H. Nelson,

Crozing Barrels.

No. 101,650. Patented Apr. 5. 1870.

Fig. 1.

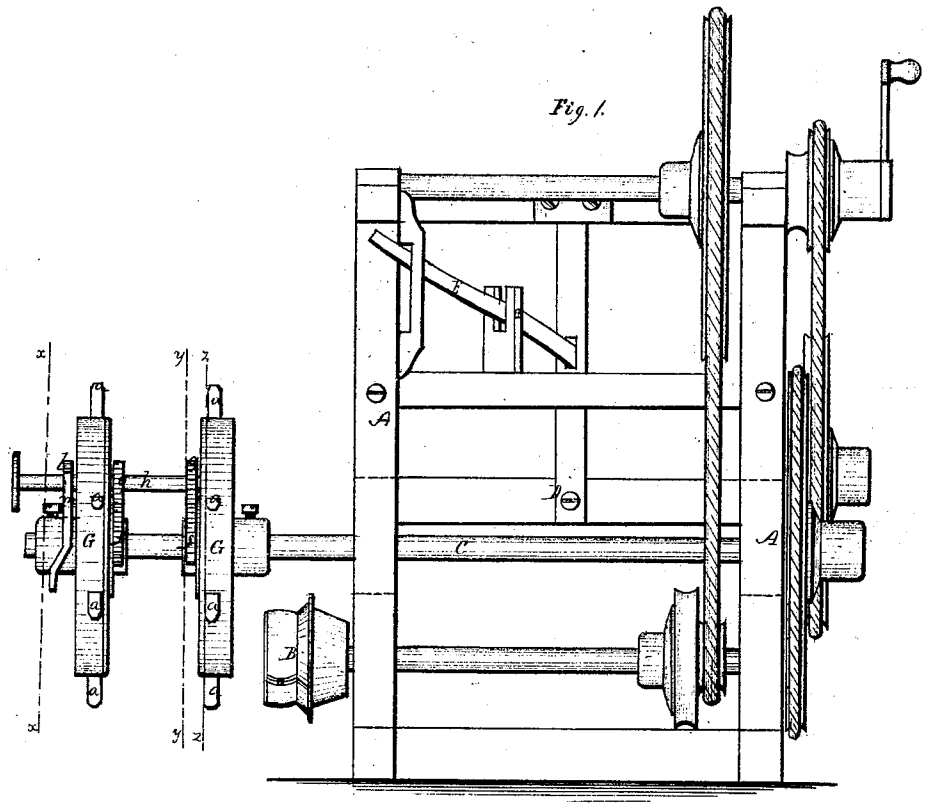


Fig. 2.

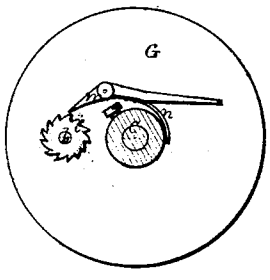


Fig. 3.

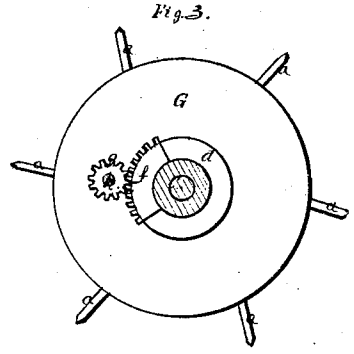
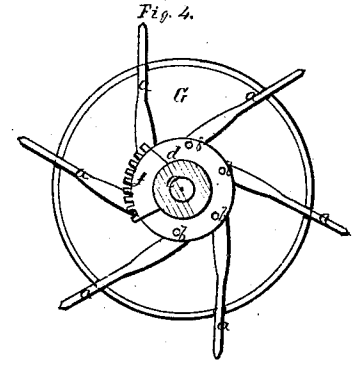


Fig. 4.



Witnesses—
D. J. Brown
R. D. Smith

Hiram Nelson,
By his atty.,
J. S. Brown

United States Patent Office.

HIRAM NELSON, OF LAKE VILLAGE, NEW HAMPSHIRE, ASSIGNOR TO HIMSELF AND ALPHEUS DOLLOFF.

Letters Patent No. 101,650, *dated April* 5, 1870.

IMPROVEMENT IN MACHINE FOR CROZING BARRELS.

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, HIRAM NELSON, of Lake Village, in the county of Belknap and State of New Hampshire, have invented an Improved Machine for Chamfering, Crozing, and Trimming Barrels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making part of this specification.

Figure 1 is a side elevation of a chamfering and crozing-machine provided with my improvements.

Figures 2, 3, and 4, views respectively in planes indicated by the lines *x*, *y*, and *z*, fig. 1.

Like letters designate corresponding parts in all the figures.

The nature of my invention consists in an improved device for holding the barrel or cask upon a revolving shaft, and for bringing it to the action of the chamfering and crozing cutter.

In the drawings—

Let A represent the main body of the machine, provided with suitable gearing or belting for revolving the chamfering and crozing cutter, B, and the shaft C of the barrel-holder.

The shaft C of the holder is mounted in bearings which are simultaneously raised and lowered, or moved nearer to and further from the cutter B, by being supported or secured on a sliding frame or gate, D, the said frame being raised and lowered by a lever, E, or any equivalent means; thus, the barrel, when secured concentrically on this slowly-revolving shaft C, can be easily brought to the action of the cutter B revolving inside of the barrel, or be removed from the cutter when the work is completed.

The holder is constructed substantially as follows:

Two adjustable disks G G, or equivalent plates, or short cylinders, are secured upon the shaft C at suitable distances apart, and in such positions as to hold the barrel at points equidistant from the two ends, or where the diameters are equal. The diameter of the disks is somewhat less than that of the inside of the barrel or cask at the ends.

In each of these disks is arranged a set of arms, *a*, so as to project nearly in radial directions from the periphery of the disk.

The inner ends of the arms are pivoted at *b b*, fig. 4, to a sleeve, *d*, which has a turning movement on the shaft C, so that, by turning the same so the right, as represented in the drawings, the arms *a a* are simultaneously and equally moved outward, and by turning the sleeve to the left, the arms are drawn inward.

The turning movement is produced by a segmental rack, *f*, on the said sleeve, and a pinion, *g*, gearing into the same.

The pinions *g g* for the two sleeves *d d* are secured to one shaft *h*, so that, by turning the said shaft, all of the arms *a a* of both disks G G are moved simultaneously and equally.

The shaft *h* is turned by means of a milled head, *i*, or its equivalent.

When the arms *a a* are forced against the inside of the barrel, they are held there by a ratchet-wheel, *l*, on the shaft *h*, and a detent, *m*, pivoted to one of the disks G G, and held to the ratchet-wheel by a spring, *n*, or any equivalent means may be employed. The ends of the arms *a a* are pointed, as shown, so as to act as dogs, to hold securely against the inside of the barrel. Or there may be shoes pivoted to the ends of the arms, respectively, so as to present enlarged and self-adapting bearings to the surface of the barrel.

What I claim as my invention, and desire to secure as such by Letters Patent, is—

The device herein described for holding the barrels, consisting of the disks or plates G G, adjustable on the revolving shaft C, and provided with the projecting arms *a a*, which are moved out and in by means of sleeves *d d*, operated by racks *f f* and pinions *g g*, on a shaft, *h*, all constructed, arranged, and operating substantially as and for the purpose herein specified.

Specification signed by me November 19, 1869.

HIRAM NELSON.

Witnesses:

W. C. DEXTER,

THOMAS HAM.