

Henry DeBus, Inep<sup>d</sup> Crozing Machine.

Geo. Johnson

74319

Fig. 2.  
PATENTED  
FEB 11 1868

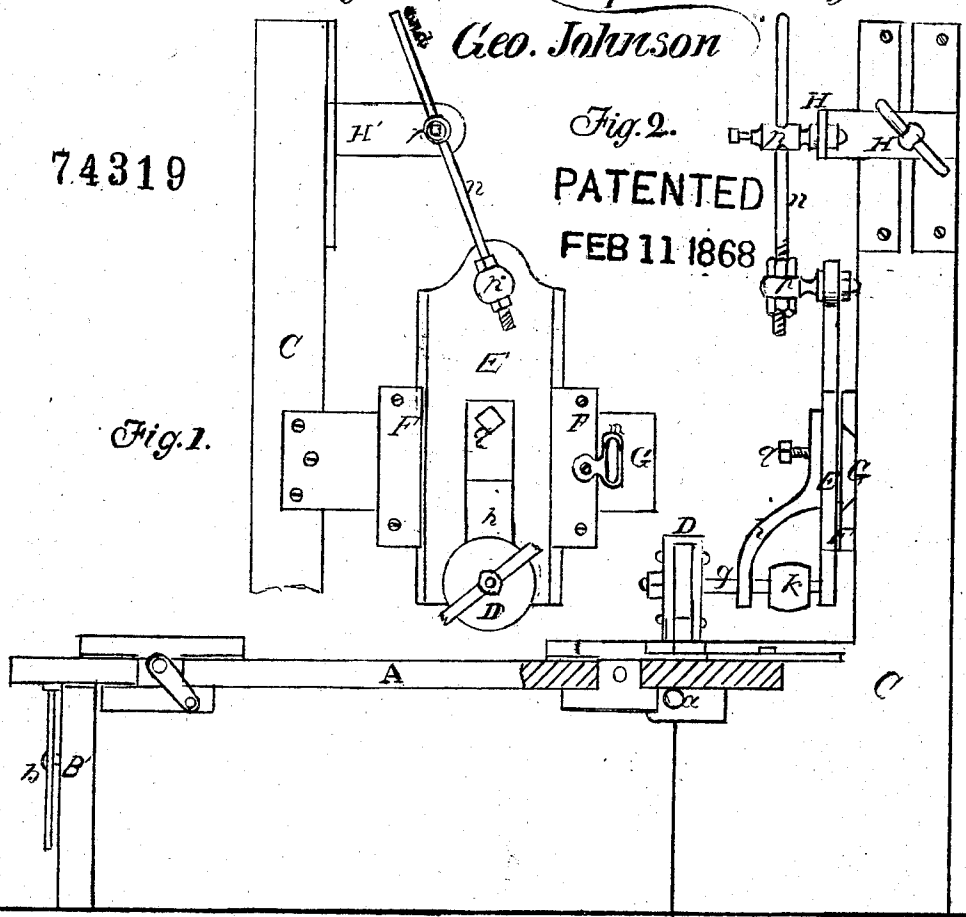
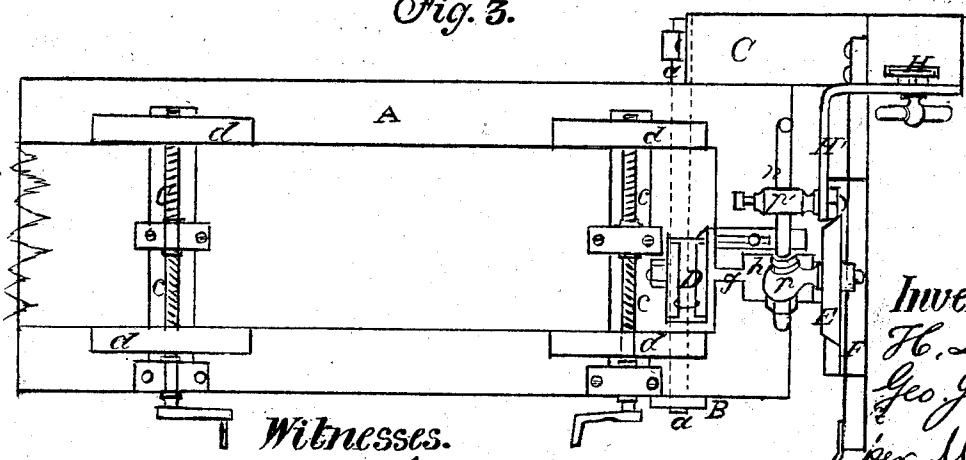


Fig. 3.



Witnesses.  
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# United States Patent Office.

HENRY DE BUS AND GEORGE JOHNSON, OF CINCINNATI, OHIO.

Letters Patent No. 74,319, dated February 11, 1868.

## IMPROVEMENT IN MACHINES 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 we, HENRY DE BUS and GEORGE JOHNSON, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and improved Crozing-Machine; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an end view of the crozing-devices, looking at the cutter-head over the holding-bench.

Figure 2 is a side view of the machine partly in section.

Figure 3 is a top view.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in the construction of a machine for cutting the croze or recess in the ends of barrel-staves for receiving the edge of the head of a barrel to secure it in place.

It consists of an adjustable bench or table, on which the stave is laid to be crozed, to be raised or lowered as desired for giving the desired taper to the croze, and provided with right and left-handed screws for clamping and holding the stave in the centre under the crozing-tool, together with an arrangement of vertical and horizontal slides, connected with a rod working in swivels, for raising and lowering the cutting-tool to suit the required circle of the croze.

By this arrangement of machinery the crozing of barrel-staves is done with great accuracy and rapidity.

A is a long table, on which the staves are laid for crozing, the front end of which is hung on a pivot-rod, *a*, supported at one end by a post, B, and at the other by a frame-standard, C. The rear end of the bench A is attached to a post, B', by a slide, *b*, which raises or lowers the end as required, to give the desired taper to the croze in the stave lying on it lengthwise. Right and left-handed screws *cc* are set across the bench A, near its ends, which carry clamping-blocks, *d d*, that are moved to and from the centre to hold the stave in line centrally with the crozing-tool or rotary cutter-head D. The rotary cutter-head, or crozing-tool D, is provided with knives on the sides and the periphery, to cut the croze in size and shape as desired. It is hung on a horizontal shaft, *g*, in bearings at the lower end of a vertical slide, E, one of which bearings is formed by an arm, *h*, that projects from the slide; and it receives its motion from a pulley, *k*. The vertical slide E works in ways formed by a horizontal slide, F, that moves on a slide-rest, G, fastened at one end to the standard C.

By this combination of vertical and horizontal slides, the cutter-head D admits of being adjusted readily, and to have a compound motion when in operation; and for effecting the necessary movement in cutting the croze, the vertical slide E is connected by a rod, *n*, with another adjustable vertical slide, H, which works in the upper part of the standard C, and is raised or lowered to suit the required circle. The lower end of the rod *n* is threaded, and is fastened by check-nuts to a swivel-boss, *p*, placed on the top of the vertical slide E, while the upper end of the rod *n* passes through a swivel-boss, *p'*, placed on the end of an arm, H', projecting from the vertical slide H.

The vertical slide E may be fastened to the horizontal slide F by the set-screw *q*, for doing straight work; and on the outer side of the slide F is a handle, *m*, to move it back and forth.

Having described our invention, we claim as new, and desire to secure by Letters Patent—

1. The cutter-head D, arranged in relation to the adjustable bench A, raised and lowered by the slide *b*, as herein described, for the purpose specified.

2. The compound vertical slide E and horizontal slide F, the connecting-rod *n*, the swivels *p p'*, in which the rod works, and the adjustable slide H in the standard C, combined, arranged, and operating substantially as and for the purpose described.

The above specification of our invention signed by us, this 10th day of April, 1867.

HENRY DE BUS,  
GEORGE JOHNSON.

Witnesses:

N. MARCHAND,  
BEN. ROBINSON.