

No. 660,931.

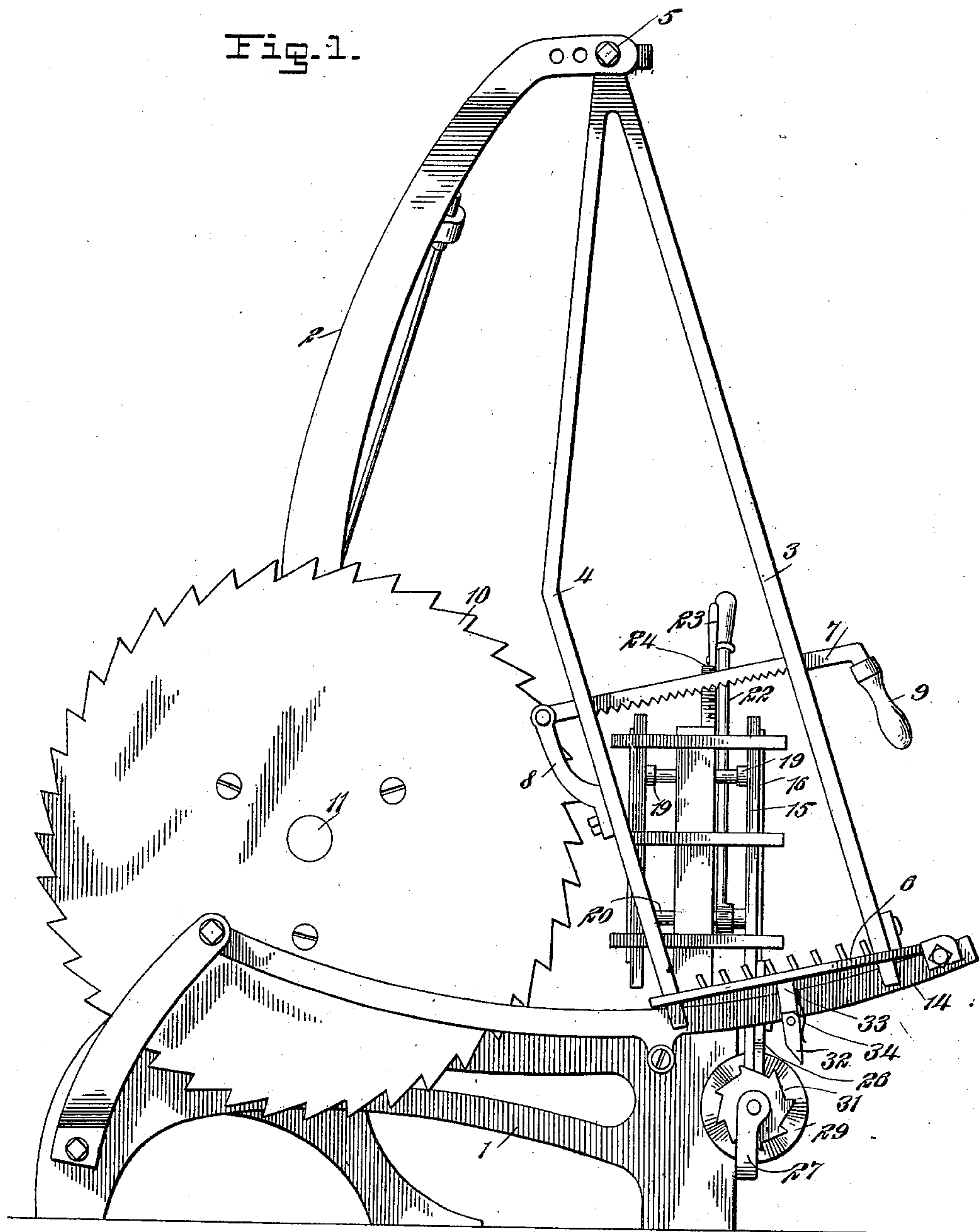
Patented Oct. 30, 1900.

J. W. SEAVOLT.
SHINGLE SAWING MACHINE.

(Application filed June 28, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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John W. Seavolt.

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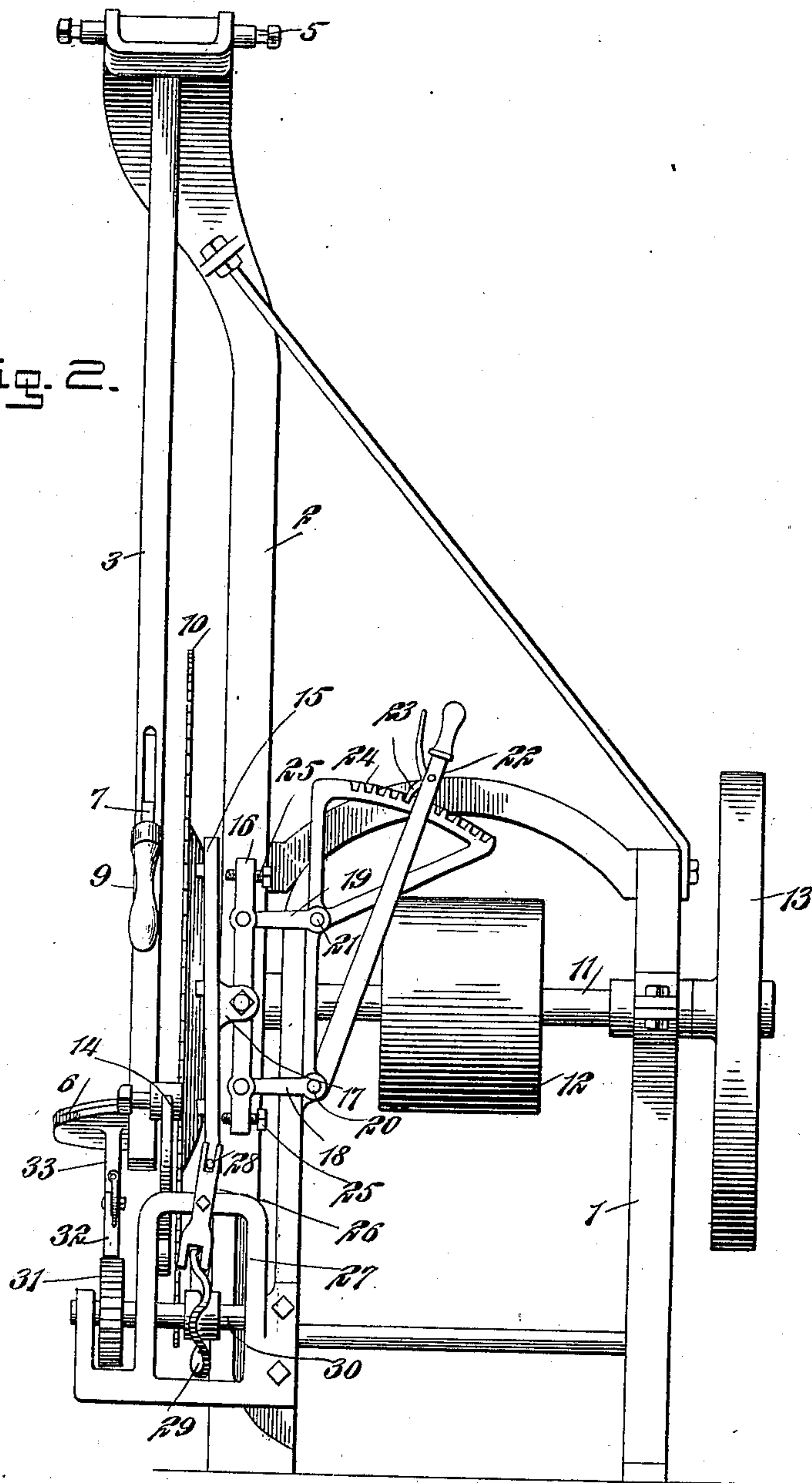
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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. SEAVOLT, OF LOCK 53, MARYLAND, ASSIGNOR OF ONE-HALF
TO EMMET A. VANSKOY, OF SAME PLACE, AND JERRY W. CLARK,
OF JAMESTOWN, NEW YORK.

SHINGLE-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 660,931, dated October 30, 1900.

Application filed June 28, 1900. Serial No. 21,882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SEAVOLT, a citizen of the United States, and a resident of Lock 53, in the county of Washington and State of Maryland, have invented a new and Improved Shingle-Sawing Machine, of which the following is a full, clear, and exact description.

This invention relates particularly to gage attachments for shingle-sawing machines; and the object is to provide a simple gage and means for automatically swinging it so that the shingles will be sawed from the block with the heads alternately in opposite directions. I will describe a shingle-sawing machine embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of a shingle-sawing machine, showing my invention as applied thereto; and Fig. 2 is a front elevation of the same.

Referring to the drawings, 1 designates the frame of the machine, from the rear side of which a swinging frame-support or arm 2 extends upward and has its upper end inclined forward. The swinging frame comprises hanger-rods 3 4, which are connected at the upper end and are mounted to swing on a bolt or shaft 5, supported in the upper end of the arm 2. Attached to the lower end of the hanger bars or rods 3 4 is a table 6, which forms the lower clamping member for the block to be operated upon by the saw. The upper clamping member consists of a lever 7, pivoted to an arm 8 and extended through slots in the rods 3 and 4, the forward end of said clamping-lever 7 being provided with a handle 9. The lower edge of the lever 7 between the hangers 3 and 4 is provided with teeth to engage in the upper end of the block.

The swinging or work-carrying frame is designed to be moved toward and from a circular saw 10, which is mounted on a shaft 11, having bearings in the frame 1, and on this shaft are a band-pulley 12 and a balance-wheel 13. The work-carrying or swinging frame is

guided in its movements and prevented from lateral movement by means of a curved guide-rail 14, supported on the main frame of the machine. The hangers 3 and 4 have downward projections, which engage against the outer side of said guide track or rail, as plainly indicated in the drawings.

The gage consists of a frame 15, which is mounted to swing on an adjusting-frame 16. The gage-frame 15 has at its center at one side lugs 17, which are mounted to rock on a rod supported by the adjusting-frame. The adjusting-frame has pivotal connections with arms 18 and 19, the arm 18 being rigidly connected to the shaft 20, having bearings in the frame 1, while the arms 19 are mounted to swing on a shaft 21, supported by the machine-frame. Also rigidly connected to the shaft 20 is an adjusting-lever 22, carrying a pawl 23 near its upper end to be engaged in either one of notches in an arc rack 24 to hold the gage as adjusted. Stop devices in the form of screws 25 are arranged at the lower and upper ends of the adjusting-frame. These screws may be projected more or less forward to limit the swinging movement of the frame 15. It is to be understood that the adjusting-frame 16 is at all times parallel with the adjacent side of the saw 10. The gage-frame 15, however, is to be swung at an angle to the side of the saw to alternately bring its upper and lower ends a greater distance from the saw, thus holding the block in such manner that the shingles will alternately be sawed with their heads pointed in opposite directions.

I will now describe the means for automatically rocking the gage-frame 15. This means comprises a shifting-lever 26, pivoted at about its center to a bracket 27 on the machine-frame, and into the bifurcated upper end of this shifting-lever a pin 28, attached to the frame 15, passes. The lower bifurcated end of the lever 26 engages the opposite sides of a cam-wheel 29, having a wave-like surface and mounted on a shaft 30. Also mounted on this shaft 30 is a ratchet-wheel 31, adapted upon a forward movement of the work-carrying or swinging frame to be engaged by a pawl 32, pivoted to an arm 33, 100

extended downward from the table 6. This pawl is so connected to the arm 33 that upon a forward movement of the work-carrying frame or during its movement from the saw it will engage with a tooth of the ratchet-wheel 31 and impart a partial rotation thereto. On the movement of said frame toward the saw, however, the pawl 32 will yield against the resistance of its holding-spring 34, so as to ride over a tooth of the ratchet-wheel without imparting motion thereto.

In operation after adjusting the gage to the thickness of the shingle or other work to be separated from the block the block is to be placed with its lower end on the table 6 or in engagement with the teeth thereon and the upper end is to be engaged by the teeth of the lever 7. Of course at this time one face of the block will be held tightly against the gage-frame 15. Now upon moving the work-carrying frame toward the saw, which is of course in operation, a shingle will be severed from the block, and if the frame 15 is at this time in the position indicated in Fig. 2 the head of the shingle will be pointed downward. As the swinging frame is moved in the opposite direction the pawl 32 by engaging with a tooth of the ratchet-wheel 31 will rotate the shaft 30, which will cause the cam-wheel 29 to rotate through the space of one step and swing the shifting-lever 26 in such manner as to move the lower end of the gage-frame 15 toward the saw and to move the upper end away from the saw, so that when the next shingle is separated from the block its head portion will be upward. It is to be understood that before sawing a shingle the block is to be moved against the swinging gage-frame.

While I have described the gage in its connection with a saw for sawing shingles, it is to be understood that it is to be used in sawing barrel-heads, chair-backs, seats, and similar work. To adapt the gage for this purpose, it is only necessary to remove the pin 28 and by means of the set-screws 25, of which there are four, adjust the plate 15 par-

allel with the frame 16 and then adjust the gage to or from the saw for the required thickness of the work by means of the operating-lever.

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

1. In a sawing-machine, a gage-supporting frame, swinging arms on which the frame is mounted, a lever for swinging the arms and holding the frame at all times parallel with the side of the saw, a gage-plate mounted to swing on the frame, and set-screws carried by the frame for engaging with the gage-plate, substantially as specified.

2. In a shingle-sawing machine, a saw, a work-carrying frame mounted to swing toward and from said saw, a gage-supporting frame, swinging arms on which said gage-supporting frame is mounted, a lever for swinging said arms, a gage-plate pivoted at its central portion to said carrying-frame, a swinging lever engaging with a pin on said gage-plate, a cam-wheel engaging with said lever, and means for imparting step-by-step rotary motion to said cam-wheel, substantially as specified.

3. In a shingle-sawing machine, a saw, a work-carrying frame mounted to swing toward and from said saw, a gage mounted to swing at one side of the saw, a shifting-lever having a bifurcated upper end into which a pin on the frame passes, a cam with which the lower end of said shifting-lever engages, a shaft on which the cam is mounted, a ratchet-wheel on said shaft, and a pawl carried by the work-carrying frame for engaging with said ratchet-wheel, substantially as specified.

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

JOHN W. SEAVOLT.

Witnesses:

PETER R. LAWYER,
IRVIN A. DAWSON.