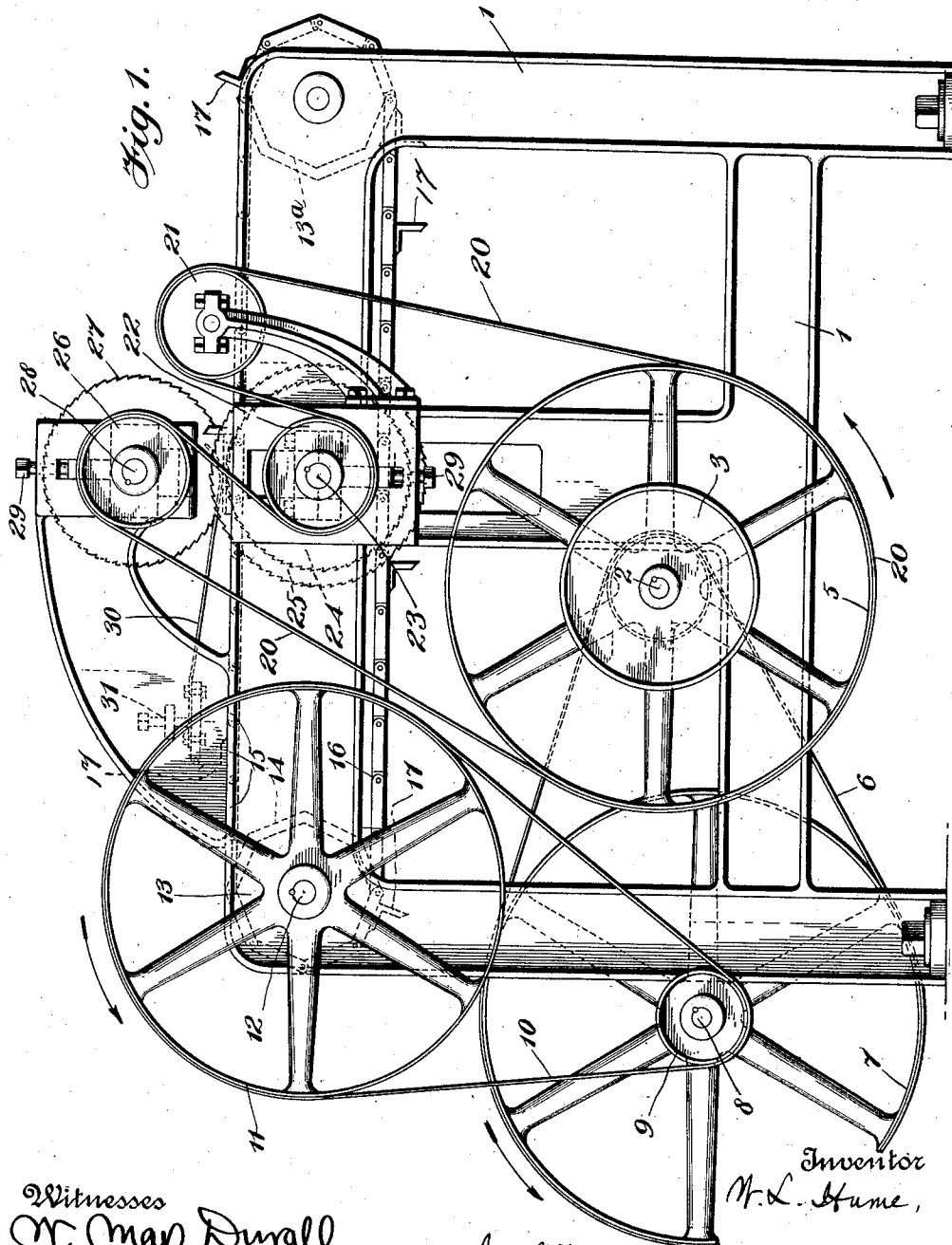


W. L. HUME.
WOOD GAINING MACHINE.
APPLICATION FILED OCT. 2, 1911.

1,016,828.

Patented Feb. 6, 1912.
4 SHEETS—SHEET 1.



Witnesses
M. May Dural.
Byron B. Collins.

Inventor
W. L. Hume,
by Wilkinson, Fisher & Matherspon,
Attorneys.

W. L. HUME.
WOOD GAINING MACHINE.
APPLICATION FILED OCT. 2, 1911.

1,016,828.

Patented Feb. 6, 1912.

4 SHEETS—SHEET 2.

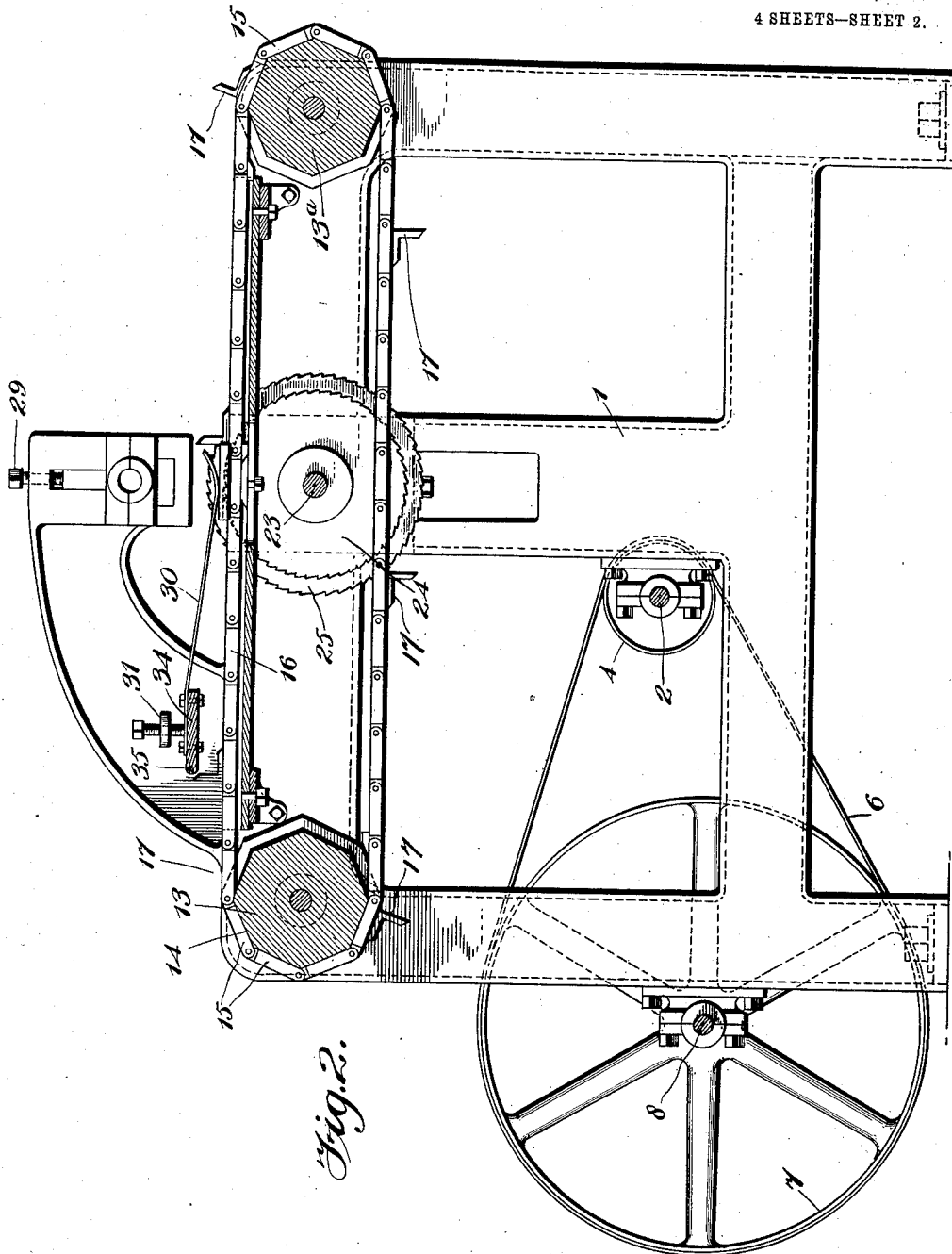


Fig. 2.

Witnesses
W. May Duvall.
Byron B. Collins.

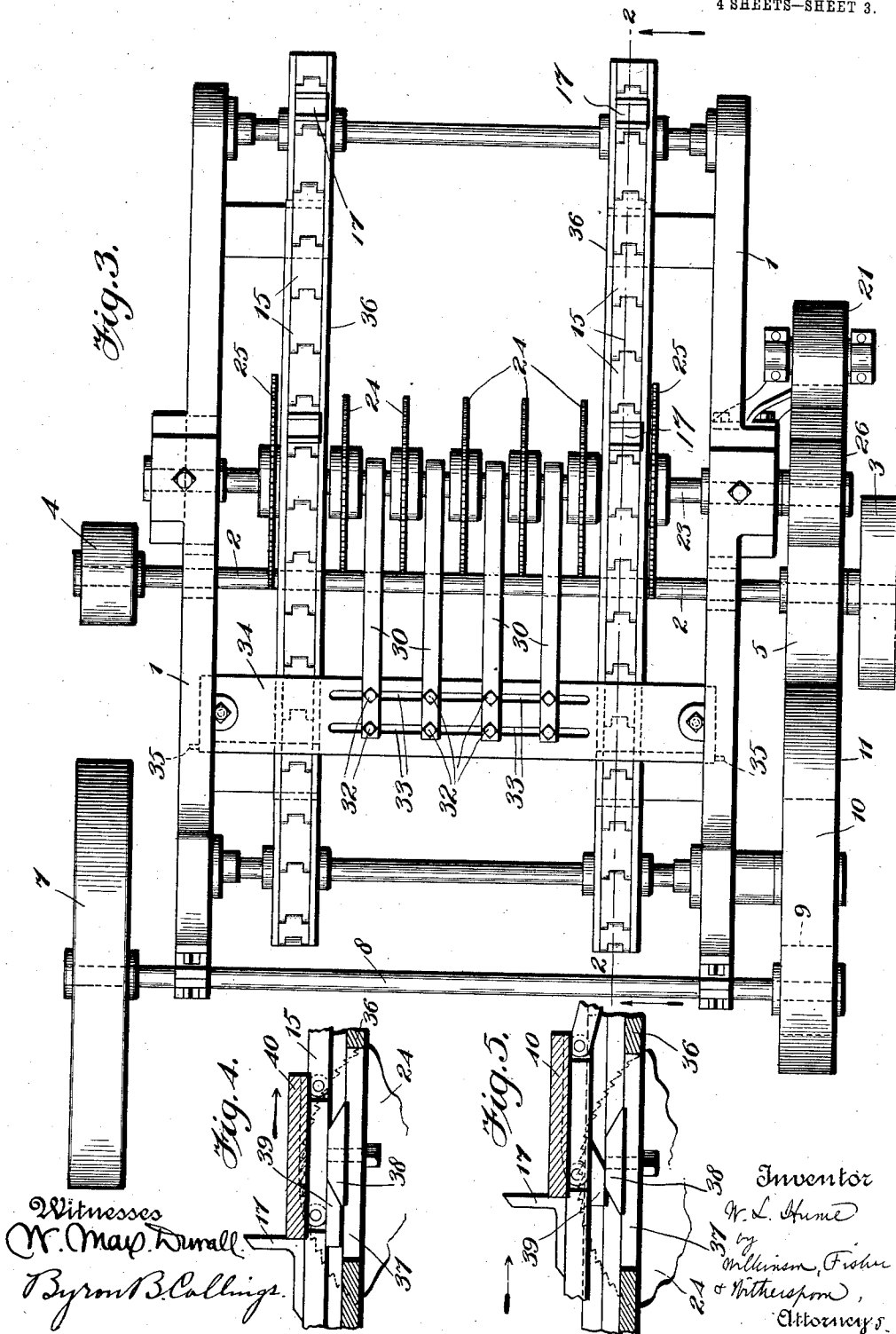
Inventor
W. L. Hume,
by William Fisher & Witherspoon,
Attorneys.

W. L. HUME.
WOOD GAINING MACHINE.
APPLICATION FILED OCT. 2, 1911.

1,016,828.

Patented Feb. 6, 1912.

4 SHEETS—SHEET 3.

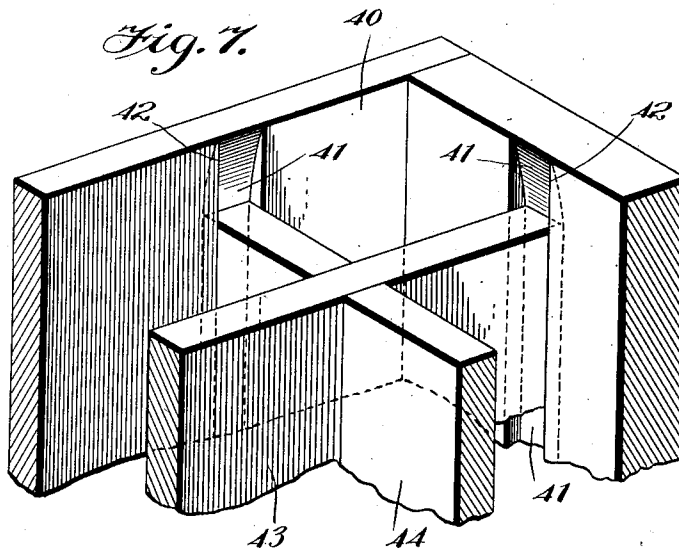
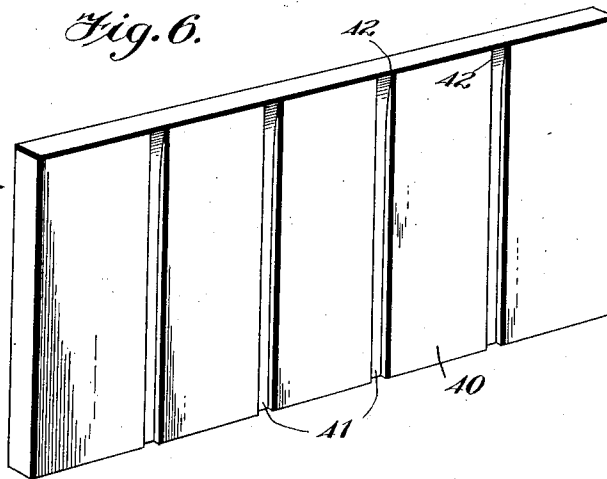


W. L. HUME.
WOOD GAINING MACHINE.
APPLICATION FILED OCT. 2, 1911.

1,016,828.

Patented Feb. 6, 1912.

4 SHEETS—SHEET 4.



Witnesses
W. May Dwall.
Byron B. Collins.

Inventor
W. L. Hume,
by Milliken, Fisher & Witherspoon
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM L. HUME, OF ROME, GEORGIA.

WOOD-GAINING MACHINE.

1,016,828.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed October 2, 1911. Serial No. 652,460.

To all whom it may concern:

Be it known that I, WILLIAM L. HUME, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Wood-Gaining Machines; 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 appertains to make and use the same.

My invention relates to improvements in wood gaining machines, and it is intended to provide a machine adapted to cut up the boards for knock down crates or boxes, and to cut certain peculiar shaped grooves in the boards forming the side walls of said boxes for purposes that will be hereinafter more fully set forth.

My invention will be understood by reference to the accompanying drawings, in which the same parts are indicated by the same numerals throughout the several views.

Figure 1 shows a side elevation of the complete machine. Fig. 2 shows a vertical section along the line 2—2 of Fig. 3, and looking in the direction of the arrows. Fig. 3 is a plan view of the machine, the driving belts, the upper saw shaft, and the upper saws being omitted. Figs. 4 and 5 are fragmentary sectional views showing the operation of the device in effecting the curved taper of the groove. Fig. 6 is a detail, showing the inner side of one of the side boards ready for use in the box, and Fig. 7 is a perspective view showing the mode of assembling the box.

1 represents the frame of the machine, in which is journaled the drive shaft 2, driven by means of the pulley 3 from any convenient source of power. This shaft carries the driving pulleys 4 and 5. The driving pulley 4 drives the belt 6, which in turn drives the pulley 7 of the shaft 8. This shaft carries a small pulley 9, driving the belt 10, which belt drives the pulley 11 on the shaft 12. This shaft 12 carries a chain wheel 13, having flat sides 14, engaging the links 15 of the chain 16. This chain carries the feeding angle bars 17, which feed the boards to the saw. The chain 16 passes over the idler chain wheel 13^a, journaled in the frame 1.

The pulley 5 drives the belt 20, passing over the idler 21 and under the pulley 22 on the shaft 23, driving the saws 24 and 25.

The belt 20 also passes over the pulley 26, driving the saws 27. The lower saw shafts 23 and the upper saw shafts 28 may be adjusted in the usual way by suitable adjusting devices 29. The upper saws are used only for the end cut, as is well known in the art. The outer saws 25 on the lower saw shafts are of greater diameter than the inner saws 24, and serve to cut the ends of the board, while the inner saws cut the grooves.

Springs 30 are provided to press the board down against the lower saws. The tension of the springs 30 is accomplished in any convenient way, as by means of the tension devices 31, and the springs are adjusted laterally by means of the bolts 32, engaging in the slots 33 in the cross piece 34, pivoted to the frame 1, as at 35.

The feed chains 15 run in boxes 36, and the bottoms of these boxes are slotted as at 37 (see Figs. 4 and 5), and into this slot projects the cam plate 38, which engages the cam block 39, carried by the chain 15. This cam block may be adjusted slightly, so as to limit the termination of the curved portion of the groove in the board, as will now be described: The board 40, traveling in the direction of the arrow in Figs. 4 and 5, is cut into by the saws 24 to form grooves 41, and these grooves are tapered as at 42, owing to the fact that the block 39 carried by the chain 15, will wedge the chain and with it the board, up slightly, gradually clearing the board from the saw, as shown in Figs. 4 and 5. In this manner, the end of the groove 41 will be curved inward, as at 42, and the termination of the groove may be either at the end of the board, as shown in Figs. 6 and 7, or it may be terminated any desired distance inside of the end.

In the construction of the completed box, the partition pieces 43 and 44 are preferably secured together in the ordinary way, are driven in from the bottom of the box, and are wedged up into the tapered portions of the groove, thus firmly locking the top of the box, when the bottom of the box is nailed on. This locks the partitions firmly in place, and when it is desired to take the box apart, the bottom is removed and the partitions are driven downward and clear of the sides.

It will be obvious that various modifications might be made in the herein described apparatus, and in the construction, combi-

nation, and arrangement of parts, that could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. An apparatus of the character described, comprising a saw shaft and a series of rotary saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

2. An apparatus of the character described, comprising a saw shaft and a series of groove cutting saws and a pair of end cutting saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

3. An apparatus of the character de-

scribed, comprising a saw shaft and a series of rotary saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, springs pressing said boards toward said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

4. An apparatus of the character described, comprising a saw shaft and a series of groove cutting saws and a pair of end cutting saws carried thereby, chains with angle irons carried thereby, with means for driving said chains for feeding the boards to said saws, springs pressing said boards toward said saws, cam blocks carried by said chains, and cam plates engaging said cam blocks and lifting said chains, and with them the ends of said boards, causing said boards to clear said saws, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

WILLIAM L. HUME.

Witnesses:

J. A. JENKINS,
HUGH McCRARY.

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