



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN MACHINERY FOR CUTTING BUNGS.

Specification forming part of Letters Patent No. 5,613, dated June 6, 1848.

*To all whom it may concern:*

Be it known that I, JOSEPH P. GAUME, of Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in the Machine for Cutting Wooden Bungs or Corks for Barrels, Casks, &c.; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of the machine; Fig. 2, a horizontal section taken at the line *xx* of Fig. 1. Fig. 3 is an inverted view of one of the chucks on an enlarged scale, and Fig. 4 a plan of the supports below the carriage.

The same letters indicate like parts in the four figures.

In my improved machine the bungs are cut out of the solid timber by means of an instrument placed on the end of a spindle with cutters attached to a hollow chuck on the spindle or mandrel, the inner bore of which is conical to give the conical form to the bung, which is formed by the inner edges of the cutters, while their outer points cut a cylindrical hole to sever the bung from the block; and the nature of my invention consists in arranging a series of such mandrels, each having a chuck with its cutters in a vertically-sliding gate suspended to a spring and working in appropriate ways in fender-posts when this is combined with a carriage for moving the board or block of wood under the chucks, placed and moving at an angle of about forty-five degrees, with a plane passing through the axis of the chucks, the board or block of wood being supported around the circles generated by the cutters on the chucks to insure the separation of the bungs from the board or block.

In the accompanying drawings, *a* represents a frame properly adapted to the purpose, and *b b* two fender-posts in which slides a gate *c*, suspended by a rod *d* to a spring *e* at the top of the frame, so that the attendant can draw the gate by simply overcoming the tension of the spring, which should be of such force as

simply to sustain the weight of the gate and its appendages.

The spindles or mandrels *f f f*, with the chucks *g g g* at their lower end and below the gate, have their bearing in the gate in a vertical position—that is, parallel with its motion in the fender-posts—and each mandrel is provided with a pulley *h*, so that the whole of them are rotated by belts *i i i*, that pass around a master-band wheel *j* on a vertical shaft *k*, that receives motion from any first mover, and as the mandrels have to work close together the pulleys overlap. The chucks *g* on the end of the mandrels are made hollow, the inside being slightly conical to correspond with the form of a bung. Slots are cut out in a direction inclined to the axis, in which are inserted the cutters *l l*, that are made with the lower and inside edges sharp and projecting sufficiently from the lower edge and inner periphery of the chuck to insure cutting, the slots in which the cutters are inserted being formed with a throat in the usual manner for the discharge of the chips. The block of wood *m*, from which the bungs are to be cut, is to be of the thickness of the intended bungs and of any width required in proportion to the number of chucks. It is placed and properly fastened on a horizontal carriage *n*, that slides on ways *o* in the manner of a saw-mill carriage, and the ways are so placed that the motion of the carriage shall be at an angle of about forty-five degrees, with a plane passing through the axis of the mandrels that the bungs may be cut from the board in the lines represented at *p p*, whereby much of the wood is saved which would otherwise be lost if the motion of the carriage were at right angles to the plane passing through the axis of the mandrels. Below the carriage there is a support *q*, (see particularly Fig. 4, which is a plan view of this part,) with holes *r r r*, corresponding with the chucks through which the bungs are discharged so soon as cut from the board, and as these holes are of the size of the outer diameter of the chucks the board is effectually supported around the circles generated by the cutters to enable them to cut entirely through the board. The gate with the mandrels and chucks being suspended from a spring, the attendant moves the carriage with

the board on it under the chucks, which are then forced down onto the board by the hand of the attendant, and so soon as by their rotation they have cut through and the bungs have dropped down the gate is liberated, which permits it to rise by the tension of the spring. The carriage is then moved forward for another cut.

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

1. The arrangement of the chucks (provided with appropriate cutters and attached to mandrels or spindles) in a sliding gate, substantially as described, when this is com-

bined with a carriage placed at an angle of about forty-five degrees with a plane passing through the axis of the chucks, substantially in the manner and for the purpose specified.

2. In combination with the carriage and the chucks thus arranged, the perforated supporters, which sustain the under surface of the board around the cutters, substantially as described.

J. P. GAUME.

Witnesses:

S. SAMYNS,  
E. SENGER.