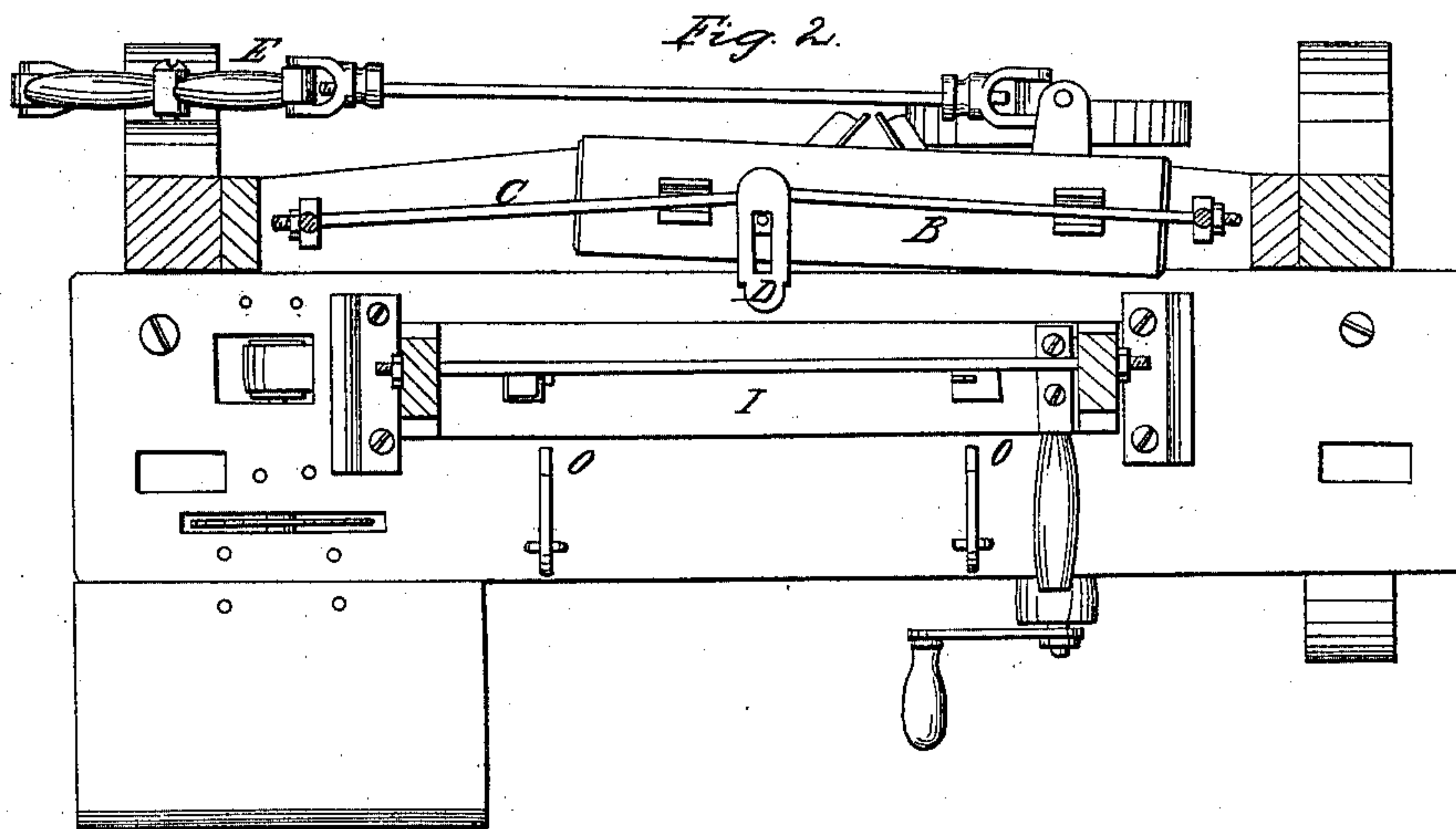
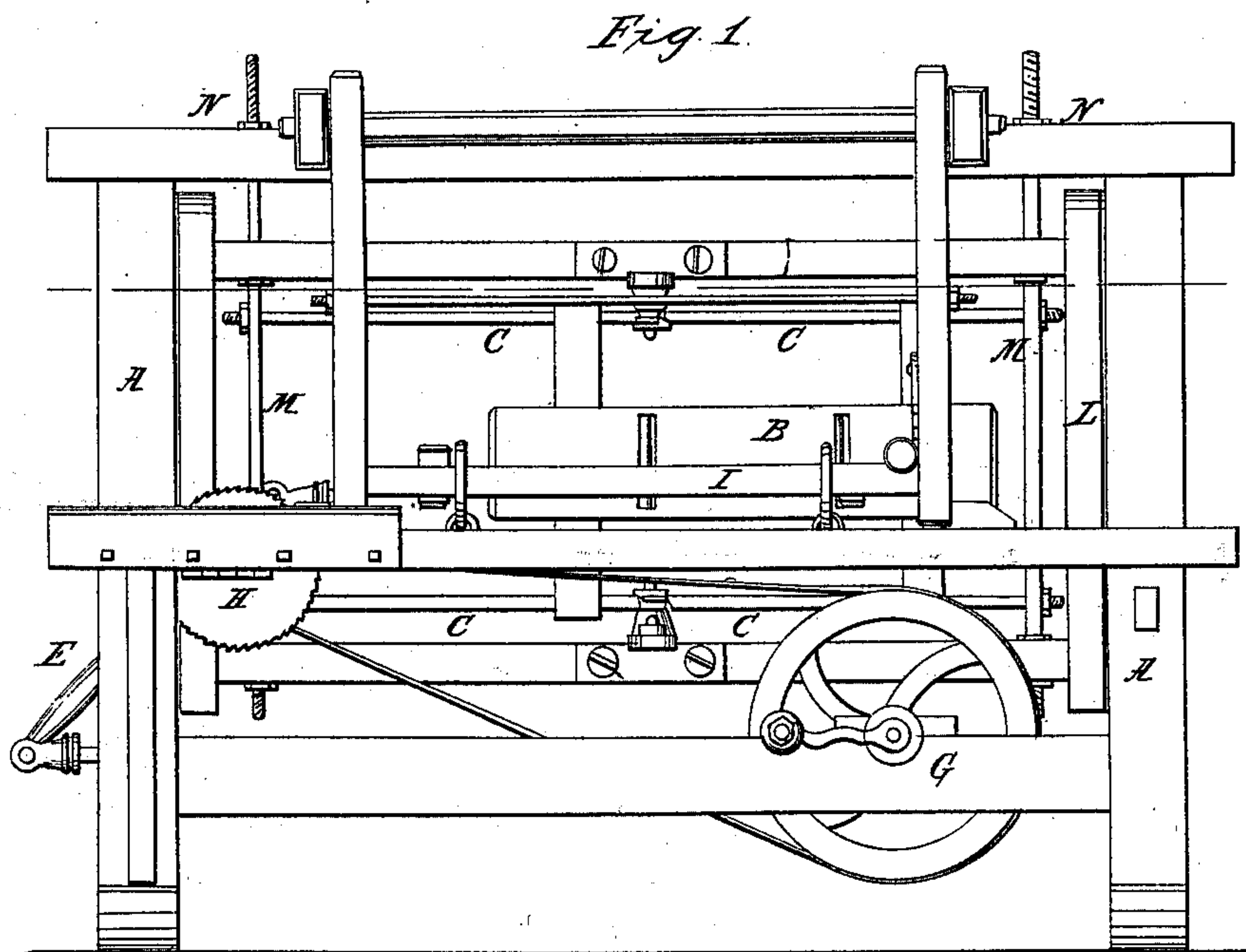


*L. B. Ecker,*  
*Jointing Staves.*  
*N<sup>o</sup> 81,613.      Patented Sep. 1, 1868.*



*Witnesses:*  
*W. D. McLaughlin*  
*A. M. Stout Jr*

*Inventor:*  
*Lewis B. Ecker*  
*per Daniel Breed*

United States Patent Office.

LEWIS B. ECKER, OF UNION BRIDGE, MARYLAND.

*Letters Patent No. 81,613, dated September 1, 1868.*

IMPROVEMENT IN MACHINE FOR JOINTING STAVES.

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, LEWIS B. ECKER, of Union Bridge, in the county of Frederick, and State of Maryland, have invented a new and useful Improvement in Stave-Jointing Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the accompanying drawings—

Figure 1 is a front view of my machine.

Figure 2 is a horizontal section of the same, the section being made, on the line *xx* of fig. 1.

My improvements in stave-jointing machines may be arranged upon any suitable frame A. The plane B is provided with two bits in the same stock, one bit facing each way. The plane is arranged upon jointed guide-rods C, the joint being made adjustable by means of the slide D, in order to give the plane any desired obliquity of motion, and thus make the stave of any degree of bilge that may be required. By this arrangement the bits cut from the centre of the stave toward each end. The plane receives a reciprocating motion from the reciprocating lever E, which, in turn, is moved by a crank-pin carried by the shaft G, which may also be employed to operate the saw H, as shown.

The plane and the guide-rods are arranged upon the gate L, which may be raised or lowered by means of screw-rods M and nuts N, fig. 1, thus raising or lowering the plane, and consequently bringing a different part of the edge of the bit to work in cutting.

I do not broadly claim a carriage-bed for moving the stave up to the planes, and I am aware that stops have been used to limit the advance of the stave toward the planes, but I believe it is new to employ a swinging bed moved by hand, and having gauge-stops behind the bed, thus gauging both ends of the stave to one width before the second plane begins to cut.

Having thus fully described my invention, I claim—

The combination of the plane B, arranged in the adjustable gate or frame L as described, with the swinging carriage-bed I, and the stops O, substantially as set forth.

LEWIS B. ECKER.

Witnesses:

DANIEL BREED,  
EDM. F. BROWN.