

*Kinney & Parker,
Sawing Shingles.*

N^o 85,103.

Patented Dec. 22, 1868.

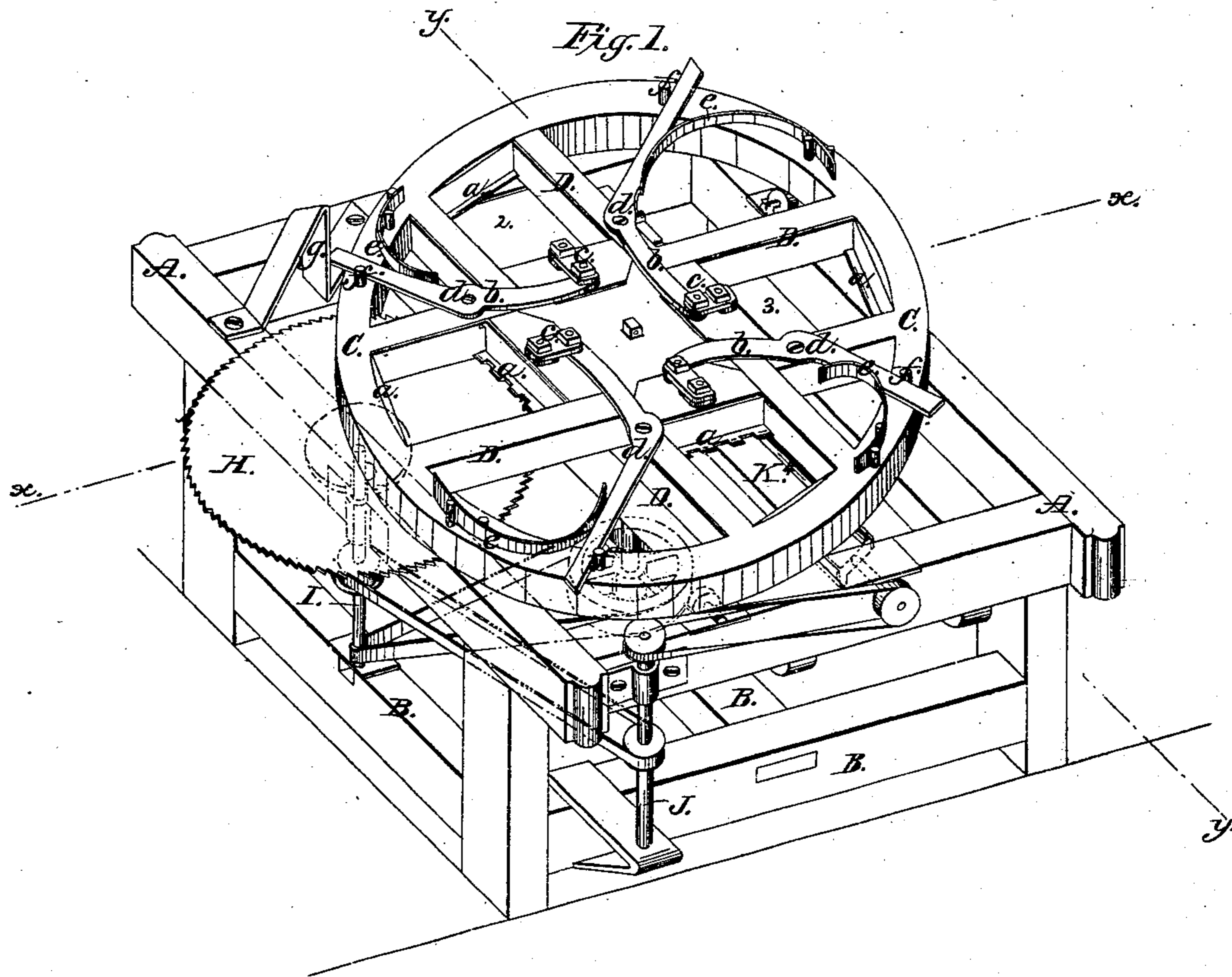


Fig. 2.

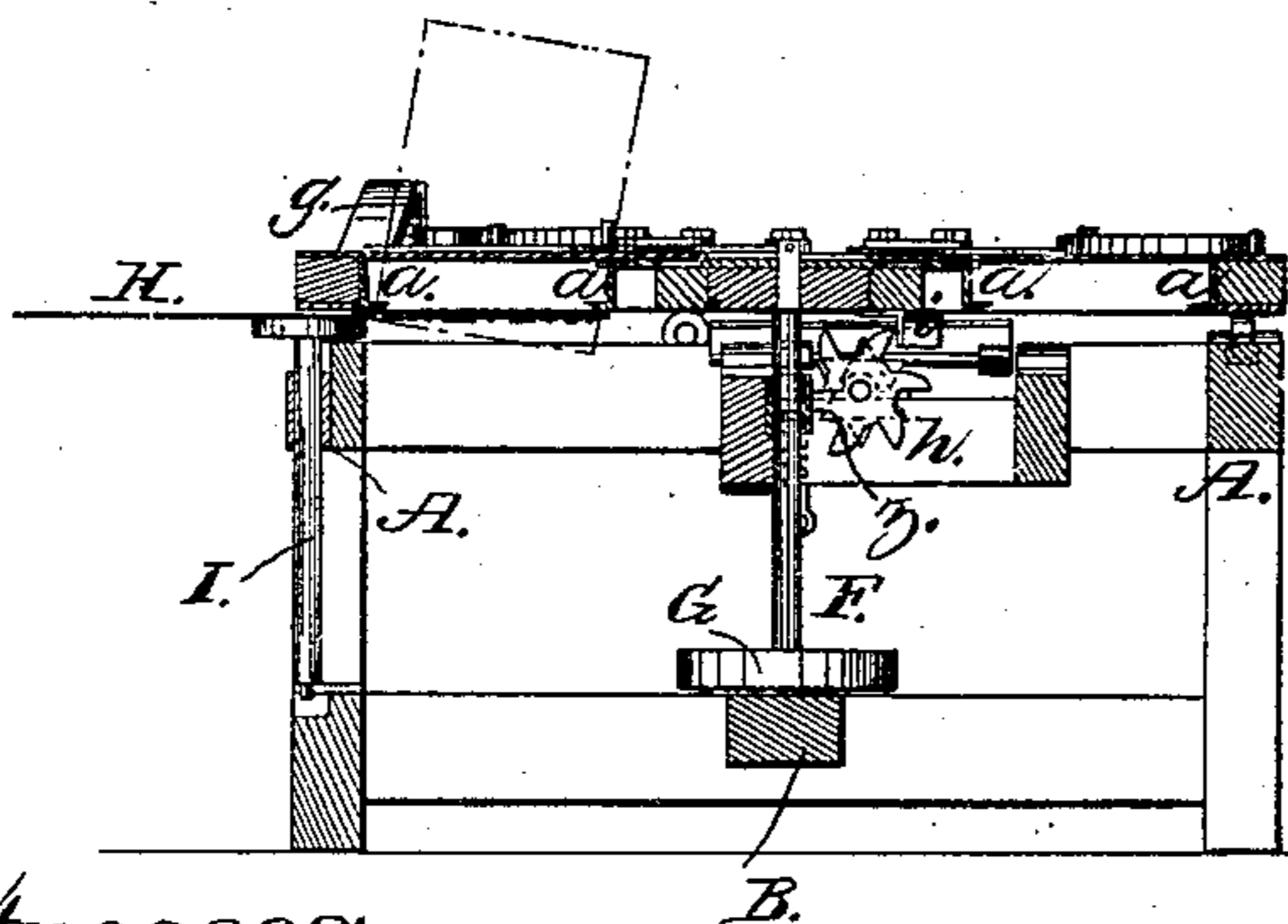
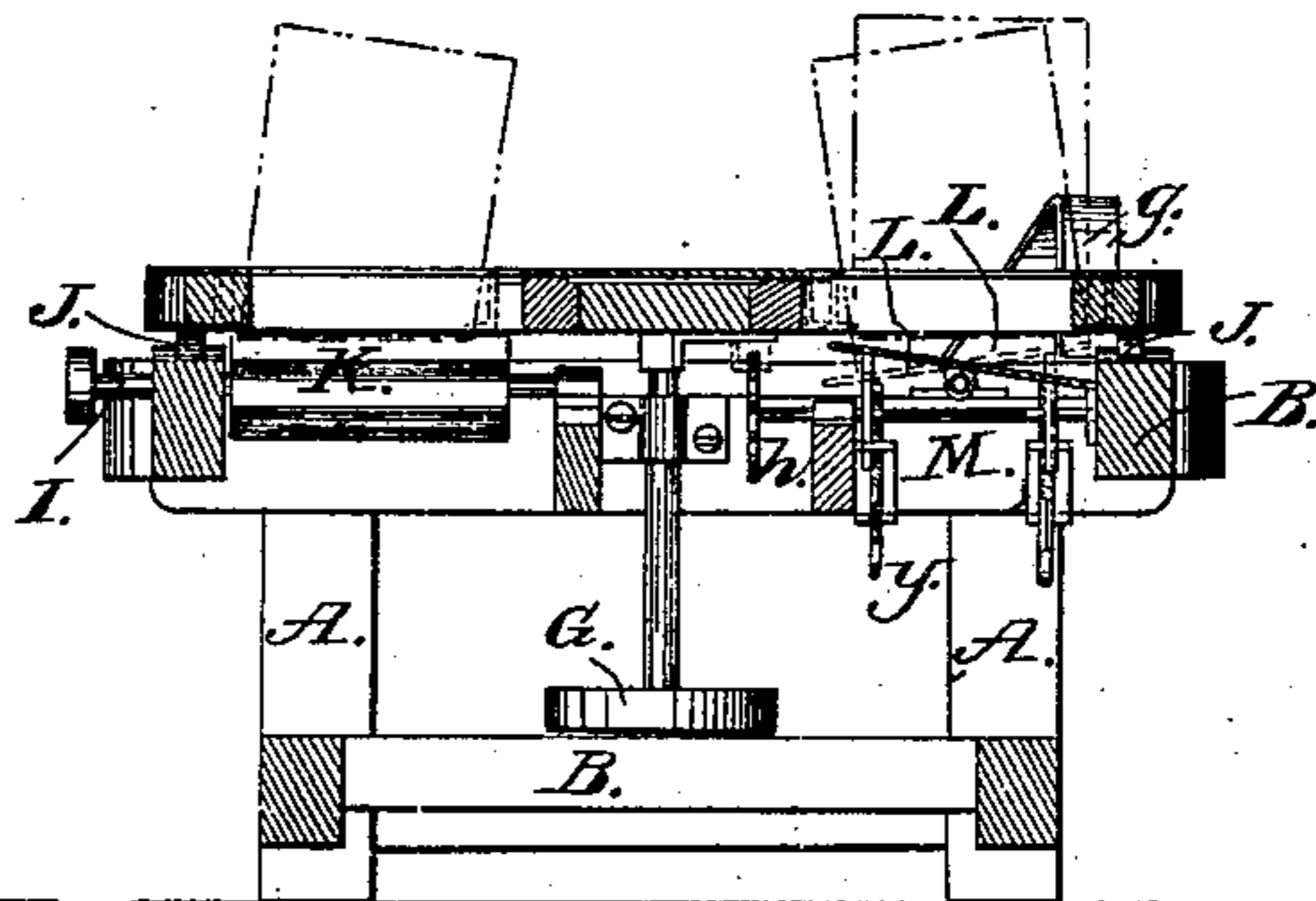


Fig. 3.



Witnesses:

*Ch. H. Winder
V. C. Clayton*

Inventor:

*Chas. A. Kinney,
Chas. Parker
by their attys
J. C. Clayton*

United States Patent Office.

CHARLES A. KINNEY AND CHARLES PARKER, OF CORRY, PENNSYLVANIA.

Letters Patent No. 85,103, dated December 22, 1868.

IMPROVEMENT IN SHINGLE-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that, we, CHARLES A. KINNEY and CHARLES PARKER, of Corry, in the county of Erie, and in the State of Pennsylvania, have invented certain new and useful Improvements in Shingle-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a plan view in perspective.

Figure 2 is a vertical section through the line $x-x$ in fig. 1.

Figure 3 is a vertical section through the line of $y-y$ of fig. 1.

The nature of our invention consists in the revolving wheel, with brakes for disengaging the block at the cut of each shingle, and grasping it again, the stationary stop for operating the brakes, the arrangement of the saw, the manner of dressing the face-side of the shingle, and the adjustable table, with its necessary mechanism for operating, automatically, said table, with the several devices for operating the machine, all of which will be more fully hereinafter explained.

To enable others skilled in the art to make and use our invention, we will now proceed to describe its construction and operation.

In the construction of our invention, in fig. 1, A is the frame.

B, the lower brace of the frame, and cross-piece extending across the middle of the frame.

C, the revolving wheel, in which are held the blocks of wood out of which the shingles are made. This wheel is composed of a firm periphery, or rim, sufficiently strong for the purposes for which it is to be used.

Cross-pieces D D D' D' are framed in this wheel, at right angles to each other, leaving a space between each pair of cross-pieces of sufficient breadth and length to receive and hold the several blocks to be cut into shingles.

The centre of said wheel is provided with a square journal-box, marked E, into which box the journal F fits.

To this journal is attached band-wheel G, for operating the wheel, saw, planer, and automatic table.

We place in each of the squares 1, 2, 3, and 4, supports, $a a a a$, to the inner rim of the wheel, on which we rest the outer ends of the blocks of wood.

Like supports, with teeth, are placed at the inner ends of said squares 1, 2, 3, 4. These supports are made to slide in and out, and rest on cross-frames, and are attached to stops or trips, b , to which they are securely fastened by bolts c .

These stops or trips are secured to the cross-pieces D D D' D' by bolts d , as a pivot on which they move, and are held in proper position by the springs e and pin f .

g is a brake, firmly attached to the top of the frame and near the outer side of the rim of the wheel C, against which the stops or trips strike as the wheel revolves, thus causing them to slide the supports in order to drop the block on the table; and the spring throws them back again to grasp the block.

H, the saw, is attached to a shaft, I, with its bearings on the frame A and B.

Two pulleys are placed on this shaft I for bands, one of which runs around the driving-pulley and conveys motion to the saw, and the other band, on the other pulley, transmits motion to the journal-shaft J, on which (shaft J) are two pulleys, around which are bands to communicate motion to the revolving planer K.

This planer is made of two revolving knives, a' , placed on a shaft, and parallel to each other, in any suitable manner, and is intended to dress the entire face of the shingle, and has its bearings in journal-boxes on cross-pieces and frame A.

L is the automatic table, hung on a shaft, which passes through its centre, firmly attached to the table, and resting in journal-boxes secured to cross-ties B, and the table easily oscillates on its shaft.

Under this table, and at right angles to its bearing, is a shaft, M, with its bearings on one of the cross-ties B, and secured by a journal-box on the inner side of the frame A.

On the shaft M is a triangular cam, z , to oscillate the table L.

On the end of the same shaft is a ratchet-wheel, h , by which the shaft M is turned at regular intervals by means of a catch, i , which is firmly attached to the under side and near the centre of the revolving wheel C.

y is a set-screw for regulating the taper of the shingle, shown in fig. 3.

There are three friction-rollers, j , let into the top of the frame, on which the revolving wheel C turns.

In the operation of our invention, motion is given to the driving-band wheel on the shaft, which is let into and passes through the centre of wheel C, to which it is firmly attached, thus causing said wheel to revolve. Motion is now communicated by bands from the driving-pulley to the saw, by means of a pulley on the saw-spindle, and from this spindle to the planer K, causing it to revolve rapidly, and as the wheel C revolves, the catch on the under side of the wheel C catches into one of the teeth of the ratchet-wheel h , and revolves the shaft to which it is attached, a partial revolution, turning up one point of the triangular cam against the table, and raising up the inner side of the table to the height required, when the catch slips off and allows the table to stand in this position while the wheel makes one revolution and cuts a shingle from each block, thus cutting four shingles at one revolution, with the heel of these first four shingles at the outer end of the block. In making the next revolution, the catch of wheel C

again operates on the ratchet-wheel, and turns it partially around, bringing up one of the points of the triangular cam. The catch then slips off and the table falls down on the inner side, making the lower side of the table on the inner side, so that the four shingles cut on this revolution of the wheel C will have the heel on the inner end.

The timber out of which the shingles are to be made is cut to the required length and breadth. These blocks are then put into squares 1, 2, 3, and 4, and are firmly held in position by the supporters and by the spring-clamps. As the wheel C revolves one revolution, the table remains with the inclination downward on the outside, thus placing the shingle to be cut as it falls on the table, by being relieved from the spring-clutch, by the brake coming in contact with the arm of the spring-clutch with the heel outward, bringing it around to the saw, where it is cut from the block, and falls out from the machine.

As the blocks pass over the rotary planer, the lower side of the block is dressed, thus presenting a smooth face to each shingle as it is cut off. By thus dressing the face-side of the shingle, it is greatly enhanced in its value, as the water will pass off freely and not be absorbed by the shingle, thus making it more durable.

The wheel C can be made of cast-iron, if we find it desirable.

We are aware that tilting-tables have been used in shingle-machines. This we do not claim broadly, as it is not new.

We are also aware that planers on the face of a revolving wheel are not new.

We are also aware that sectional knives on a revolving planer, for dressing only the but-end of the shingle, are not new. This we do not claim.

Having thus fully described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

The automatic table L, when operated by shaft M, wheel h, cams z and i, and set-screw y, and the revolving horizontal planer k, with knives a' a' for dressing the entire face of the block, in combination with the saw H, revolving frame A, trips b, springs e, and brake g, substantially as described, and operating as and for the purposes set forth.

In testimony that we claim the above-described invention, we have hereunto signed our names, this 15th day of February, 1868.

C. A. KINNEY.
CHARLES PARKER.

Witnesses:

L. E. GUIGNON,
JO. C. CLAYTON.