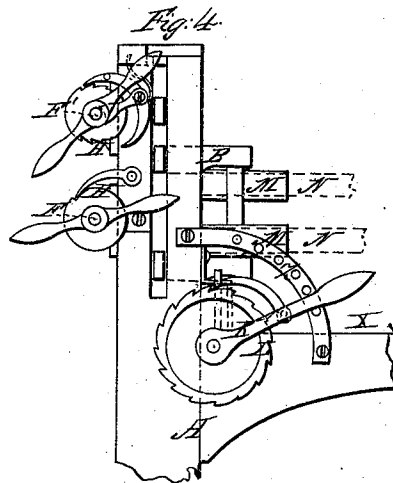
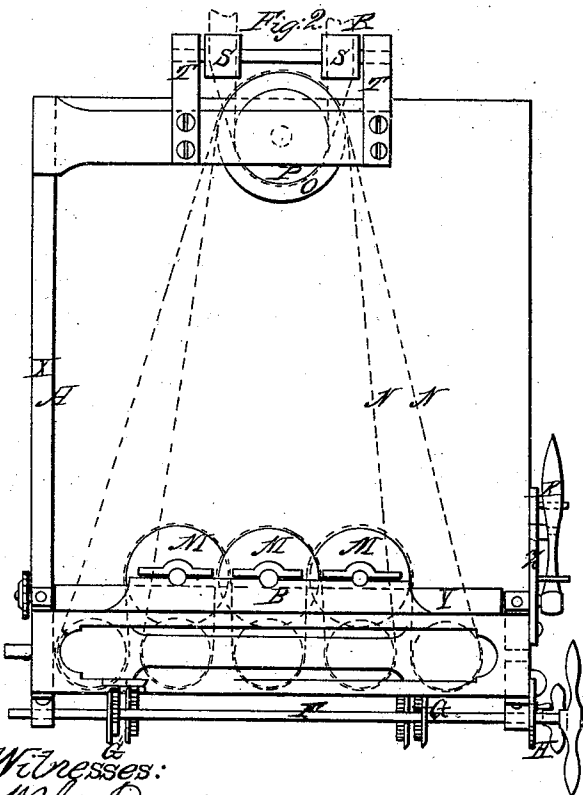
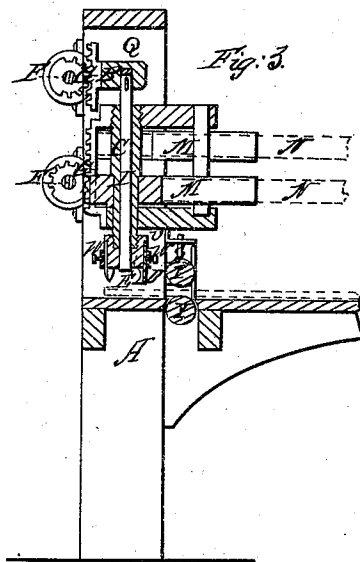
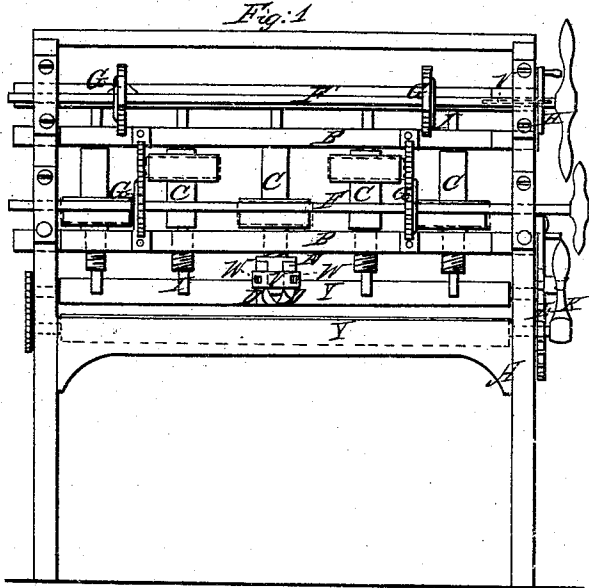


A. J. Gibson.

Bung Mach.

N<sup>o</sup> 85,579.

Patented Jan. 5, 1869.



Witnesses:  
W. G. Davis  
A. Bennett

Inventor:  
A. J. Gibson

# United States Patent Office.

ABRAM J. GIBSON, OF CINCINNATI, OHIO, ASSIGNOR TO WILLIAM C. DAVIS AND JOHN W. GARRISON, OF SAME PLACE.

*Letters Patent No. 85,579, dated January 5, 1869.*

## IMPROVEMENT IN BUNG-CUTTING MACHINES.

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, ABRAM J. GIBSON, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and improved Machine for Making Bungs, of which the following is a full and clear description, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an end elevation of my improved bung-machine.

Figure 2 is a plan of the same.

Figure 3 is a longitudinal vertical section of the same, taken through one of the mandrels.

Figure 4 is an elevation of a part of one side of the machine.

Similar letters of reference indicate like parts.

The nature of this invention consists in the construction and arrangement, in a bung-cutting machine, of a lateral and vertical reciprocating frame, filled with a gang of mandrels, placed vertically at equal distances apart, with rotary cutters attached, and a sufficient number to cut a plank of any desired width into bungs, as the plank moves through the machine, to make the greatest saving of lumber and labor, as will be hereinafter shown in the operation.

A is the frame of the machine, to receive the vertical and lateral reciprocating frame B.

C are mandrels, placed in the vertical and lateral reciprocating frame, to receive the rotary cutters D, by means of the cutter-heads E fastened to the lower ends of the mandrels.

F and F' are horizontal shafts, to elevate and depress the mandrels C and clamps I, by means of racks and pinions G and ratchets H. The clamps I pass through the mandrels, to fasten the wood to the table, in the process of cutting.

Y are feed-rollers, operated by the lever K.

The ratchet L regulates the distance the plank is to be moved forward.

Z is a circular face-plate, to regulate the distance of the lever K, in feeding the plank through the feed-rollers Y, in connection with the ratchet L.

M are idler-pulleys, to receive the belts from the mandrels, driven by belts N and pulleys O.

P is the main driving-pulley.

R, the main driving-belt, passing under idler-pulleys S attached to brackets T.

Q are blocks of elastic rubber, to allow the clamps I to yield, and be adjustable to uneven surfaces of the plank.

V are grooves cut in the clamp-shaft F, to allow the shaft F to reciprocate laterally with the frame B, while held in an elevated position by the racks and pinions G and ratchet-wheel H.

The lateral and vertical reciprocating frame B is to be removed from frame A, to give place for others for the various sizes of bungs to be cut, as one lateral and vertical reciprocating frame serves only for one size of bungs, on account of the system requiring the mandrels to be placed at different distances apart, according to the various sizes of bungs.

### *Operation in Working the Machine.*

First, place the plank to be cut, on the table, close up to the guide X, the lateral and vertical reciprocating frame to be placed to the opposite side of the machine from the operator, to commence. The plank is moved forward between the feed-rollers and under the cutters, by the lever K; the distance determined by the ratchet-wheel L.

Second, the clamps I are to be moved down to fasten the wood inside of the cutters, and held down by ratchet-wheel H'.

Third, apply the power to drive the machine.

Fourth, move down the cutters by turning the shaft F to the right for cutting, and to the left for elevating. The ratchet-wheel H on the shaft F will hold the mandrels in an elevated position.

Fifth, release the clamps by elevating. When the clamps are in an elevated position, move the lateral and vertical reciprocating frame towards you, so as to clamp the wood in the space between what had been previously cut, and while the clamps are in an elevated position move the plank forward, by means of the lever K and feed-rollers Y, the distance of one-half of the diameter of the bungs previously cut. The lever K will determine, if properly arranged between the pins in the face-plate Z, and clamp again as stated in the second operation, and the cutters may be operated again as stated in the fourth operation.

The object of this machine is to be able to cut bungs out of a plank of any desired width, length, or thickness, across the grain of the wood, by passing the plank straight through the machine, and reciprocating the cutters both laterally and vertically.

I am aware that a machine can be made to operate rotary cutters in a frame perpendicularly only, and reciprocate the plank on the table, which would be equivalent to the reciprocating cutter-frame, but not as simple or as practical.

Having fully described my invention,

What I desire to secure by Letters Patent, is—

The arrangement of the frame B, shaft F, rack and pinion G, and clamp I, herein described, for the purpose set forth.

A. J. GIBSON.

Witnesses:  
GEO. E. BROWN,  
CHAS. C. WILSON.