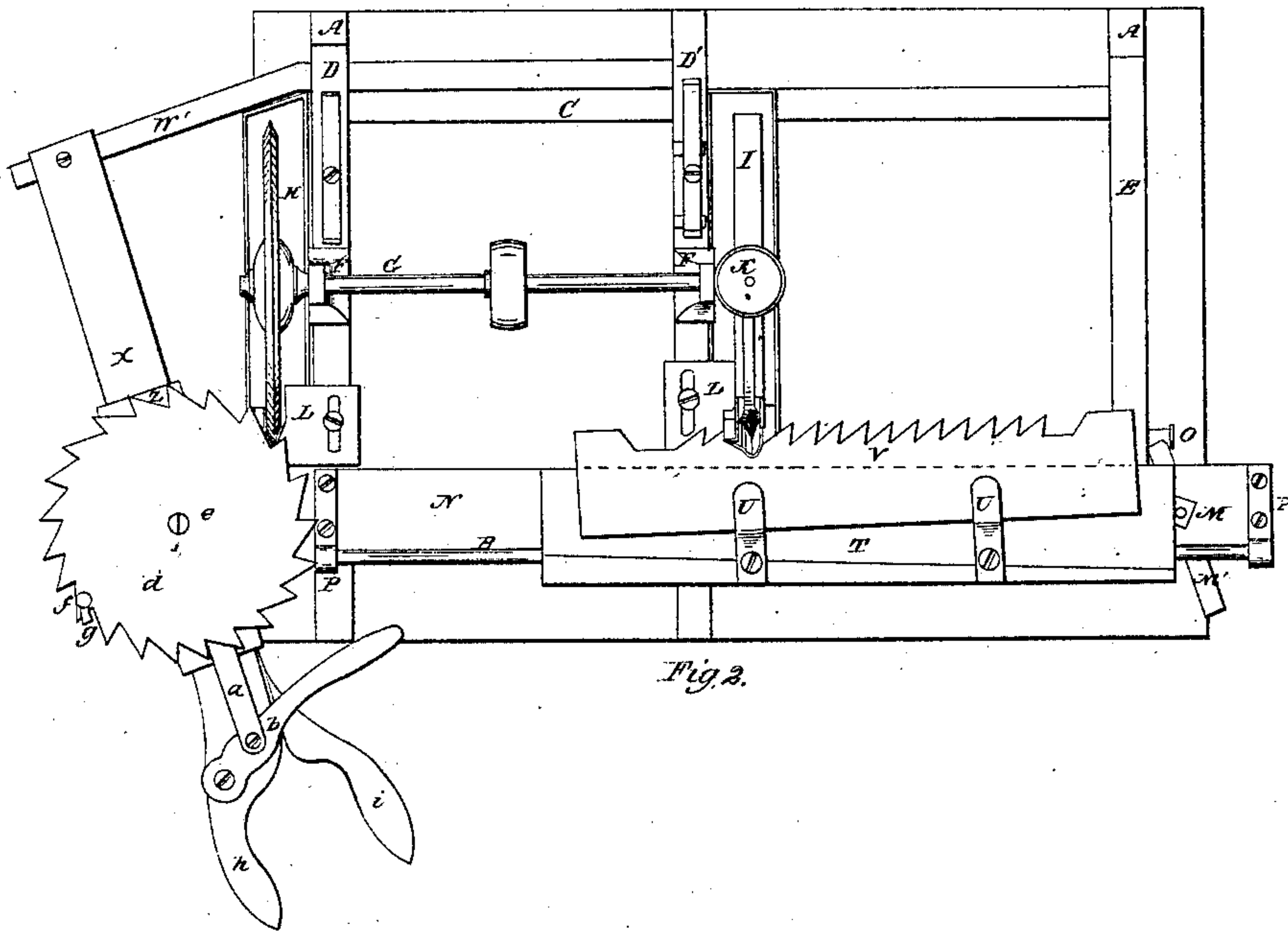


Fig. 2.

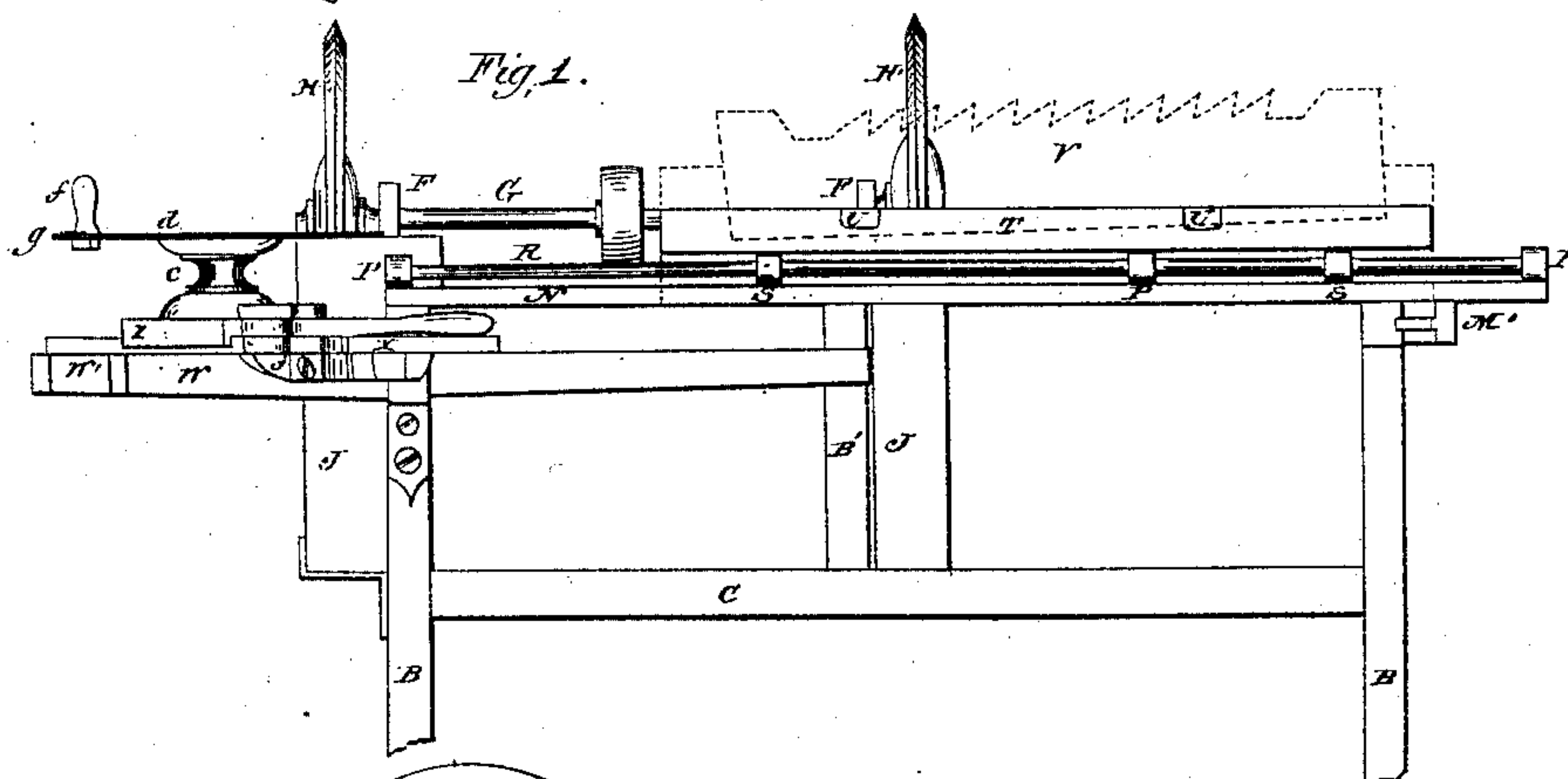


Fig. 1.

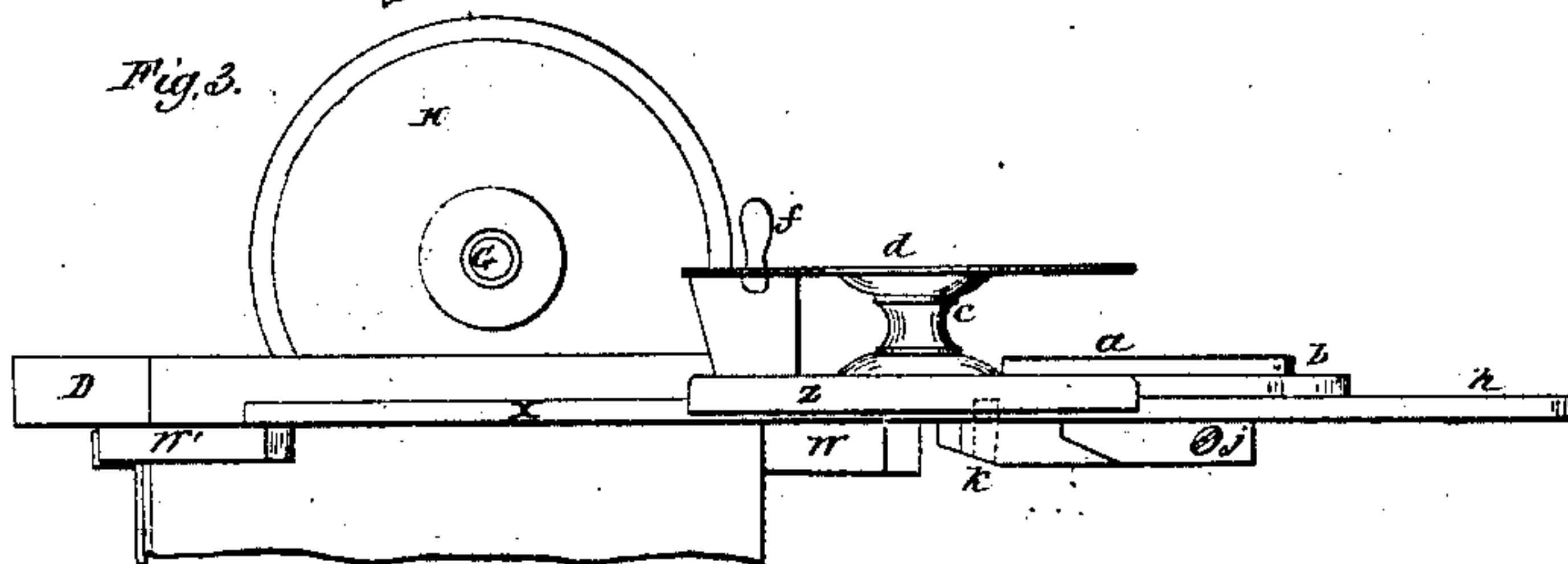


Fig. 3.

Witnesses:
J. E. Dennis
Henry L. Walton.

Inventor.
Charles Taylor
By his Atty
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United States Patent Office.

CHARLES TAYLOR, OF ST. JOHN, NEW BRUNSWICK, ASSIGNOR TO HIMSELF, JAMES HARRIS, BARTLETT LINGLEY, AND HENRY C. LOVELL.

Letters Patent No. 62,572, dated March 5, 1867.

IMPROVEMENT IN MACHINES FOR SHARPENING SAWS.

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, CHARLES TAYLOR, of St. John, Sunbury county, Province of New Brunswick, have invented certain new and useful Improvements in Machines for Grinding and Sharpening the Teeth of Saws; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention or improvements without further invention or experiment.

The nature of my invention and improvements consists in the new combination and arrangement hereinafter described and claimed. In the accompanying drawings—

Figure 1 is an elevation of the front side of a machine with my improvements.

Figure 2 is a plan or top view.

Figure 3 is an elevation of one end.

In these drawings, A A are the sills of the frame, into which the four posts B are fastened, which posts are connected about midway of their height by the girders C C, and at the top by the bars D and E. There are some short posts, B', fastened into the girders C, and connected by the bar D'; the several parts named forming a strong frame to which the other parts are fastened or connected. The stands or boxes F F are fastened to the bars D and D' for the shaft G to turn in, which shaft may be provided with a pulley for a band from some moving power to turn it, with the grinding-stones H and H' fastened on the ends of the shaft G, as shown in the drawings. These stones work to the best advantage when they are no thicker than the distance between the points of the teeth on the saw to be sharpened, and the edge of the stone is made to fit the space between the teeth; and when so made it grinds and wears uniformly, and retains its shape a long time. A trough, J, to catch the water, is fastened under each stone; and a cover over each stone, as shown at I, with a can, K, to supply the stone with water when grinding. In front of each stone, to support the teeth of the saw while grinding, I fasten the blocks L to the bars D and D'; these blocks are made with a notch nearly corresponding with the edge of the stone, so as to fork on to it and support each of the two teeth being ground, and each of the blocks L has a slot in it for the bolt that fastens it to the bar, so that it may be moved forward as the stone wears away, and adjusted when required. The carriage N is arranged to vibrate on the tops of the bars D D' and E and on the fulcrum M in the movable block M', which is traversed between the bar E and the bracket O fastened to the bar E. There are three brackets, P, on the carriage N, to hold the rod R, upon which the brackets S of the clamp T traverse. This clamp T consists of a board fastened to the brackets S, and two clamping clips, U U, fastened by screws, so as to clamp the saw V firmly to the board and hold it while its teeth are being ground and pointed. The brackets S of the clamp T are arranged to traverse on the rod R, so as to allow the spaces between the teeth of the saw to be brought in succession to the stone and pressed up and ground, and the clamp and saw may be turned on edge or perpendicular whenever it is desirable to examine the teeth, and, after they are ground, to point them with a forked set in the manner well known. After the teeth have been ground and pointed, the saw may be taken from the clamp ready for use. To grind and sharpen the teeth of circular saws, I fasten two bars W W' under the bars D D', and make them to project beyond the left end of the frame, as shown in the drawing, and fasten the forked lever X to the bar W' so that it will vibrate on the bar W towards and from the stone H when required. The carriage Z is fitted to traverse on the lever X, and is connected by the link a to the short lever b, which traverses the carriage and block c with the saw d to and from the stone, the saw being fastened to the block c by the screw e, so that it may be turned by the clamping handle f, which may be fastened to the edge of the saw, and changed from time to time by removing the wedge g and moving it to another part of the saw. The outer end of the lever b is forked with two prongs, h and i, so that the man who grinds the saw may stand between the prongs of the lever and move it to or from the grinding-stone by swaying his body, while his hands adjust the teeth of the saw so as to grind it as desired. To accommodate men of different sizes, I hang or hinge the prong i to the lever X, so that it can be adjusted to suit the size of the man working the machine; that is, the prong i is arranged to vibrate on the pivot k (shown by dotted lines) in the lever X, and the prongs h and i are connected by the screw j, which may be turned to adjust the space between the prongs to the size of the workman standing between them to

work the lever X. It will be apparent from the foregoing description that the spaces between the teeth are ground to a uniform depth, and the teeth of a uniform length. But if it is desirable to gum the saw, a thin stone may be used to deepen the spaces and lengthen the teeth as may be required.

Having described my improvements, I will state my claims, as follows:

What I claim as my invention and improvements in machines for grinding and sharpening the teeth of saws, is—

1. A vibrating carriage with a movable fulcrum, in combination with a clamping plate hinged horizontally to hold the saw, and permit it to be turned on edge with facility for examination and pointing of the teeth without removing it from the clamping plate.

2. I also claim an arrangement of the forked lever X, traversing carriage Z, and lever b, for moving the saw and adjusting it to the grinding-stone, substantially as described.

3. I claim making the fork of the lever X adjustable, to adapt it to the size of the operator or attendant.

CHARLES TAYLOR.

Witnesses:

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