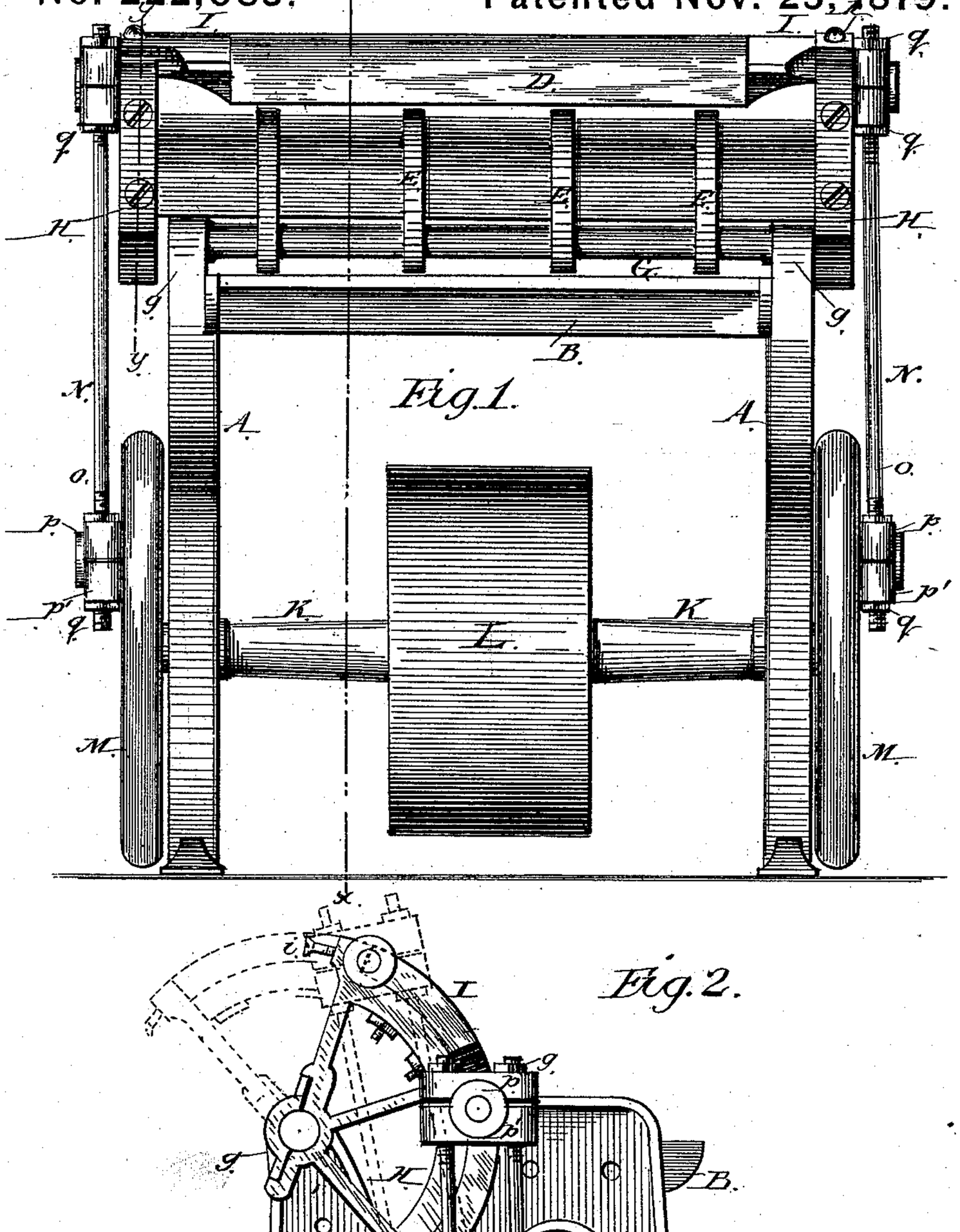
2 Sheets—Sheet 1.

W. SISSON, dec'd.

W. H. & E. J. SISSON, Executors.

Stave-Cutting Machine.

No. 222,085. Patented Nov. 25, 1879.



Witnesses;
Fred. G. Dieterich
J. Wallis Fowler.

William H. Sisson
Eunice J. Sisson
Executors of
William Sisson
by A. Peterson & Co
Attorneys

2 Sheets—Sheet 2.

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Fig. 3.

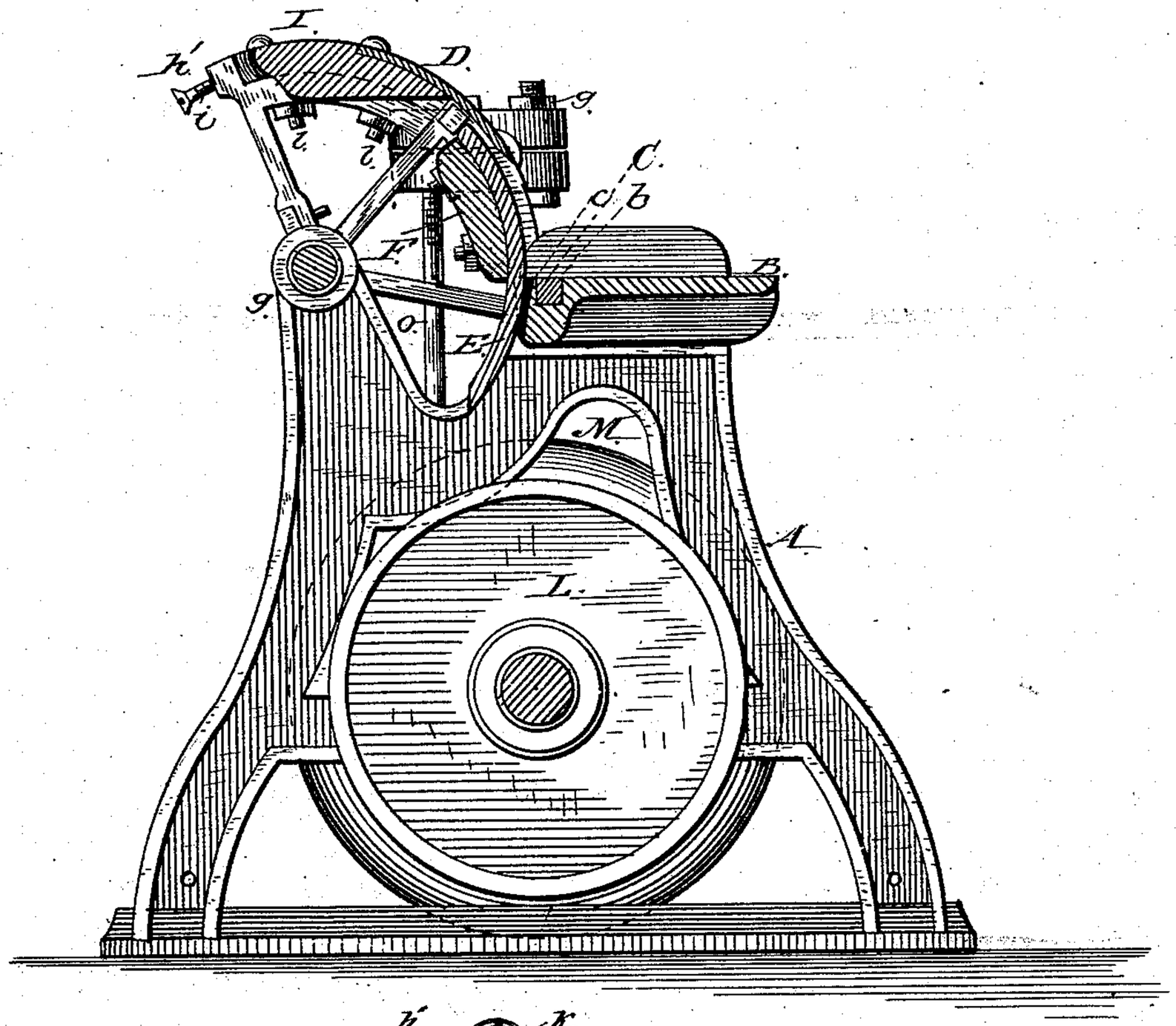
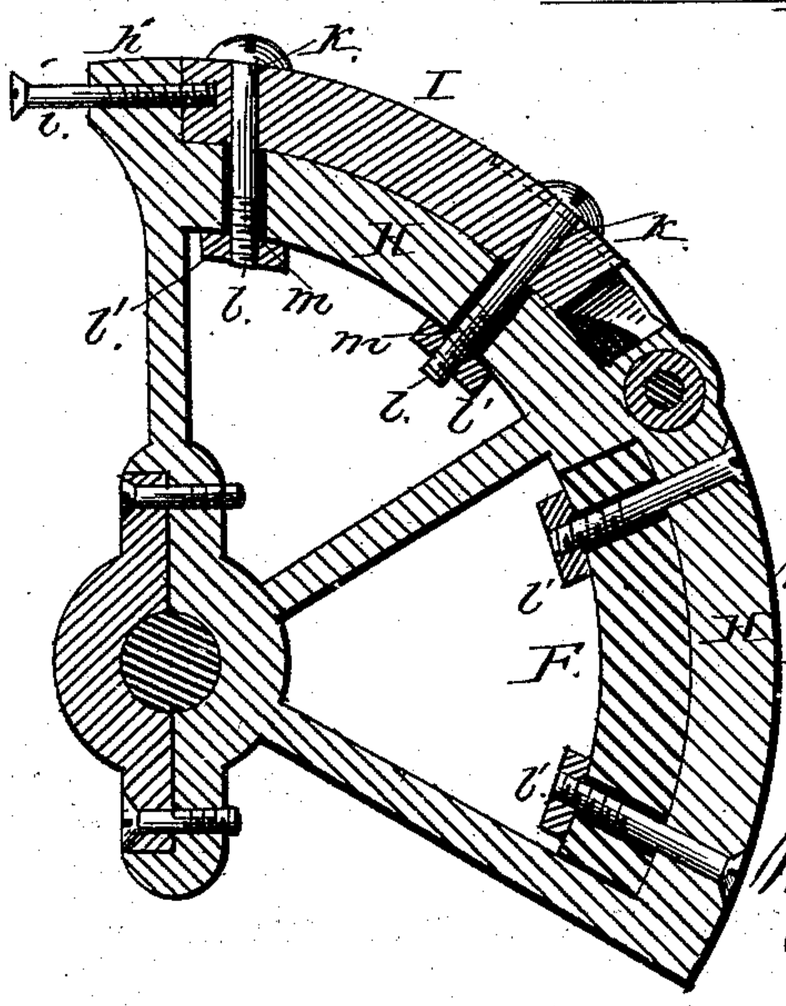


Fig. 4.



Witnesses;
Fred G Dieterich
L Walter Fowler.

William H. Sisson.
Eunice J. Sisson
Executors of
William Sisson
by A Peterson & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM H. SISSON AND EUNICE J. SISSON, (EXECUTORS OF WILLIAM SISSON, DECEASED,) OF FULTON, ASSIGNORS TO HENRY M. MAGUIRE, OF OGDENSBURG, NEW YORK.

IMPROVEMENT IN STAVE-CUTTING MACHINES.

Specification forming part of Letters Patent No. **222,085**, dated November 25, 1879; application filed May 17, 1879.

To all whom it may concern:

Be it known that WILLIAM SISSON, late of Fulton, in the county of Oswego and State of New York, did invent certain new and useful Improvements in Machines for Cutting Staves, of which the following is a clear and exact description, which will enable others skilled in in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front elevation. Fig. 2 is a side elevation. Fig. 3 is a vertical section on line *x x*, Fig. 1, and Fig. 4 is a similar (enlarged) section on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to machines for cutting staves from the bolts or blocks, more especially staves intended for tight barrels or casks to hold liquids; and it consists in the detailed construction and arrangement of sectoral supports or bearings for the cutter-head and guide-plate, and their combination with adjustable pitmen and an operating shaft and pulley, substantially as hereinafter more fully set forth.

In the two sheets of drawings hereto annexed, A A are the side pieces, which, with the bed-plate B, form the frame of the machine. The bed B has a longitudinal groove or recess, *b*, in its rear side, into which is inserted the removable cutting-block C that receives the edge of the vibrating knife or cutter D.

c c are notches made in the rear edge of bed B, back of the recess *b*, to receive the curved guide-ribs E E of the curved guide plate or stock F.

G is a shaft, journaled in bearings in the ends of the brackets *g g* of the side pieces or standards A A. Upon the projecting ends of this shaft (which is parallel to and a little above the bed-plate B) are secured two sectoral heads, H H, one at each side of and exterior to the frame, the curved rims of said sectoral heads or bearings being concentric with the shaft G.

Each of the heads H H has a projecting lug or shoulder, *h'*, through which is inserted a set-screw, *i*, bearing against the rear edge of the curved knife-stock I, the curvature of which coincides with that of the rims of the heads H H upon which it rests.

The ends of the curved knife-stock I are perforated, as shown at *k k*, to receive bolts *l l*, which pass through corresponding slots *m m* in the heads H, and are held firmly in place by nuts *l' l'*.

The knife D is bolted firmly in a recess in the stock I, as shown more clearly in Fig. 3, and is curved to coincide with the curvature of the stock.

The curved guide-plate or guide-stock F is secured with its ends in the lower part of the heads H H concentric to shaft G, but at a less distance from this than the knife-stock, so as to leave a space between the upper edge of the guide-plate and the curved knife D projecting down over it. Upon the front face of this curved guide-plate F are secured equidistant guide-ribs E E, which register with the slots or notches *c c* in the bed-plate B.

In the lower part of the frame, below the bed-plate B and parallel thereto, is journaled a shaft, K, provided with a driving-pulley, L, and balance-wheels M M, one on each side. Two driving-pitmen, N N, connect the wheels M M with the vibratory heads H H. Each of these pitmen consists of parallel rods *o o*, the ends of which are inserted through the half-boxes *p p'*, in which the crank-pins of the heads H and wheels M are respectively pivoted, the pitman-rods being adjustable in length by their nuts *q q*, so that all slack caused by wear of the boxes may readily be taken up.

By the construction of the sectoral bearings or heads H H, as described, shoulders or abutments are formed on opposite sides for the knife-stock or cutter-head I and the guide-plate F, the former being upon the outer side of the head or bearing H, and the latter upon the inner side of this, as will be seen more clearly by reference to Fig. 4 of the drawings. In this manner the knife-stock and guide-plate are both secured firmly in the head on oppo-

site sides thereof and concentric to each other, without possibility of accidental displacement during the operation of the machine.

We claim and desire to secure by Letters Patent of the United States—

1. The combination, with the sectoral heads or bearings H H, consisting each of two concentric sectors of different radii, overlapping each other at one end so as to form shoulders or abutments on their outer and inner sides, of the adjustable outer knife-stock or cutter-head I, and inner concentric guide-plate F, substantially as set forth.

2. The combination, with the shouldered or stepped sectoral heads or bearings H H, constructed as described, of the adjustable pitman-rods *o o*, half-boxes *p p' p p'*, crank-wheels M, and shaft K, substantially as set forth.

In testimony whereof we have hereto set our hands this 10th day of May, 1879, in the presence of two subscribing witnesses.

WILLIAM H. SISSON. [L. S.]
EUNICE J. SISSON. [L. S.]

Witnesses:
W. J. WATSON,
S. B. WHITAKER.