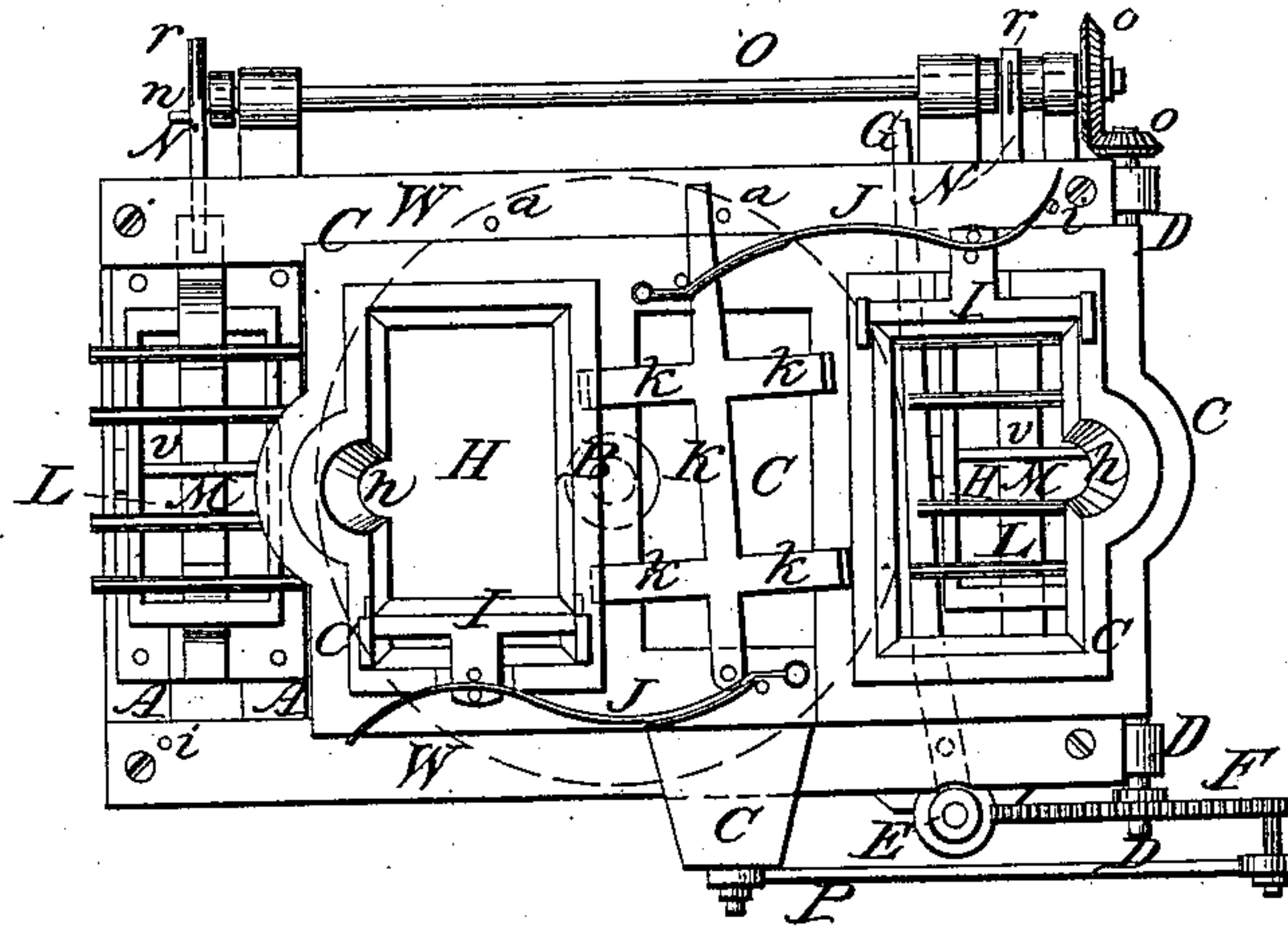
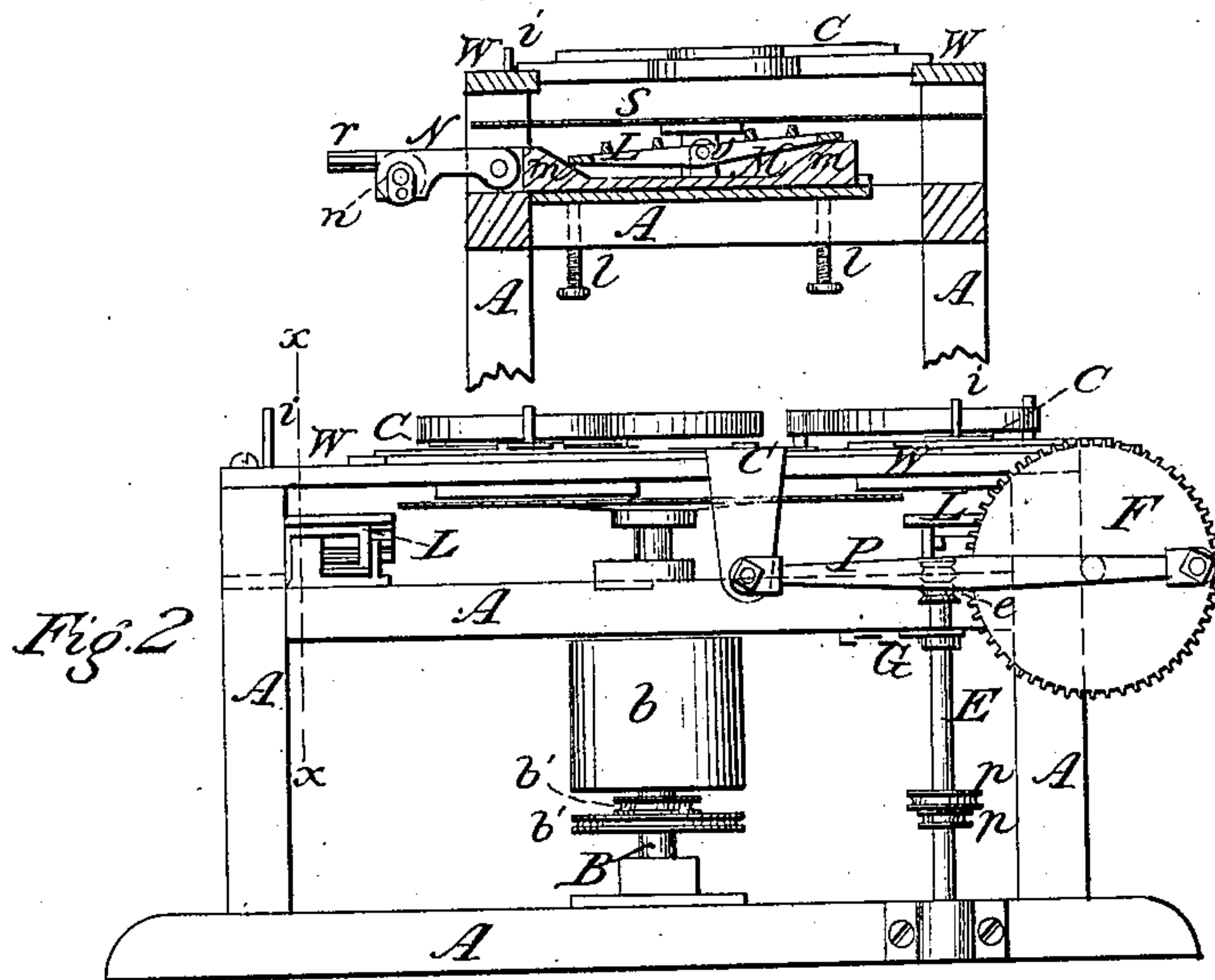


*J. E. Austin,*  
*Sawing Shingles.*

*N<sup>o</sup> 76,691.*

*Patented Apr. 14, 1868.*

*Fig. 1.*



*Fig. 3.*

*Witnesses:*

*L. A. Pettus*

*A. M. Tanner*

*Inventor:*

*James E. Austin*  
*By* *Thum* *Attorneys*

# United States Patent Office.

JAMES E. AUSTIN, OF OSWEGO, NEW YORK.

Letters Patent No. 76,631, dated April 14, 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 I, JAMES E. AUSTIN, of the city and county of Oswego, and State of New York, have invented a new and improved Shingle and Heading-Machine; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable those skilled in the art to which my invention appertains to make use of it, reference being had to the accompanying drawings forming part of this specification, and in which—

Figure 1 is a cross-section through the line *x x* of fig. 2.

Figure 2 is a side elevation, and

Figure 3 is a top view.

In this invention a new apparatus is provided for heading and pointing the shingles, and it is so constructed that by throwing a portion of it out of gear, the stuff can be sawed into thin boards of a uniform thickness, suitable for barrel-heading.

In the drawings, *A A* represents the frame of the machine; *B*, the driving-shaft; *b*, the drum, to which is applied the power that operates the driving-shaft; *b' b'*, pulleys, from which the parts that work the carriage are operated; *S*, the saw, and *C* the carriage. The driving-shaft *B* forms the saw-mandrel, and stands in an upright position, the saw resting horizontally upon its upper end.

The carriage is slid back and forth longitudinally with the machine, upon ways, *W W*, by means of a pitman, *P*. A horizontal shaft, *D*, at the end of the machine, works the pitman, the latter being connected with a crank or wheel, *F*, and eccentric-pin, attached to the shaft. The shaft receives its motion from a worm-screw shaft, *E*, which in its turn is operated from the driving-shaft by means of a belt and pulleys, *p p*, working in connection with the pulleys *b' b'*. The worm *e*, and cog-wheel *F*, are brought into or thrown out of gear by a lever, *G*. In this manner, as the driving-shaft rotates the saw, it also communicates a reciprocating motion to the carriage, which runs back and forth above the saw, parallel to it, and almost in contact with it.

The carriage is provided with two boxes, *H H*, for holding the bolts to be sawed, each box having a recess, *h*, in its side, to enable the operator to take hold of the bolt more easily for the purpose of adjusting or moving it. The boxes are loose, resting in apertures made in the carriage to receive them, and supported by flanges or rims, that rest upon the carriage around the apertures. Each box is provided with a sliding end-piece, *I*, operated by a stout curved spring, *J*. The spring presses the end-piece in towards the centre of the box against the bolt, to hold the latter firmly in position while passing the saw, but when the carriage has conveyed the bolt past the saw and back, as it approaches the point whence it started, the spring strikes against a pin, *i*, and is forced back, carrying the end-piece with it, and allowing the bolt to drop down.

A pivoted plate, *K*, of the form shown clearly in fig. 3, is attached to one side of the carriage, and lies upon its upper surface, having arms, *k k*, reaching out on either side, with sharply-bevelled ends, which run under the inner rims or flanges of the boxes *H H*, and, as the carriage runs back and forth, alternately raise the inner edge of one box or the other. This plate is moved by pins, *a a*, against which the end of it strikes, and it so operates that as the carriage reaches the end of its forward movement, the plate *K* slightly raises the inner edge of the box, and with it the bolt, holding it up while the carriage is running back, in order to prevent the friction of the bolt against the upper surface of the saw. As the returning bolt clears the edge of the saw, the arm *k* is withdrawn, and the box let down to a level position again, while at the same moment, as before explained, the sliding end-piece *I* is retracted, and the bolt is dropped for a new cut.

The shingles are headed and pointed by an arrangement shown very clearly in section in fig. 1. In that figure, *L* is a rest or table, upon which the bolt drops when the end-piece *I* is withdrawn. One of these tables is situated at each end of the machine, its inner edge lying under the edge of the saw. The table lies across the machine, and is pivoted at its centre, so that its ends can be rocked up and down upon the pivot. The ends of each table rest upon a sliding block, *M*, provided with inclined or inward-sloping shoulders, *m m*, which, as the block is slid back and forth across the machine, cause the table to rock on its pivot. A pitman, *N*, extends



from the end of the sliding block to a crank or eccentric, *n*, upon a shaft, *O*, which works at the side of the machine, receiving motion from the shaft *D* by means of suitable gearing, *o o*. The pitmen may be attached to the cranks or eccentrics, *n n*, in such a way that they can be readily detached. For this purpose they may be simply provided with a notch in their under side, which may rest over the pin when sawing shingles, and at other times may be lifted off by means of handles, *r r*, attached to the pitmen.

The operation of this machine is simple and effective, and adapts it to the manufacture of shingles or of plain barrel-heading of uniform thickness. When shingles are to be sawed, the pitmen *N N* are connected with the cranks *n n*, as above described, and the table *L* is thereby caused to rock upon its pivot, *v*. The gearing *o o* is so adjusted in making the machine that the inclination of the table *L* is reversed at every return of the carriage *C*, so that as the bolt drops upon the table once, one end of it will be higher than the other, and as it drops again, after the cutting of a shingle from it, the inclination will be reversed, thus causing the shingles to be headed and pointed.

When it is desired to saw barrel-heading, or stuff for making boxes, and other thin wooden strips, the pitmen *N N* may be unshipped, and the sliding blocks *M M* adjusted to hold the table all the time in a perfectly horizontal position, so as to saw all the material into strips of a uniform thickness.

The elevation of the table *L* may be adjusted by means of set-screws *l l*, so that the material produced by the machine shall be of any required thickness, from that of veneering up to that of heavy planks.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the pivoted tables *L L* with the sliding blocks *M M*, having the shoulders *m m*, and operating the tables, substantially in the manner and for the purposes specified.

JAMES E. AUSTIN.

Witnesses:

SHERMAN STONE,  
W. S. ALLAN.