P. Welch.

Crozing Staves.

No. 41,249. Patented Jan. 12, 1864.

Fig 2.

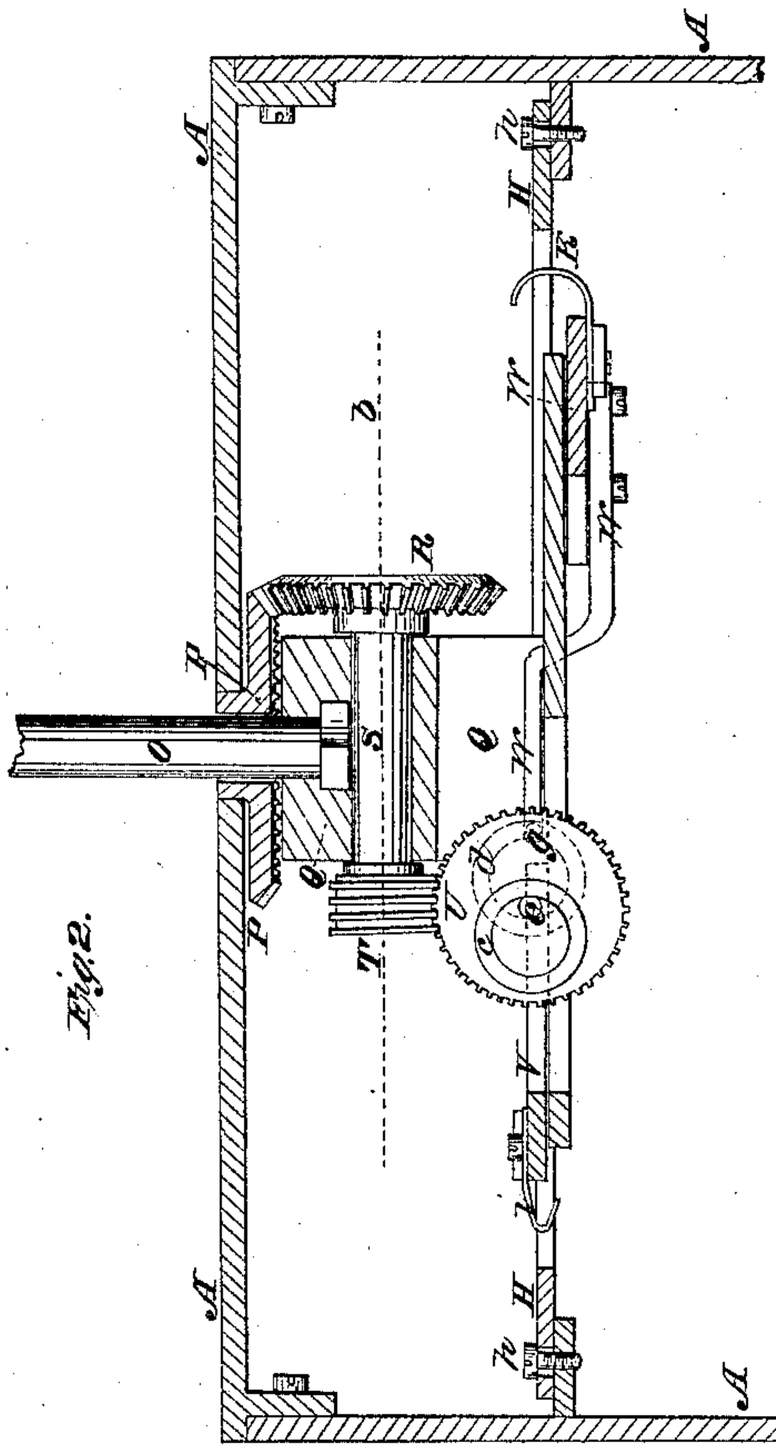


Fig 3.

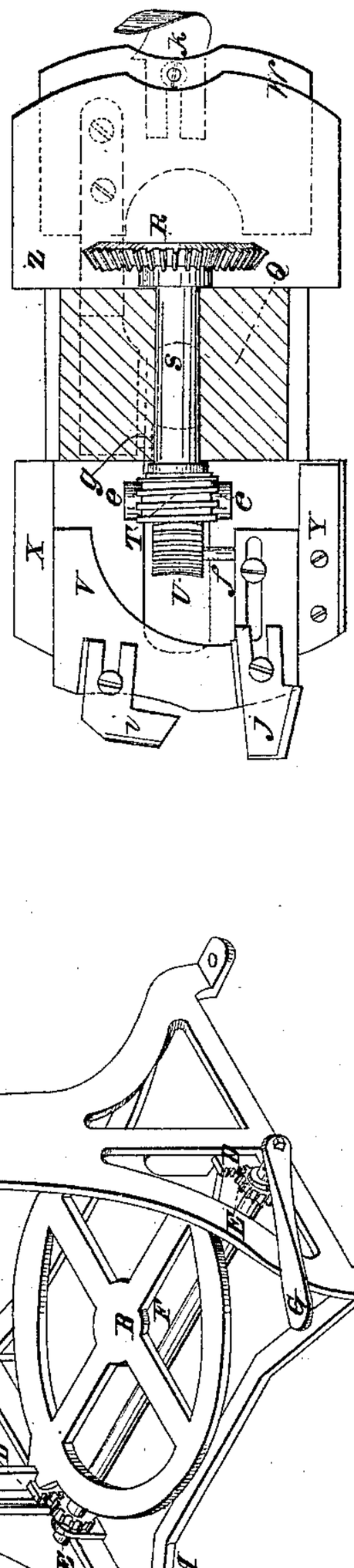
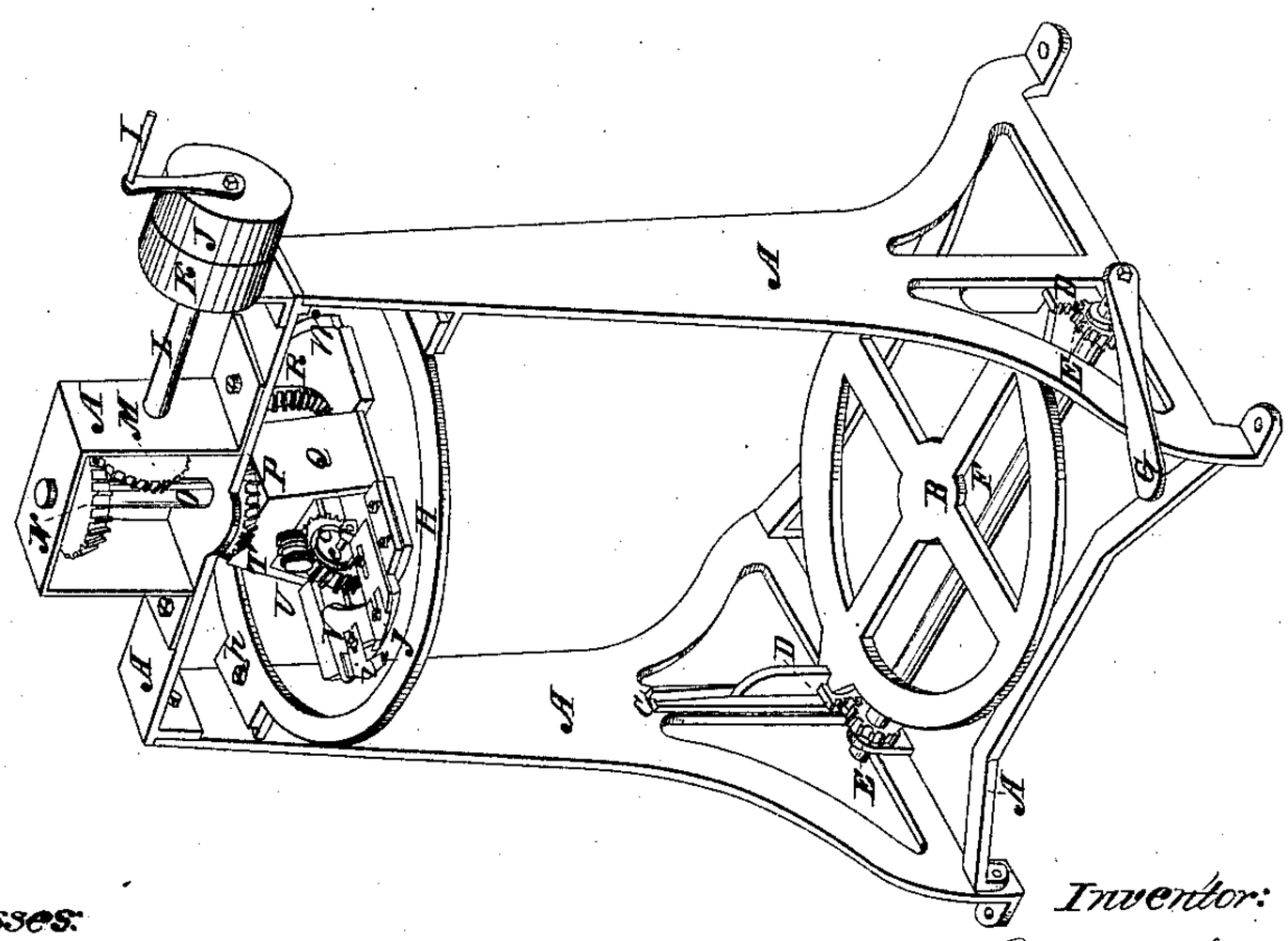


Fig 1.



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By his Attorney.
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UNITED STATES PATENT OFFICE.

PETER WELCH, OF OSWEGO, NEW YORK.

IMPROVEMENT IN MACHINES FOR CHAMFERING AND CROZING BARRELS.

Specification forming part of Letters Patent No. **41,249,** dated January 12, 1864.

To all whom it may concern:

Be it known that I, PETER WELCH, of Oswego, in the State of New York, have invented a new and useful Improvement in Machines for Chamfering, Crozing, and Beveling Barrels; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the machine complete. Fig. 2 is a vertical section, on an enlarged scale, of a portion of the machine, showing the tool-stock and its connections, and the mode of getting the feed. Fig. 3 is a horizontal section of the tool-stock through line *a b* of Fig. 2, the shaft S and the wheels at either end of it being left in view.

The same part is marked by the same letter of reference wherever it occurs.

The nature of my invention consists in an improved mode of obtaining the feed-motion of the tools by which the chamfering, crozing, &c., are performed by means of a peculiar construction and arrangement of the tool-stock and mode of operating the same, all as hereinafter more particularly set forth.

To enable others to make and use my improved machine, I will proceed to describe its construction and operation, referring to the drawings, on which A marks the frame of the machine; B, the platform on which the barrel is placed. This platform can be raised or lowered in the ways C by means of the racks D, operated by the pinions E on the shaft F, said shaft having a treadle, G, attached at one end, by means of which the pinions E can be rotated to raise and lower the platform.

H marks an adjustable hoop or ring, which receives the upper end of the barrel. It is adjusted in position by means of the set-screws *h*, working through slots in the ring and entering brackets fixed to the frame A, as clearly shown in Fig. 2.

I is a winch, which represents the power of any suitable prime mover, for imparting motion to the machine, J being the loose and K the fast pulley on the end of the driving-shaft L. On the inner end of shaft L is a bevel-wheel, M, which engages a similar wheel, N, on the top of vertical shaft O. This shaft passes down through the center of fixed wheel P, which is immovably attached to the frame, (see Fig. 2,) and is attached at its lower end to the tool-stock Q, so that when shaft O rotates the tool-stock Q must turn with it.

Gearing into the fixed bevel-wheel P is the bevel-wheel R on the end of the horizontal shaft S, which runs through and rotates in the tool-stock Q, carrying at its other end the worm-wheel T, which gears into and drives the feed-wheel U. This wheel has cam-grooves *c d* in its sides (see Fig. 2) and turns upon a central shaft, *e*. The cam-grooves *c* and *d* receive, respectively, pins *f* and *g*, attached, respectively, to the slides V and W, which carry the tools *i j k*, which perform the work. The slide V works in and out in the guiding-ways X Y, and the slide W works in the same manner in guiding-ways on the under side of plate Z.

The operation is as follows: Motion being imparted to the machine, the shaft O is set in rotation, and with it the stock Q. The wheel R is rotated by the rotation of the stock by reason of its gearing into the fixed wheel P. As wheel R rotates the worm T on the opposite end of shaft S turns slowly and drives the feed-wheel U, which, by reason of its cam-grooves *c d* operating on the pins *f g*, attached to the tool-slides, cause the tools *i j k* to advance and recede as the work requires, feeding the tools to the work as long as necessary, and then retracting them preparatory to a repetition of the operation.

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

The new and improved mode of imparting the feed motion to the crozing and other tools, as hereinbefore set forth, the same consisting in the combination of the stationary bevel-wheel P with the wheel R, shaft S, worm T, feed-wheel U, pins *f g*, and slides V and W, constructed, arranged, and operating substantially in the manner described.

The above specification of my said invention signed and witnessed at Chicago, this 10th day of November, A. D. 1863.

PETER WELCH.

Witnesses:

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G. W. STANFORD.