W. Maguire,

Crozing Staves.

No. 7,886. Patented Jan. 7, 1851.

Fig. 2

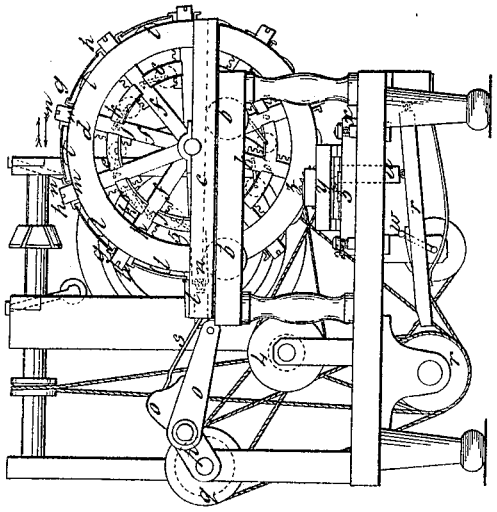


Fig. 3

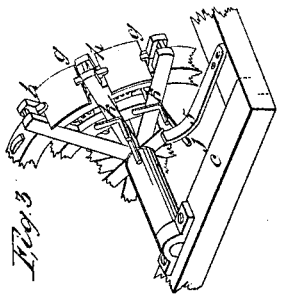
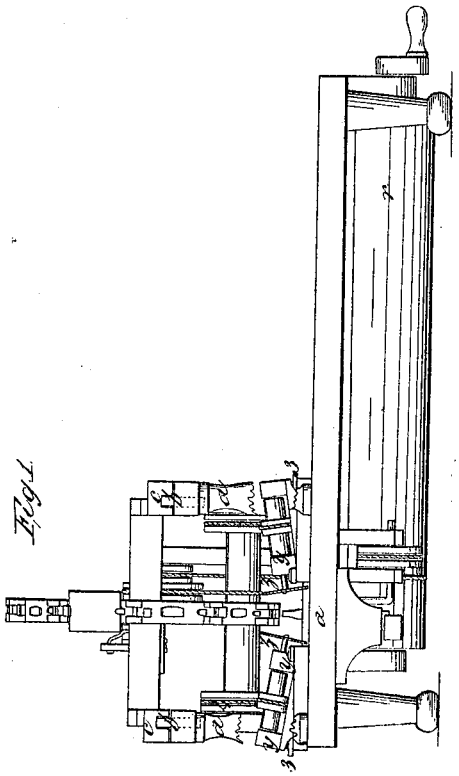


Fig. 1



UNITED STATES PATENT OFFICE.

WILLIAM MAGUIRE, OF CINCINNATI, OHIO.

MACHINE FOR JOINTING STAVES.

Specification of Letters Patent No. 7,886, dated January 7, 1851.

To all whom it may concern:

Be it known that I, WILLIAM MAGUIRE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Barrel Machinery; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation thereof, reference being had to the annexed drawings, making part of this specification.

My invention consists in apparatus for jointing the staves.

Figure 1 is a longitudinal elevation of the stave jointing apparatus. Fig. 2 is an end elevation of the stave jointing apparatus; Fig. 3, a portion of the circular rest—showing the manner in which the handles *k* are retained by the springs *j;* and also a portion of the sliding frame *c* with the projecting arm 5.

Like letters refer to the same parts in the several figures.

a is a frame of wood. Journaling within this frame is a set of rollers *b* supporting a carriage *c* in which is journaled a large wheel or circular rest constructed as follows.

d is an outer rim or ring, and *e* an inner one concentric with the former.

f are a number of spokes, which divide the rim *d* into as many equal compartments.

g are stationary catches, and *h* are sliding catches, which terminating in racks *h'*, can be either protruded from or retracted toward the center of the wheel by pinions 6; and the springs *j* pressing upon the handles *k*, maintain the retraction of the racks.

l are blocks affixed to the perimeter of the wheel midway between the spokes *f*.

One end of the stave to be jointed is inserted under a stationary catch *g*, and the other end under the adjoining sliding catch *h*, the latter having been previously protracted for that purpose. The rack being then retracted by the pinion and retained to its position by the springs *j* acting on the handles *k* of the pinions, the stave by this process is brought and held upon the wheel rim, to the curve which it possesses in the cask. Each spoke terminates in a pair of cheeks *m* traversed by a pin *n*.

The carriage in which the wheel is journaled, has a reciprocating motion imported to it by the pitman *o* which connects it with the rotating arm *p*, upon a shaft *q* receiving motion from the driving pulley *r*. A secondary pitman *s* connected with the pitman *o*, actuates a sliding crotch represented by dotted lines *t*, which grasping a pin *n* on the wheel, prevents the rotation of the latter while moving in the direction of the upper arrow. When the wheel has reached the end of its stroke the crotch *t* retires, and another crotch *u* rising through the floor grasps another pin, and thereby compels the wheel to rotate the distance of two consecutive spokes during its return in direction of lower arrow. This last named crotch *u* is actuated by a lever *v*, set in motion by a rotating pin *w*, which derives its motion from the driving pulley.

x x are blocks, capable of being advanced toward or drawn from one another, and bolted to the frame at the proper distance apart, according to the width required for the stave.

y y are two gates or frames which carry the rotating jointer bits or saws *z*. These gates *y*. are united to the blocks *x*, at their inner edge, by pivots; their rear edges being capable of being raised or lowered by screws 3 according to the amount of flare or chamfer to be imparted to the stave joint. These jointing bits are driven by a system of belts and pulleys 4 connected with the driving pulley.

5 is an arm projecting from the frame, which intercepting the handles of the pinions—after they leave the jointer liberate the former, and allow the stave to escape.

Operation as follows:—The stave to be reduced is placed upon a section of the large wheel for jointing, just as the wheel approaches the extremity of its stroke, and the wheel, in returning, passes the stave between the rotating jointers or saws *z*, which are so disposed as to give the stave joint its proper bevel, and as the perimeter of the wheel to which the stave is bent corresponds to the bulge of the cask, and the jointer maintains the same bevel, the stave is both tapered in width from the bulge to the chime. and properly beveled at the same time; and each stave, in succession after being jointed, is liberated by the arm 5 pressing upon the winch *k* which proceeds from the pinions 6.

Having thus fully described the nature, construction and operation of my invention, what I claim therein as new and original, and desire to secure by Letters Patent is

The arrangement substantially as herein described, of a circular rest, having a sliding motion to and fro, in the plane of its

axis, and having around its perimeter, catches, for the retention of the stave during the process of jointing, and rotating the distance from stave to stave, at every forward stroke, and held fast for the action of the rotating jointers upon the stave at every return stroke, the jointers and circular rest being so arranged as to impart at the same time to the stave edges any given bevel and taper according to the size and bilge of the cask.

In testimony whereof, I have hereunto set my hand before two subscribing witnesses.

WILLIAM MAGUIRE.

Witnesses:
GEO. H. KNIGHT,
EDWARD H. KNIGHT.