

C. RUGGLES.
Machines for Cutting Gores in Staves.
 No. 143,466. Patented Oct. 7, 1873.

Fig. 1-

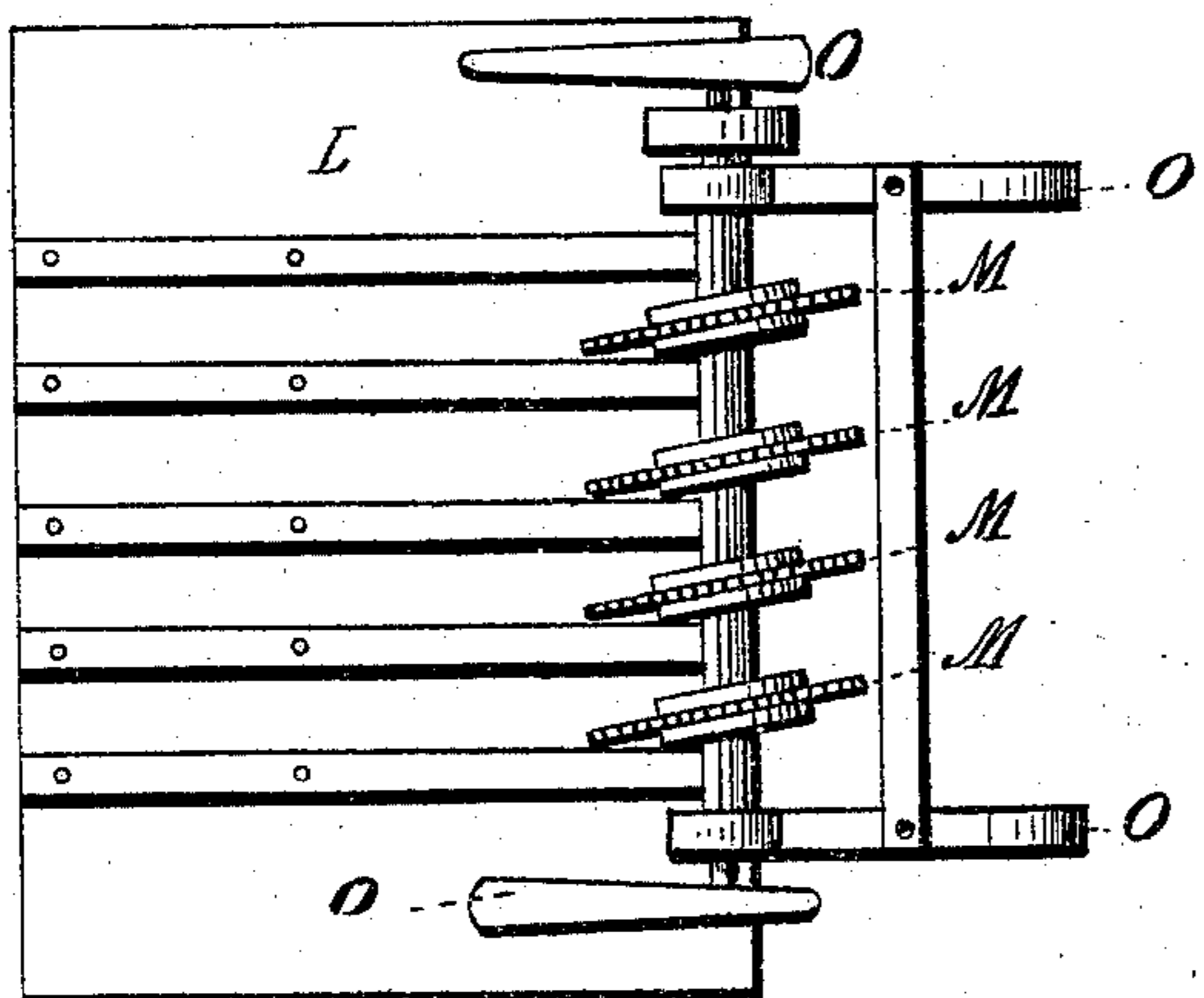


Fig. 2-

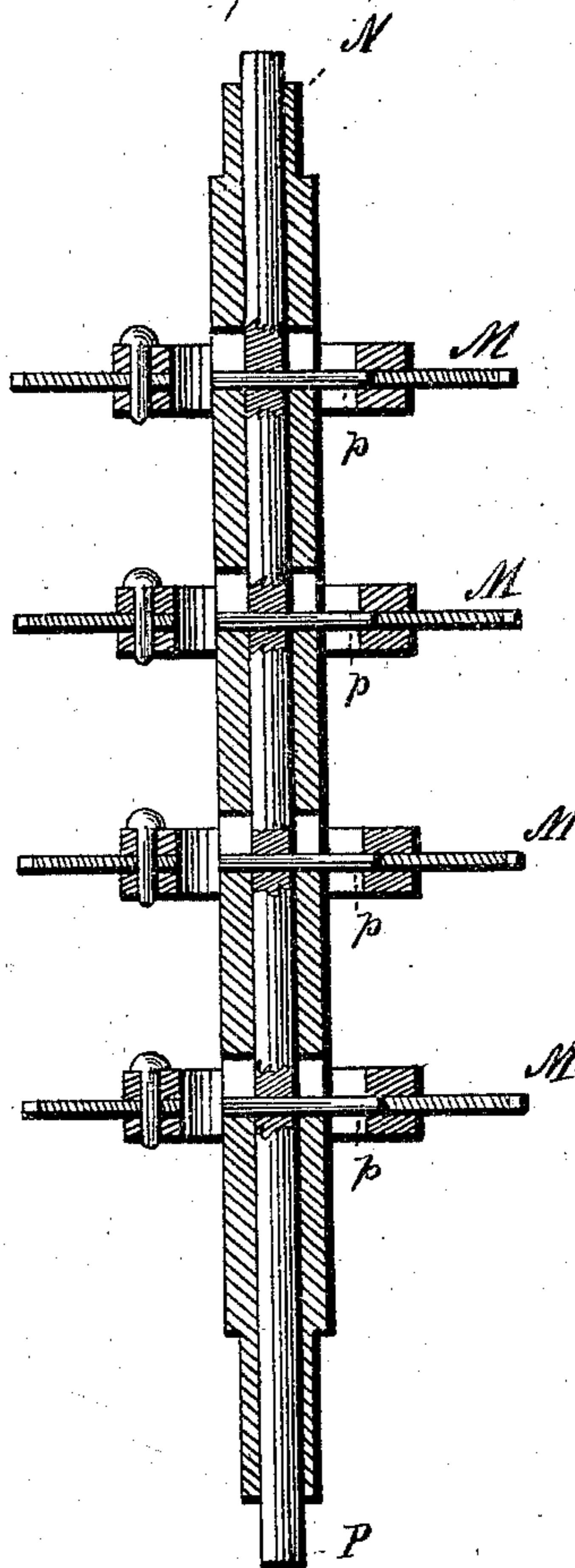


Fig. 3-

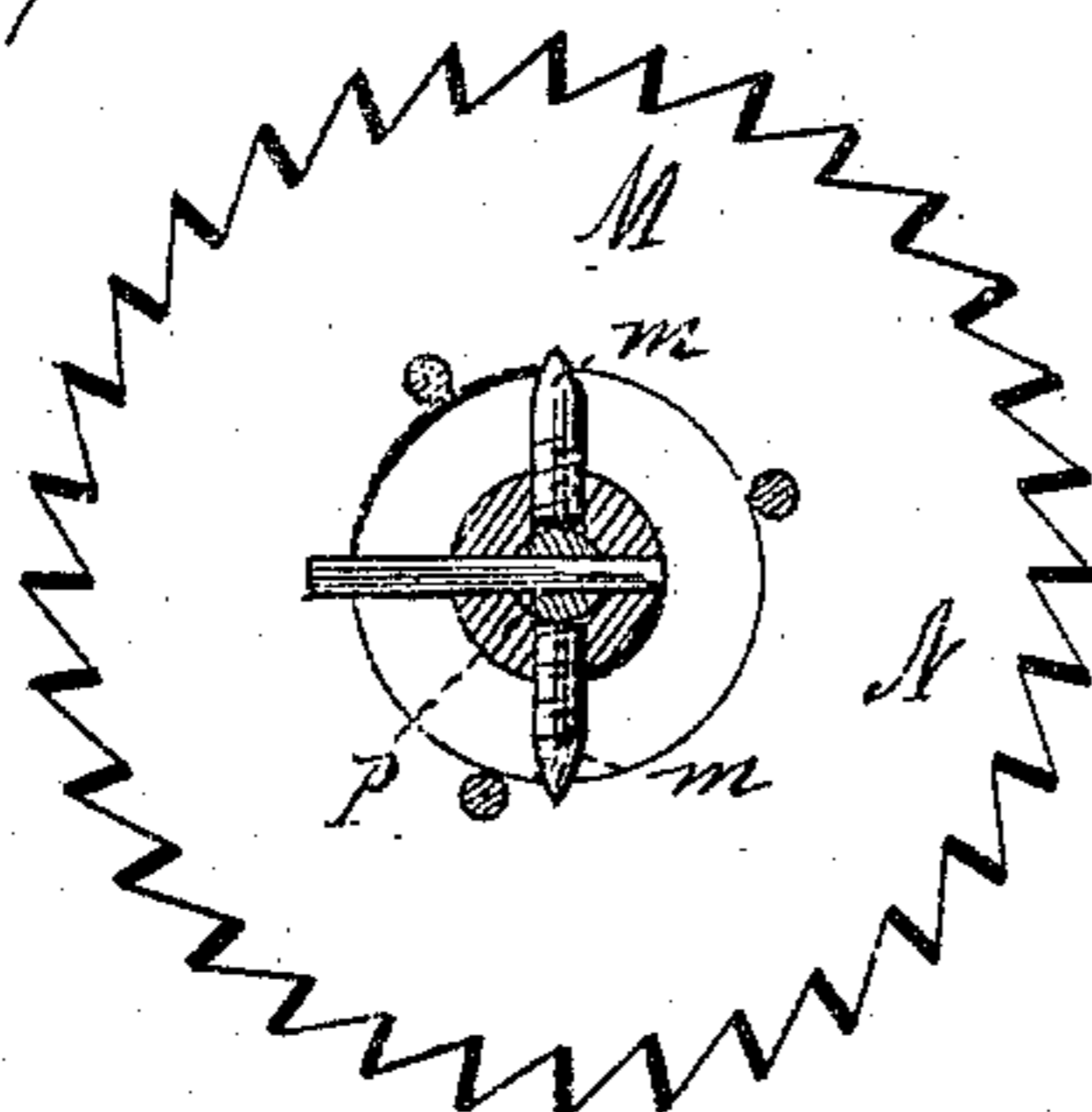
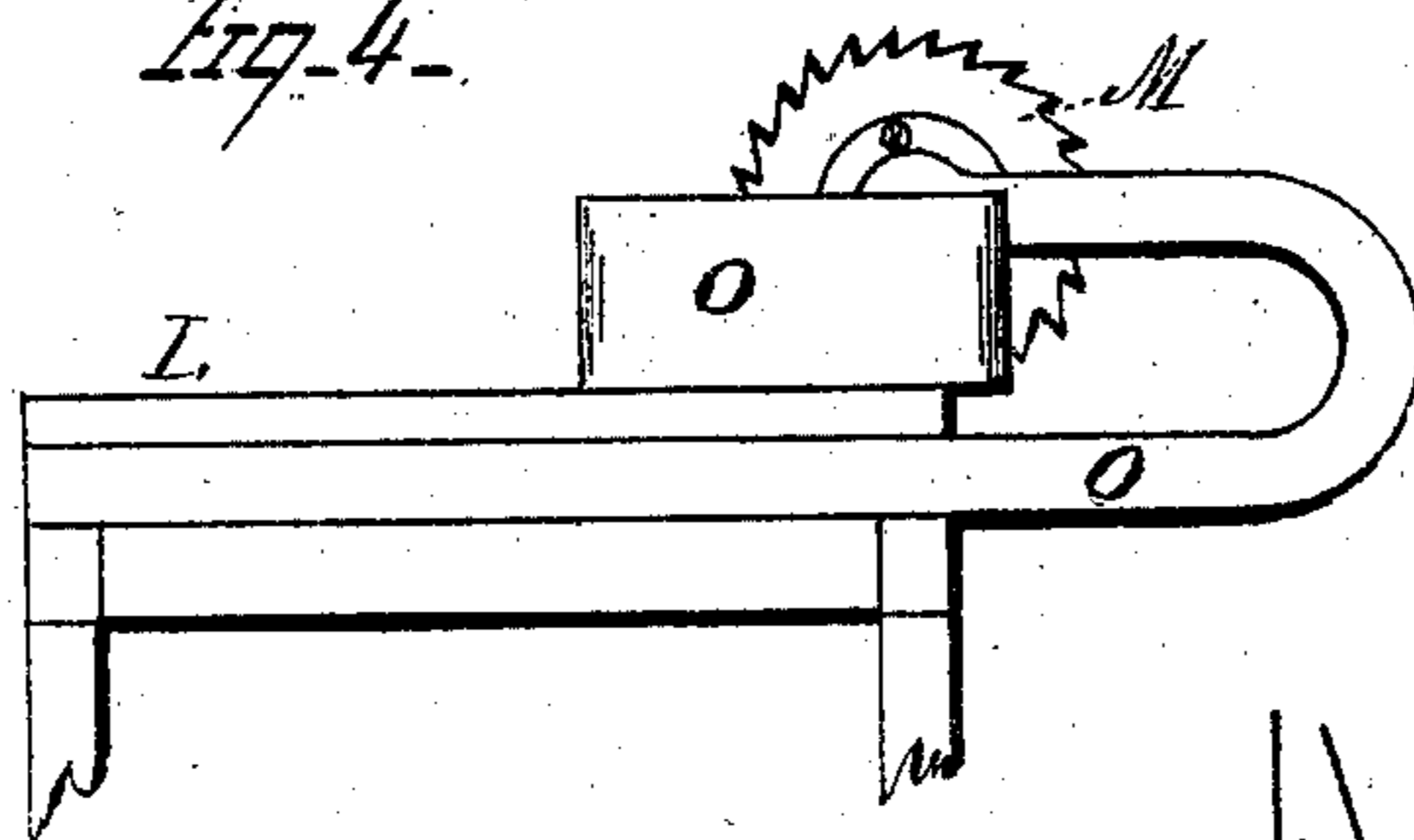


Fig. 4-



WITNESSES

W. J. Newman.
Wm. H. Brewster Jr.

INVENTOR

Charles Ruggles
By Leggett & Leggett
attorneys

UNITED STATES PATENT OFFICE.

CHARLES RUGGLES, OF HURON, OHIO.

IMPROVEMENT IN MACHINES FOR CUTTING GORES IN STAVES.

Specification forming part of Letters Patent No. **143,466**, dated October 7, 1873; application filed September 6, 1873.

To all whom it may concern:

Be it known that I, CHAS. RUGGLES, of Huron, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Machine for Cutting Gores in Staves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improved mechanism for preparing a continuous stave which has been crozed and chamfered for receiving the hoops, and more particularly to mechanism for forming the gores in the ends of the stave, so that when the ends are embraced with hoops the barrel will assume the ordinary bilged form.

Figure 1 is a view in plan of the improved stave sawing or goring machine. Fig. 2 is a longitudinal sectional view of the saw-shaft. Fig. 3 is a view of a saw, showing the manner of connecting it to the saw-shaft. Fig. 4 is a side view in elevation of the goring-machine.

L is a sliding frame, which receives the properly gored and chamfered stave. This frame rests upon suitable guides, and permits of forcing the stave against the gang of wabble-saws M, each of which cuts a gore that is wide at the edge, but diminishes to a saw thickness at the inner end. The stave is now turned and the other end is forced against the saws, and similar gores are cut. These gores I prefer to alternate from opposite edges, and to extend inwardly to the middle line of the stave; but do not confine myself to any particular style or depth of cutting, as the machine is susceptible of adjustment to suit all styles and depths of gores.

This adjustment is effected as follows: The saws M are not attached directly to the saw

shaft or mandrel, but are suspended upon pivot-screws *m*, and will turn upon these screws as an axis. These screws are in turn firmly secured to the saw-shaft N. This shaft is hollow, and is provided with a solid shaft, P, situated within and concentric to it. This latter shaft has spuds *p* projecting from it through slots in the hollow shaft, and, coming out at right angles to the pivot-screws *m*, fit loosely into pivot-seats on the inside of the saw-collar. The inner shaft P is then made to project at both ends, so as to impinge against the forms O. As the slab or stave is, therefore, forced against the saws, the formers O hold the wabble-saws first at a considerable angle, but gradually straightening up, until finally, at the bottom of the gore, they stand perpendicular to the saw-shaft. There may be two sets of wabble-saws, if desirable, situated at each end of the veneer or stave, so as to dispense with the necessity of turning the slab; and instead of the saws being stationary and the slab movable, the latter may be stationary and the saws be forced against it by a suitable lever.

What I claim is—

1. The goring mechanism composed of sliding frame L with forms O, arranged to operate, in combination with the adjustable gang of wabble-saws M, substantially as set forth.

2. The combination of saws M, pivots *m*, hollow shaft N, sliding concentric shaft P with projecting spuds *p*, as and for the purposes substantially as set forth and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of September, 1873.

CHARLES RUGGLES.

Witnesses:

ROBERT JAMES,
A. H. WINCHELL.