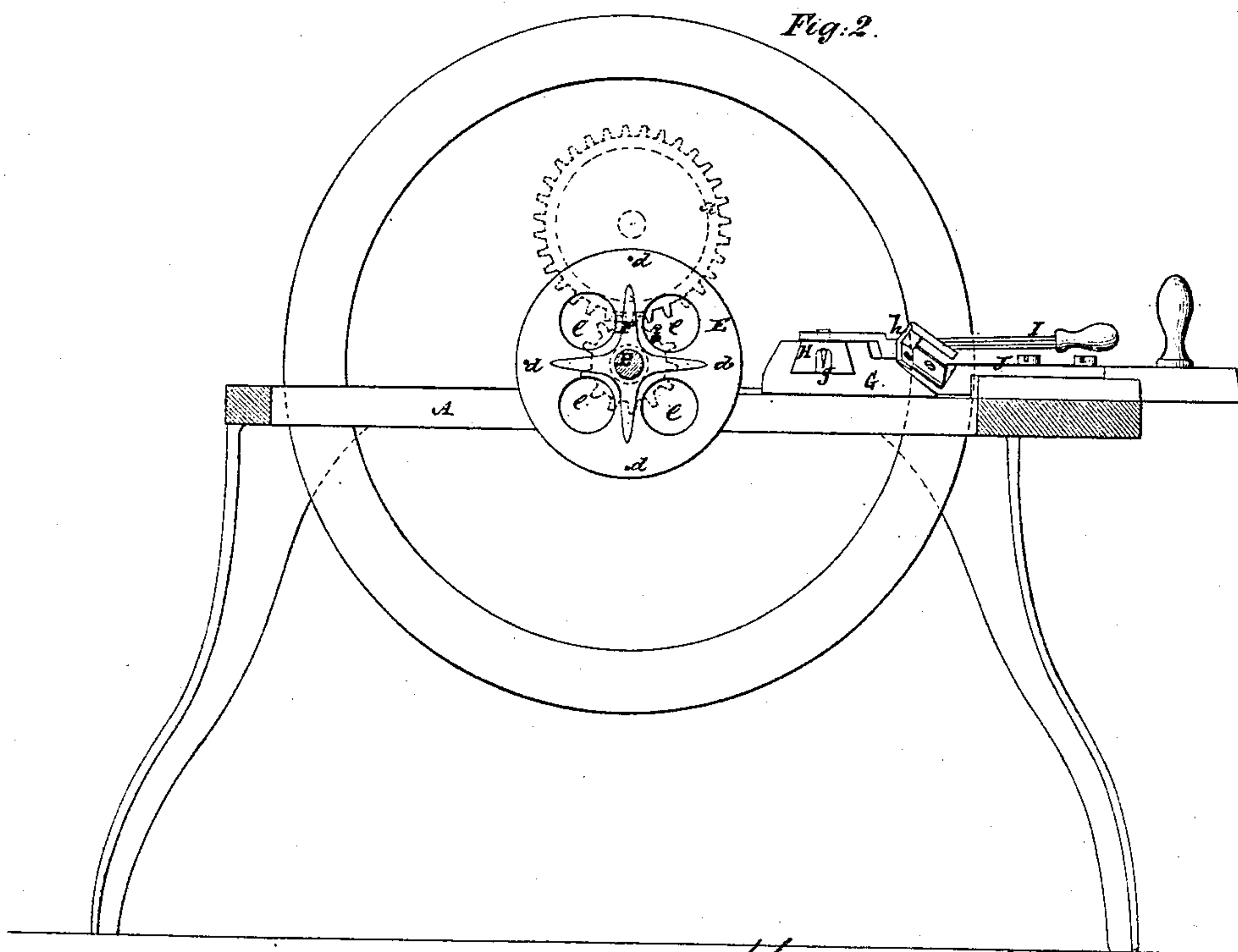
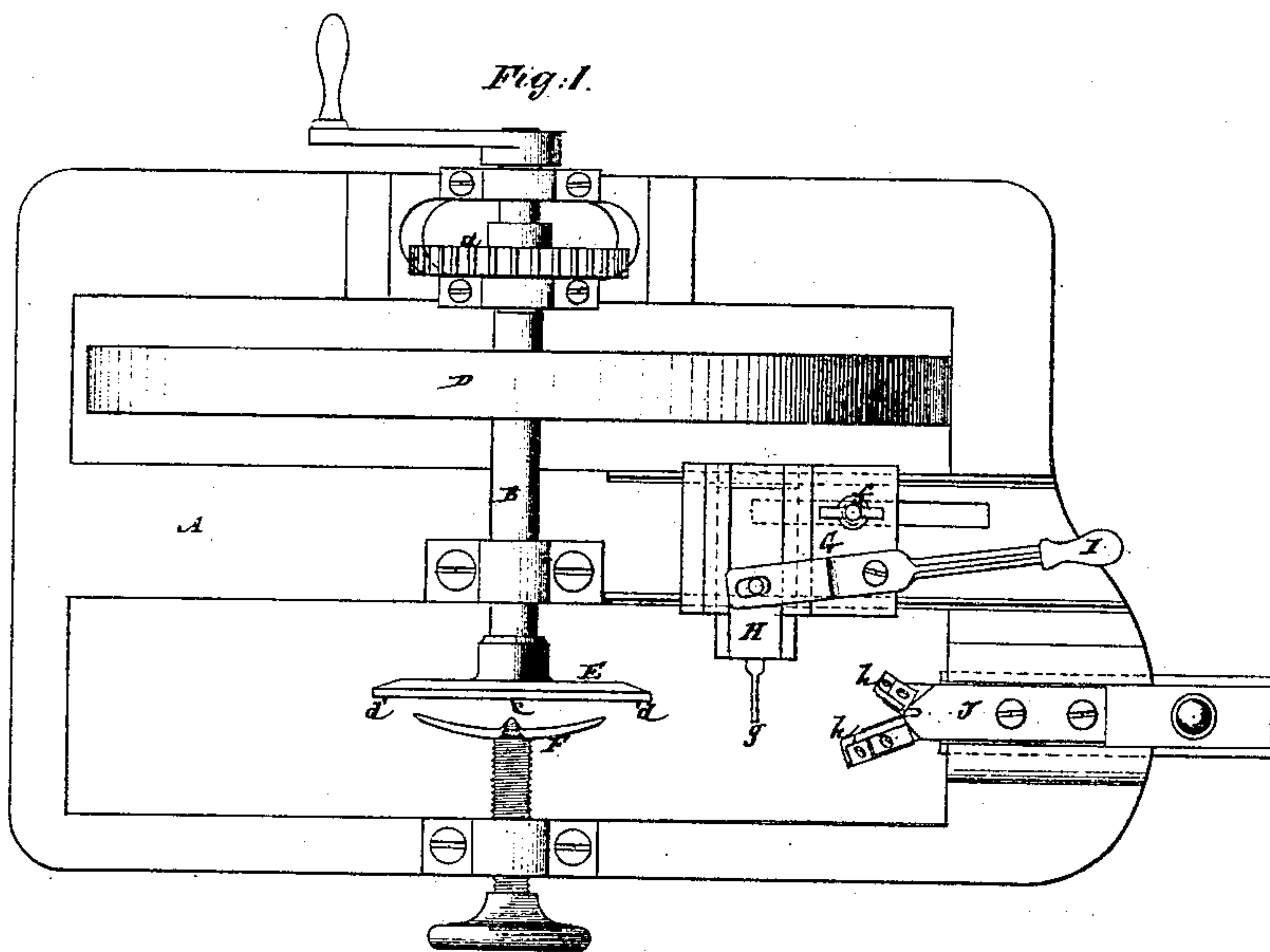


W. Mickel,
Manf. Barrel Heads.
No. 103,762. *Patented May 31, 1870.*



Witnesses:
Fred. Haynes
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United States Patent Office.

WILLIAM MICKEL, OF ONEONTA, NEW YORK, ASSIGNOR TO JAMES T. MARBLE, THEODORE P. EMMONS, AND LESTER S. EMMONS.

Letters Patent No. 103,762, dated May 31, 1870.

IMPROVEMENT IN MACHINERY FOR MAKING BARREL-HEADS.

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, WILLIAM MICKEL, of Oneonta, in the county of Otsego and State of New York, have invented a new and useful Improvement in Machines for Making Barrel-Heads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a plan, and

Figure 2, a vertical section, taken as indicated by the line $x x$ in fig. 1, of a machine for making barrel-heads, constructed according to my improvement.

Similar letters of reference indicate corresponding parts.

My invention consists in a certain arrangement of various slides carrying suitably-constructed cutters; together with a revolving face-plate and clamp, between which the stuff is held, for cutting barrel-heads of different sizes, by first rounding them and afterward forming the opposite bevels on their edges, substantially as hereinafter described.

In the accompanying drawing—

A represents the frame of the machine, and

B, its operating-shaft, speeded up by gearing, $a b$, that may be set in motion by any suitable power.

On this shaft B, which lies horizontal and in transverse relation with the frame, is a fly-wheel, D, to give steadiness to and ease the working of the machine.

Said shaft, on its front end, carries a face-plate, E, of lesser diameter than the smallest barrel-head to be made, and provided with a center, c , and pointed projections d , for centering and holding the stuff of which the barrel-head is to be formed, and which, having a center marked on it, is pressed up against the face-plate and held securely thereon by a many-armed clamp, F, provided with a center and operated by a screw from the front of the machine.

To facilitate the centering of the stuff on the face-plate E, when introducing it between the latter and the clamp, said face-plate is provided with a series of holes, e , through it, which apertures give light from the rear down on the center c , to adjust the stuff to said center, after which the clamp F is tightened up

to fix the wood on the face-plate and secure its rotation with the latter.

G is a sliding block arranged on one side of the shaft B, and adjustable to or from the latter, and held, when adjusted, by a set-screw, f .

In this sliding block is a cross-slide, H, operated by hand through a lever, I, and carrying at its front end a cutter, g , which serves, when projected forward by the lever I, to cut the wood carried by the face-plate, as it revolves, to the required size of the barrel-head, and to give to it its rounded form, said cutter operating from the rear of the stuff beyond the face-plate, and having its distance from the center of the latter determined, according to the required size of the barrel-head, by the adjustment of the sliding block, which adjustment is made and fixed before projecting the cutter g to perform its work.

The barrel-head having been thus sized and rounded, the cutter g is drawn back by the lever I and a second slide, J, arranged in transverse relation with the slide H, and carrying reversely-disposed or beveling cutters $h h$ at its forward end, pushed forward to cut simultaneously the necessary opposite bevels on the edge of the wooden disk or barrel-head to adapt it to the groove in the barrel, said cutters $h h$ being made adjustable to suit different thicknesses of stuff or sizes of barrel-heads.

The slide J is then run back, the clamp F slackened, and the finished barrel-head removed.

The sliding block G is not disturbed from its adjustment when it is required to make a series of barrel-heads of the same size.

By this machine, barrel-heads of various sizes may be made with accuracy and dispatch.

What is here claimed, and desired to be secured by Letters Patent, is—

The arrangement of the slide J provided with reverse beveling cutters $h h$, the sliding block G, and transverse slide H, with its cutter g , the lever I, the face-plate E, and clamp F, the whole being constructed and operating essentially as specified.

Witnesses:

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