

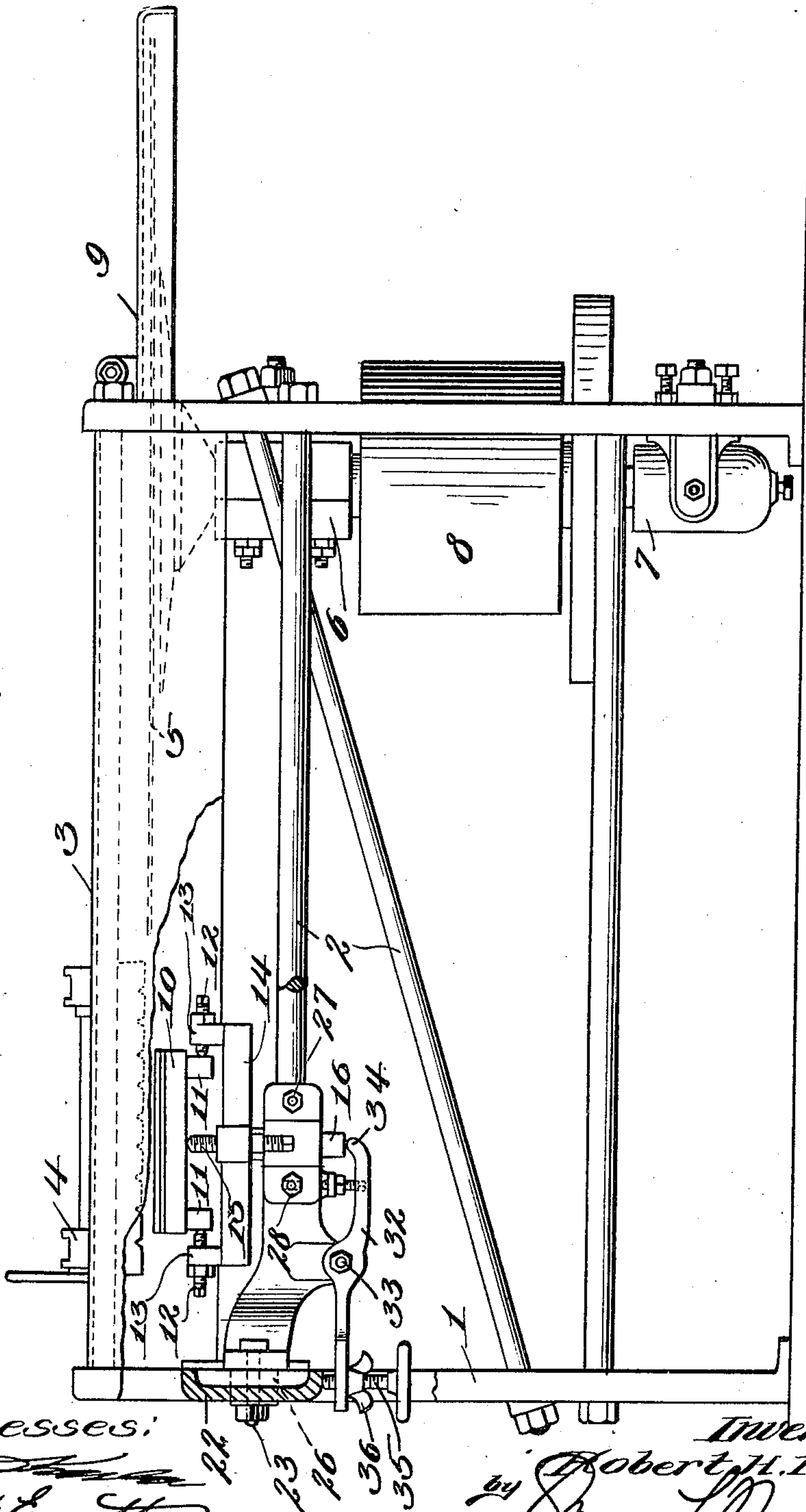
R. H. RICHARDS.
SHINGLE SAWING MACHINE.
APPLICATION FILED MAY 3, 1911.

999,260.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Robert Everett,

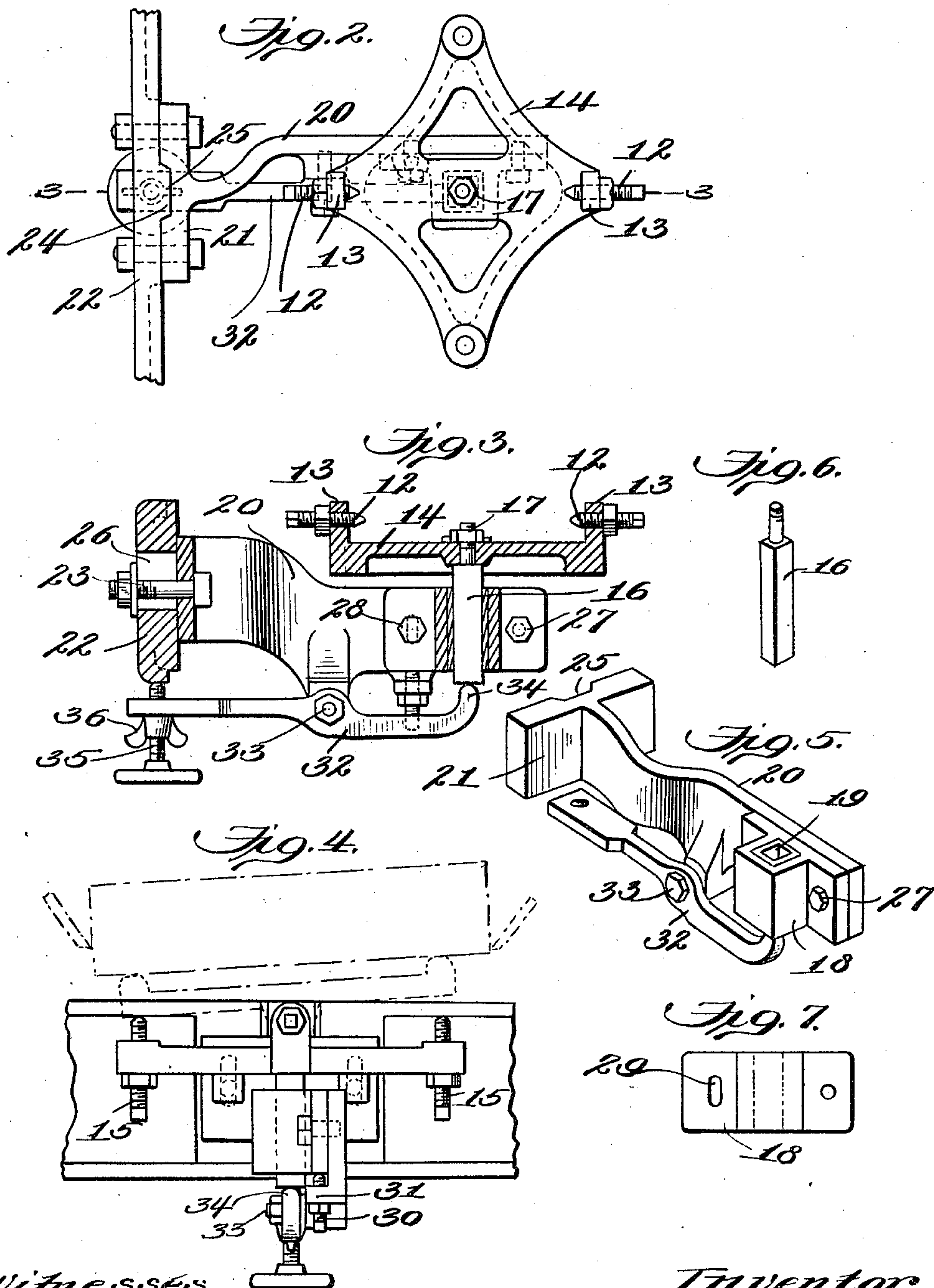
Inventor
Robert H. Richards
by *Amos L. Harris* atty.

R. H. RICHARDS.
SHINGLE SAWING MACHINE.
APPLICATION FILED MAY 3, 1911.

999,260.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 2.



Witnesses
C. Kesler
R. H. Everett,

Inventor
Robert H. Richards
by James L. Morris, Jr.
Atty.

UNITED STATES PATENT OFFICE.

ROBERT H. RICHARDS, OF HACKETTSTOWN, NEW JERSEY, ASSIGNOR TO AMERICAN SAW MILL MACHINERY CO., OF HACKETTSTOWN, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SHINGLE-SAWING MACHINE.

999,260.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed May 3, 1911. Serial No. 624,766.

To all whom it may concern:

Be it known that I, ROBERT H. RICHARDS, a citizen of the United States, residing at Hackettstown, in the county of Warren and State of New Jersey, have invented new and useful Improvements in Shingle-Sawing Machines, of which the following is a specification.

My present invention relates to improvements in shingle sawing machines, and it has for its object to provide a simple and efficient machine of this character embodying improved means for mounting and adjusting the cradle which positions the timber-bolt for each cut, such mounting embodying devices for properly leveling and positioning the cradle and also for adjusting the cradle vertically to gage the thickness of each shingle.

To these and other ends, the invention consists in certain improvements, and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out particularly in the claims at the end of the specification.

In the accompanying drawing:—Figure 1 represents a side elevation of a shingle sawing machine constructed in accordance with one embodiment of my invention, a portion of the machine being broken away to illustrate the cradle and its mounting and adjusting means; Fig. 2 represents a top plan view of the cradle support with the cradle removed and showing a portion of the machine frame to which the cradle mounting is secured; Fig. 3 represents a vertical section on the line 3—3 of Fig. 2; Fig. 4 shows the cradle and its mounting as viewed from the direction of the saw; Fig. 5 is a perspective view of the rigid arm which forms a part of the cradle mounting, the adjusting lever being attached thereto; Fig. 6 is a detail perspective view of the vertically adjustable stem which is attached to the cradle support; and Fig. 7 is a detail view of the bearing in which said stem is mounted.

Similar parts are designated by the same reference characters in the several views.

In the accompanying drawing, I have shown one embodiment of the invention applied to a machine which comprises a suitable frame 1 having appropriate braces 2 and top rails 3 upon which a carriage 4 of any appropriate construction reciprocates

in carrying the timber-bolt to and from the saw. The saw 5 is mounted in bearings 6 and 7 of suitable construction arranged toward one end of the machine and the saw arbor is provided with a belt- or other driving pulley 8. A guard 9 projects from the machine frame and serves to protect the exposed portion of the saw.

The timber-bolt from which the shingles are to be cut is positioned to be properly gripped by the feed carriage 4 by a cradle 10 which is tiltable to enable reversing of the bolt. The present invention provides an improved mounting for the cradle whereby shingles of different thicknesses may be produced. In the present instance, the cradle is provided with a pair of opposed bearing lugs 11 having seats to cooperate with the conical or otherwise suitably formed ends of pivot screws 12, these pivot screws being suitably mounted in opposed lugs 13 formed on a cradle support 14. As usual, the screws 12 are in axial alinement and are parallel to the line of movement of the carriage 4 whereby the cradle may tilt about these screws as axes and thereby enable the timber-bolt to be positioned alternately in reverse positions before it is gripped for each cut by the carriage, the tilting of the bolt being accomplished, for example, by pressure of the hand on the bolt by the operator. In order to limit the tilting of the cradle and consequently the bolt and thereby gage the angle of each cut, a pair of set-screws 15 are mounted in the cradle support on opposite sides of the pivot screw 12, these set-screws being adapted to engage the under side of the cradle as it is tilted in each direction. According to the present invention, the cradle support 14 is supported by a vertical stem 16 the upper end of which is secured to the cradle support by a nut or bolt 17 or other suitable means and the stem is adjustable vertically in a bearing 18. To prevent rotation of the bearing cradle and its support with respect to the mounting, the stem 16 is preferably angular in cross-section, as shown, and the bearing 18 has an opening 19 of a form which corresponds to the cross-section of the stem. Preferably, the bearing 18 is formed as a casting and a lining of Babbitt metal is applied which provides a suitable fit for the stem. The bearing 18 is supported by a rigid arm 20, one end of which is formed

with a laterally widened head 21 which bears against the inner face of the cross-member 22 of the frame and is secured firmly and rigidly to the frame by suitable bolts 23. To prevent twisting or other displacement of this arm 20 with respect to the machine frame, a vertical rib 24 is preferably formed on the inner face of the cross-member 22 of the frame which rib engages a vertical groove 25 formed in the cooperating face of the head 21 of the arm. This rib and groove also enables the arm 20 to be mounted at the proper elevation upon the machine frame during the assembling of the machine in which case the securing bolts 23 may extend through vertically elongated slots 26 in the cross-member 22.

The bearing 18 is secured to one side of the arm 20 in any suitable way. In the present instance, one end of the bearing is secured to the arm 20 by a bolt 27 while the opposite end of the bearing may be secured to the arm 20 by a bolt 28 which extends through a vertically elongated opening 29 in the bearing whereby the bearing together with the cradle and its support may be tilted with respect to the arm 20 for the purpose of properly leveling the cradle in the direction of movement of the carriage, or, in other words, this adjustment enables positioning of the cradle support so that the axis of the pivot screws 12 is parallel to the plane of the saw. To facilitate adjustment of this bearing and to maintain it in proper adjusted position, a set-screw 30 is preferably provided, the set-screw being tapped into a laterally offset lug 31 formed as a continuation of the lower edge of the arm 20 and extending beneath that end of the bearing 18 which contains the vertically elongated opening 29, this screw performing the dual function of adjusting this end of the bearing and of supporting it in the different adjusted positions. Preferably, the arm 20 is offset laterally so as to bring the stem 16 into a central position with respect to the head 21 which supports the arm to prevent any twisting tendency of the mounting.

The depth of the cut is regulated by adjusting the cradle and its support vertically. According to the present invention, this adjustment is accomplished by a lever 32, the intermediate portion of which is fulcrumed on a bolt or pivot 33 supported by the arm 20 while one end of this lever has an upturned portion 34 which bears against the lower end of the stem 16. The opposite end of the lever 32 is provided with an adjusting screw 35 which is tapped into the lever and bears against a suitable part of the machine, the lower side of the cross-member 22 in the present instance. This screw may have a hand-wheel to facilitate its manipulation and also a lock nut 36 may be provided

for retaining any desired adjustment. Obviously, rotation of the screw 35 will rock the lever 32 and thereby raise or lower the upturned end 34 and as the stem 16 rests upon this upturned portion of the adjusting lever, the cradle and its support will be correspondingly elevated or lowered, as desired.

I claim as my invention:

1. In a shingle sawing machine, the combination of a saw, a carriage for feeding the material thereto, and means for positioning the material relatively to the carriage embodying a cradle, a cradle support having a vertical stem attached thereto, an arm having a bearing cooperative with said stem and guiding it for vertical adjustment, and an adjusting lever fulcrumed on said arm and cooperative with said stem to adjust the latter and the cradle vertically.

2. In a shingle sawing machine, the combination of a saw, a carriage for feeding the material thereto, and means for positioning the material relatively to the carriage embodying a cradle, a cradle support having a vertical stem attached thereto, a relatively stationary member having a bearing cooperative with said stem and guiding it for vertical adjustment, an adjusting lever fulcrumed on said stationary member and cooperative at one end with said stem to adjust it and the cradle vertically, and means cooperative with the opposite end of said lever for adjusting it.

3. In a shingle sawing machine, the combination of a saw, a carriage for feeding the material thereto, and means for positioning the material relatively to the carriage embodying a cradle, a cradle support having a vertical stem fixed thereto, a stationary arm provided with a bearing cooperative with said stem for guiding it vertically, a lever fulcrumed at an intermediate point on said arm and having one end bearing against the lower end of said stem, and an adjusting screw cooperative with the opposite end of said lever for rocking it on its fulcrum and thereby adjusting said stem and cradle vertically.

4. In a shingle sawing machine, the combination of a saw, a carriage for feeding material thereto, a carriage for positioning the material relatively to said cradle, a cradle support having a vertical stem fixed thereto, a relatively stationary arm, a bearing cooperative with said stem for guiding it vertically and having means for adjusting it angularly with respect to said arm, and means fulcrumed on said arm and cooperative with said stem for adjusting the latter and the cradle vertically.

5. In a shingle sawing machine, the combination of a saw, a carriage for feeding the material thereto, a carriage for positioning the material relatively to said cradle, a cradle

support having a vertical stem fixed there-
to, a relatively stationary arm, a bearing
coöperative with said stem for guiding it
vertically and having means for securing it
5 in different angular positions on said arm,
and an adjusting lever pivotally mounted
on said arm and coöperative with said stem.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

ROBERT H. RICHARDS.

Witnesses:

F. L. FOWLER,

A. C. EADIE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
