

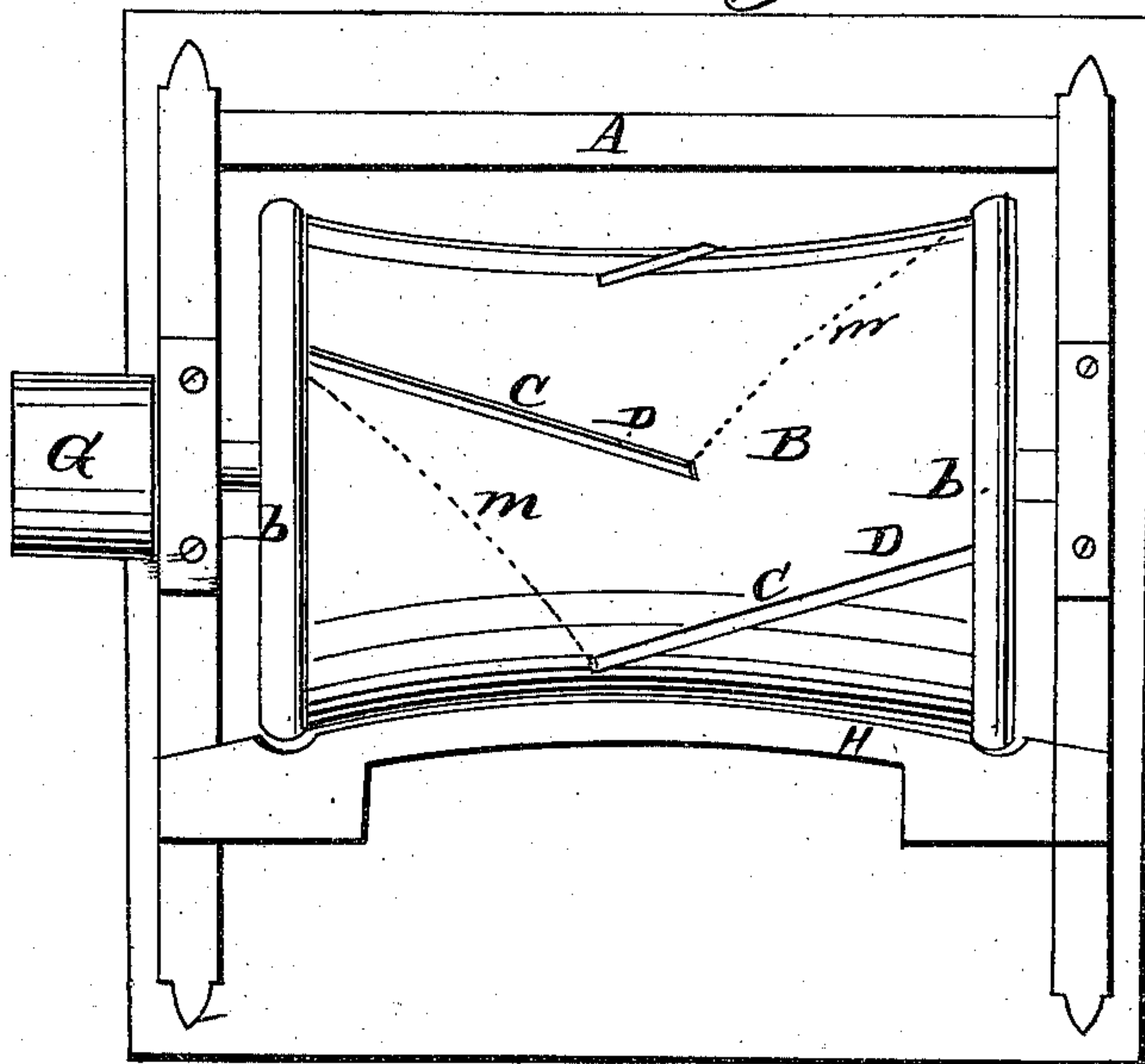
*H. A. Crossley,*

*Stave Joiner.*

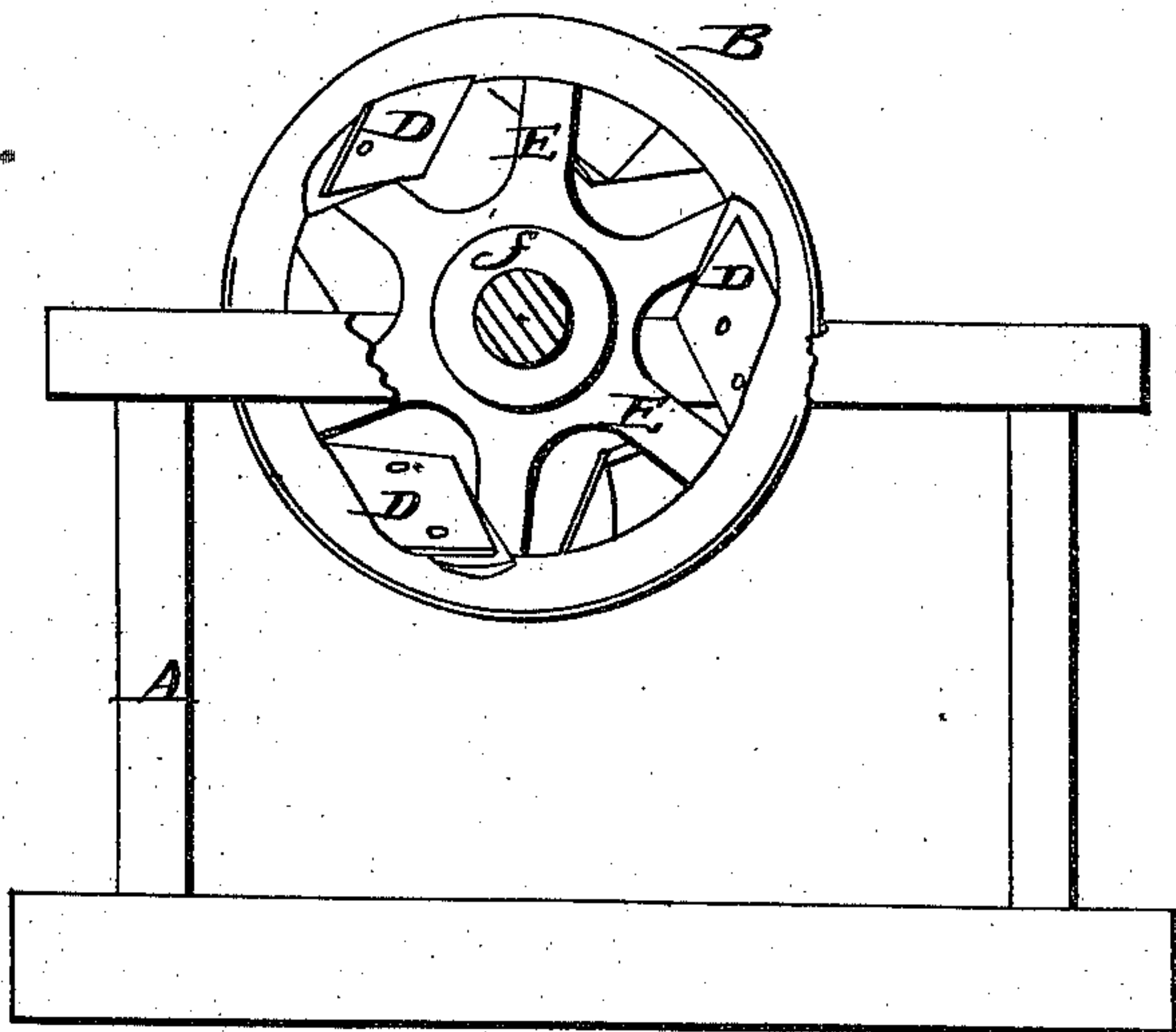
*No. 89,860.*

*Patented May 11, 1869.*

*Fig. 1.*



*Fig. 2.*



Witnesses:

*Geo. W. Tibbitts*  
*J. Holmes*

Inventor:

*Harry A. Crossley*



# United States Patent Office.

HARRY A. CROSSLEY, OF CLEVELAND, OHIO.

Letters Patent No. 89,860, dated May 11, 1869.

## IMPROVEMENT IN STAVE-JOINTER.

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, HARRY A. CROSSLEY, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in a Stave-Jointer; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view.

Figure 2 is an end view.

Like letters of reference refer to like parts in the views.

The nature of this invention relates to the construction of a cylinder, having a concave surface from end to end, corresponding to the curved edge of the stave, and is provided with knives, or cutters, arranged in the surface of the cylinder, in such a manner that their cutting-edge shall be straight, and, when in operation, cut, or shave the edge of the stave from the middle toward the ends, both ways at the same time.

The knives are, by this arrangement, made straight, which enables them to be more easily set in position, and more convenient for sharpening.

The following is a description of its construction and operation:

A suitable frame, A, which may be modified in form and arrangement to suit circumstances, is made to support the cylinder B, which is constructed in the following manner:

The cylinder, as will be seen by reference to the drawing, has its surface made concave, from one end to the other, and has a flange, b, upon each end, to give additional strength, and is provided with a number of straight slots, or openings, c, in its periphery, arranged alternately from the centre to the ends, diagonally from the centre, in such a position that the knives, D, may be straight.

Upon the inside of this cylinder, and next to the slots, are bevelled bearings, to which the knives D are attached, by bolts.

In the middle of the cylinder B, are arranged the spokes E and hub f, through which the driving-shaft passes, leaving the ends entirely open, and free.

A driving-pulley, G, is placed upon the shaft, for operating the machine.

Upon the frame A is placed a bed-plate, H, having

its upper surface convex, to fit the stave, and the edge next to the cylinder curved, to correspond with the curve of the cylinder upon which the stave rests, and may be carried up to the cutters.

The central portion of the bed-piece may be cut out, as seen in the drawing, to enable the operator to readily handle both narrow and broad staves.

This bed-plate may be so arranged as to give any required bend to the edge of the stave.

On the inside of the cylinder it is intended to have ribs, or flanges, m m, passing from the inner ends of the knives, in a curved line, as seen by the dotted lines, fig. 1, to the end of the cylinder, to give additional strength, and at the same time form a kind of fan, by which the shavings would be forced to discharge out at each end of the cylinder.

The operation of this machine is as follows:

A stave, being placed upon the bed-plate H, is pushed toward the cylinder, and, it will be observed, the knives, by their position in the cylinder, cut or shave the stave from the centre toward both ends, and thus work in such a manner upon the grain of the wood as to make a perfectly smooth edge.

The shavings are also, by this arrangement, carried towards the ends of the cylinder, and by the rapid motion of the cylinder, which creates a draught, current of air blows the shavings away from the machine, leaving it free and clear from them.

By the use of this method of construction and operation for a jointing-machine for staves, much more work may be accomplished in a given time, and of better quality.

I am aware of the Letters Patent granted to John K. Derby, for improvements in stave-jointers, dated November 1, 1859, and I hereby disclaim said invention.

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

The hollow cylinder B, concave on its outer surface, in combination with the knives D D, when the latter are arranged so as to cut in opposite directions from the centre of the stave, all the parts being constructed and arranged to operate as set forth.

HARRY A. CROSSLEY.

Witnesses:

J. HOLMES,  
GEO. HESTER.