J. M. PEIRCE & F. M. KINSMAN.

Cylinder-Saw.

No. 166,718. Patented Aug. 17, 1875.

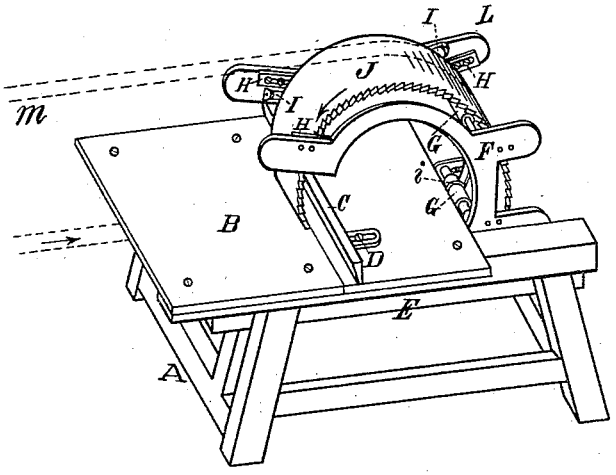

Fig. 1.

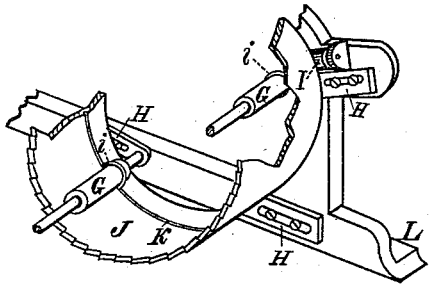

Fig. 2.

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UNITED STATES PATENT OFFICE.

JOSEPH M. PEIRCE AND FRANK M. KINSMAN, OF FITCHBURG, MASS.

IMPROVEMENT IN CYLINDER-SAWS.

Specification forming part of Letters Patent No. **166,718**, dated August 17, 1875; application filed May 13, 1875.

To all whom it may concern:

Be it known that we, JOSEPH M. PEIRCE and FRANK M. KINSMAN, of Fitchburg, in the county of Worcester, State of Massachusetts, have invented a certain new and useful Improvement in Cylinder-Saws, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which our invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view; Fig. 2, a sectional view, showing details for reference.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

Our invention relates more especially to that class of drum-saws which are employed in the manufacture of staves; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simple, cheap, and effective device of this character is produced.

The nature and operation of our invention will be readily obvious to all conversant with such matters from the following description.

In the drawing, A represents the frame-work; B, the platen or table; C, the gage; D, the gage-screw, and E the cross-beams. The saw J is in the form of a hollow cylinder, open at each end, and is provided with teeth upon one of its edges, but, instead of being hung in the usual manner upon a mandrel or shaft, is supported by a series of interiorly-arranged rollers, G G, which, in turn, are supported or journaled in the adjustable lugs or bars H H, attached to the inner sides of the auxiliary frame or standards L F. A groove, K, is cut entirely around the inner side of the saw, nearest the edge opposite the teeth, in which groove annular splines or bosses *i i* on the rollers G G work, to hold the back of the saw against a series of friction-rollers, I, journaled in proper bearings on the inner face of the standard L.

In the use of our improvement the saw itself forms the drum or pulley for the belt, which is represented by the dotted lines *m*, and is preferably applied near the friction-rollers I, to run horizontally, as shown by the arrows in Fig. 1.

It is well known that in the use of drum-saws, as ordinarily constructed and hung, the stave or sawed stuff, instead of passing through the saw, has to be withdrawn or removed prior to advancing the bolt or blank for each new cut. This is done not only at the expense of much time and labor, but at great risk to the operator.

Our improvement, it will be seen, is designed to obviate these difficulties and objections, the saw being so constructed and arranged to operate that when the bolt is placed against the gage C and advanced to the saw, the stave or sawed stuff will have an unobstructed passage entirely through the saw, being pushed from the bench B successively by the advancing bolt in a manner which will be readily obvious without a more detailed explanation.

It will be understood that in the construction and arrangement of the rollers G, friction-rollers I, standards L F, and belt *m*, none of these parts is on a plane with the bed B, or so arranged as to obstruct the free passage of the work through the saw.

Having thus explained our improvement, what we claim is—

The drum-saw J, provided with the interior groove K, in combination with the rollers G G, provided with the bosses *i*, fitting in the groove K, and the rollers I, journaled on the inner face of the standard L, all constructed to operate substantially as and for the purpose set forth.

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