2 Sheets—Sheet 1.

W. MORGAN.

Machine for Cutting Wood Spirals.

No. 211,923. Patented Feb. 4, 1879.

Fig. 1.

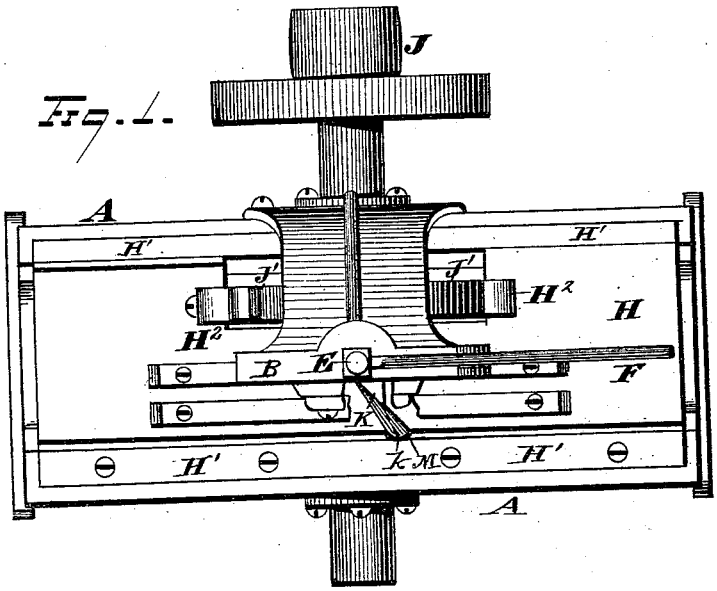
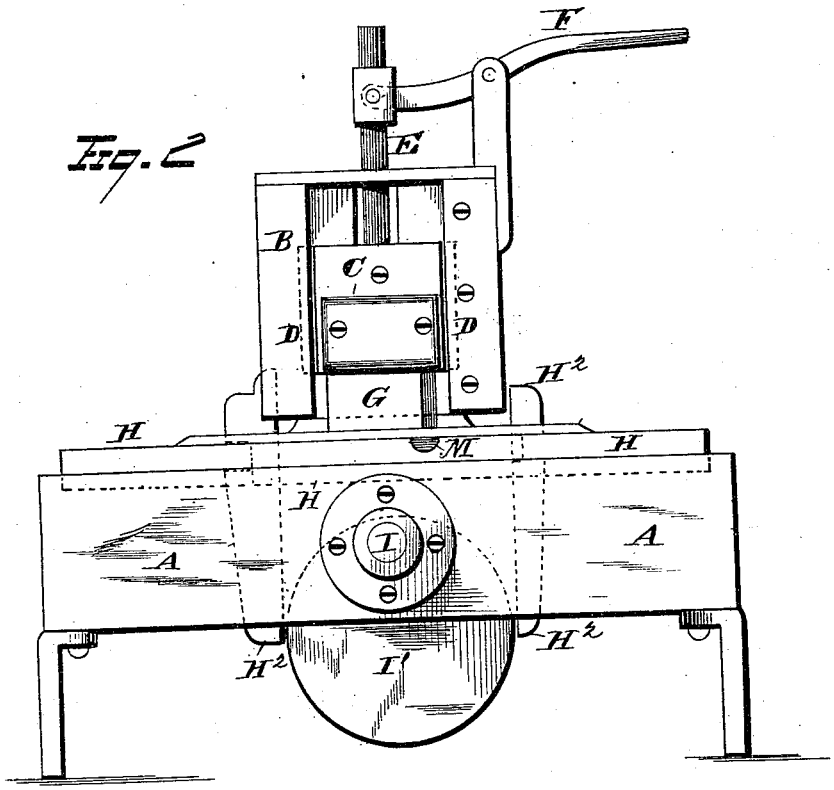


Fig. 2.



WITNESSES

E. G. Nottingham

A. M. Bright

INVENTOR

Wm Morgan.

By Seegett and Seegett.

ATTORNEYS

2 Sheets—Sheet 2.

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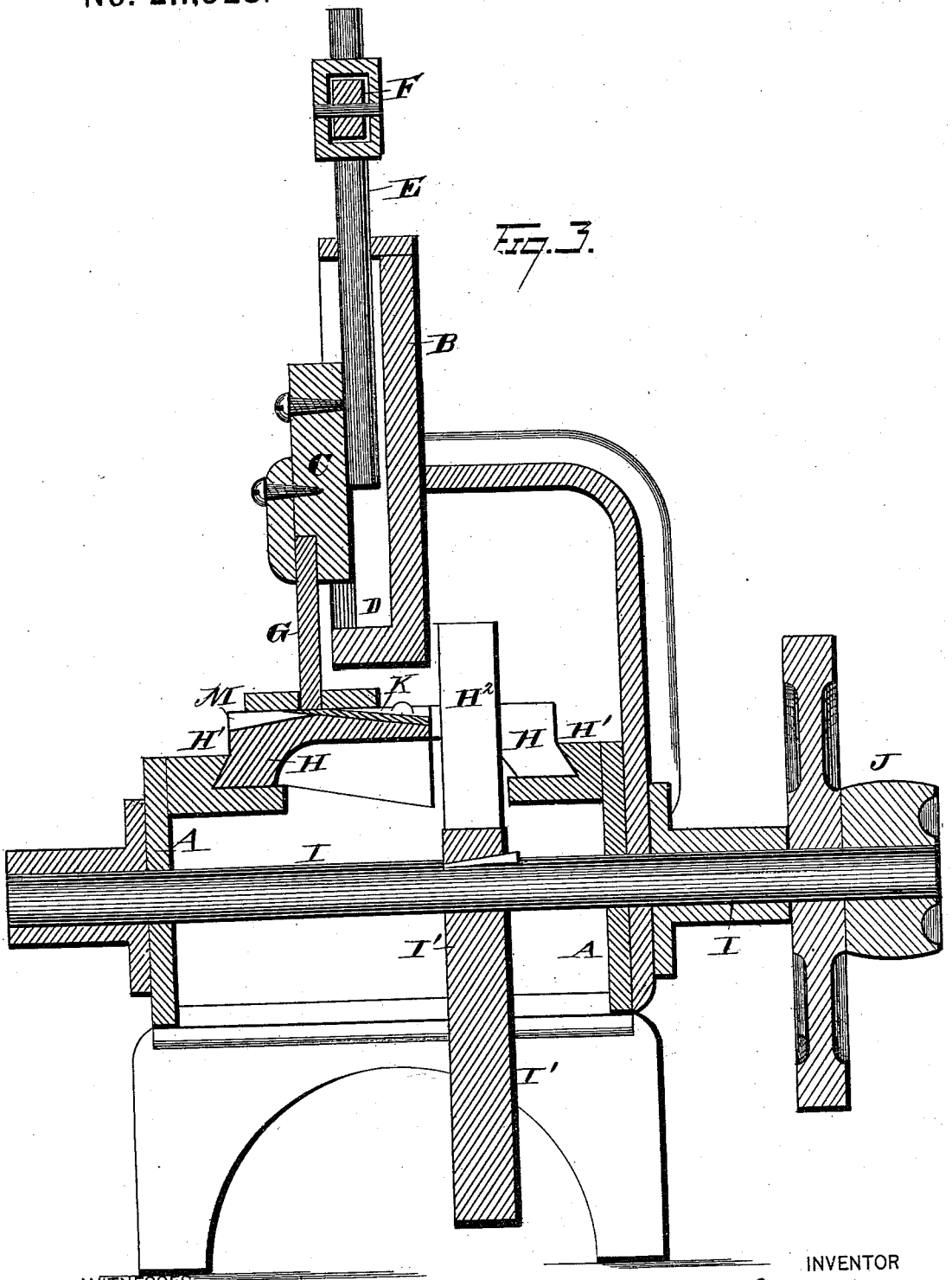

Fig. 3.

WITNESSES

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A. M. Bright

INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM MORGAN, OF CLEVELAND, OHIO.

IMPROVEMENT IN MACHINES FOR CUTTING WOOD SPIRALS.

Specification forming part of Letters Patent No. **211,923**, dated February 4, 1879; application filed November 25, 1878.

To all whom it may concern:

Be it known that I, WILLIAM MORGAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Machines for Cutting Wood Spirals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to machinery for the manufacture of wood spirals, such as are used as lamp and cigar lighters, &c.

The invention consists in the parts and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a plan view, Fig. 2 a side elevation, of a machine embodying the principles of my invention. Fig. 3 is a cross-section by a vertical plane, showing the axis of the drive-shaft.

A is a suitable frame for supporting the mechanism. B is a bracket, of any suitable construction, adapted to support the block from which the wood spirals are shaved. C is a frame or head-block for holding the block. This head-block C slides freely up and down in suitable guides D, and is attached to a rod, E, which is controlled by a lever, F, whereby the block may be at any time raised from the plane, or the head-block may be lifted up in order to insert a new block beneath it. G is a block of wood, from which the wood spirals are cut. H is the plane, adapted to slide in suitable guides H^1, and caused to reciprocate back and forth by means of an eccentric, I′, on the drive-shaft I. The eccentric I′ is embraced by arms H^2, attached to the plane H. J is a drive-pulley. K is the knife. The knife K is inclined at *k*, in order to give an inclined shearing cut across the surface of the block, whereby the shaving is caused to take a spiral form. A knife-shield may be used, the same being made abrupt, and caused to come close to the edge of the knife K, in order that the moment the shaving is started its edge will strike the shield, and it will be caused to roll up more closely than it otherwise would.

The eccentric I′, revolving as it does between the arms H^2 of the plane H and within the limits of the plane itself, gives to the plane a very positive motion, and applies the power for driving it at the locality the best adapted to make the machine operate steadily and with certainty and without any vibration of the plane; whereas if the plane were driven by a pitman from a distant point it would, in shaving the wood, be apt to vibrate more or less up and down, which unsteady operation would cause the knife to operate on the wood with less uniformity, and would produce a shaving or spiral of imperfect character. So, also, the block of wood being stationary, it can be fed downward with certainty, regardless of the speed of the plane; and in use I have been enabled to operate the plane at as high a rate of speed as to cut five hundred spirals per minute with a single knife.

M is a throat, from which the wood spiral issues as it is shaved from the block.

What I claim is—

1. In a machine for cutting wood spirals, the combination, with mechanism adapted to move the block to be cut to or from the planer, of arms secured to the latter, together with an eccentric, which rotates within said arms, and thereby actuates the planer in a reciprocating movement, substantially as set forth.

2. The combination, with the plane, of embracing-arms H^2 and driving-eccentric I, substantially as and for the purposes described.

3. The wood-spiral machine, consisting of frame A and stationary bracket B, the sliding head-block C, and sliding plane H, in connection with the arms H^2 and driving-cam I, substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MORGAN.

Witnesses:

JNO. CROWELL, Jr.,

WILLARD FRACKER.