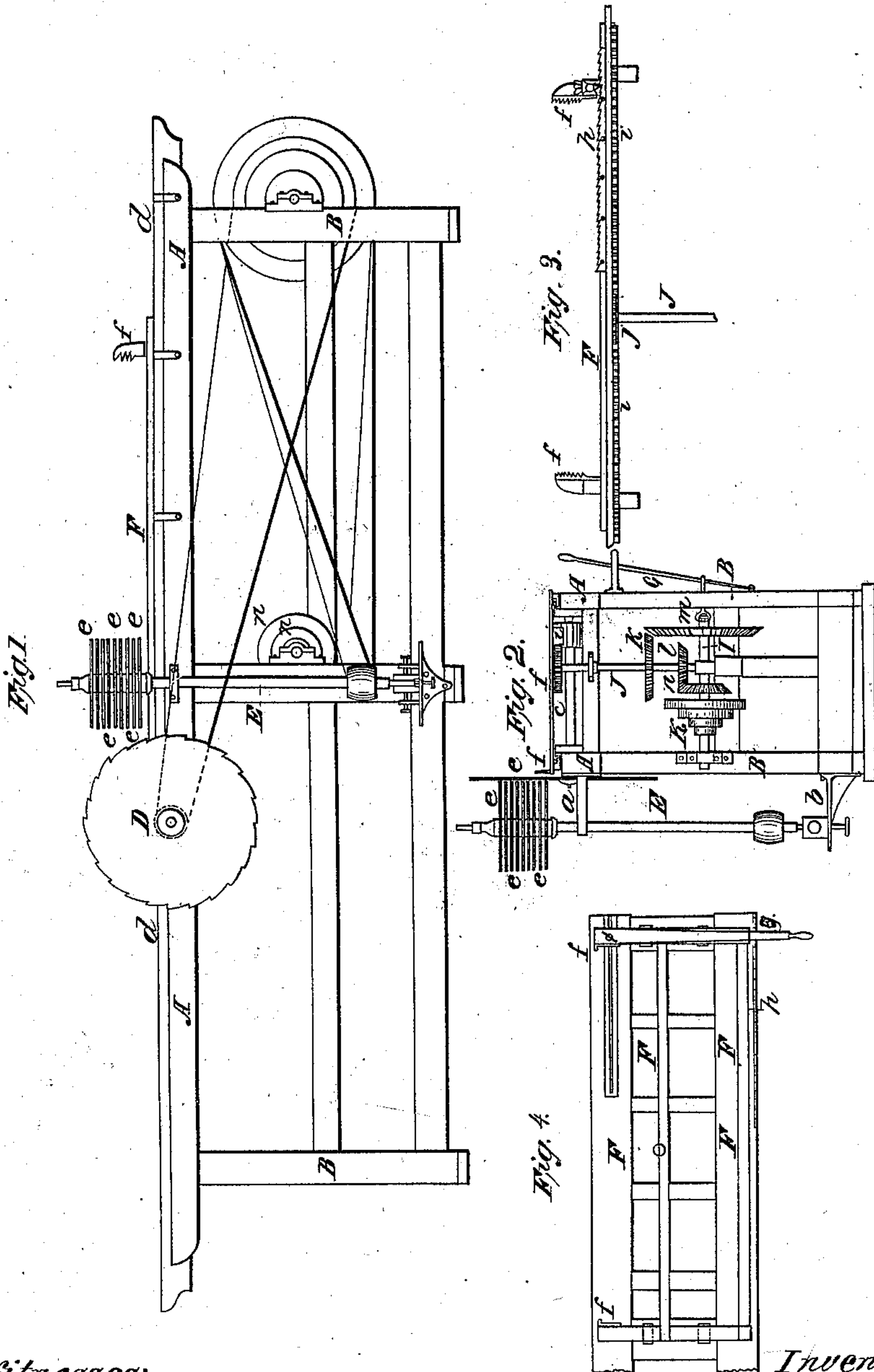


*W. G. Bulgin,  
Making Laths.*

*No 81,475.*

*Patented Aug. 25, 1868.*



*Witnesses:  
Geo. Green  
John Gray*

*Inventor:  
W. G. Bulgin.  
By atty. J. M. Hoffman*

# United States Patent Office.

WILLIAM G. BULGIN, OF VIENNA, NEW JERSEY.

Letters Patent No. 81,475, dated August 25, 1868.

## IMPROVEMENT IN MACHINES FOR SAWING LATH.

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, WILLIAM G. BULGIN, of Vienna, in the county of Warren, in the State of New Jersey, have invented certain new and useful Improvements in a Machine for Sawing Laths from round timber, and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal side elevation of the machine.

Figure 2 shows an end view of the same, with feeding-mechanism.

Figure 3 shows an edge view of the carriage and the mechanism for holding the wood to be sawed, and the feeding-apparatus.

Figure 4 is also a top view of the carriage and holding-mechanism.

The object of my invention is to saw lath uniformly from round sticks of wood, or from refuse lumber, where timber is scarce, and difficult to obtain a supply.

My invention consists in the simple arrangement and combination of the machine for running the carriage back at an increased rate of speed.

To enable others to make and use my invention, I will describe it more fully, referring to the drawings, and to the letters of reference marked thereon.

I make the frame A A from eight to ten feet in length, and of any desired width, supported on four or more posts, B B, of a suitable height, for the convenience of tending. A short distance on one side of the centre of the plates of the frame A A, I place a saw-mandrel, C, on one end of which is overhung a circular saw, D, of sufficient size to cut through any timber to be used for lath.

In the centre of the frame, outside of the plate, I frame in a piece of timber, *a*, for a journal-box, and at the bottom of the frame, directly under it, another piece, *b*, for a step, in which a vertical saw-mandrel, E, is fitted to run, on the top of which is a gang or series of circular saws, *e e e e e*, placed at a distance apart the width of the lath, they being so adjusted in relation to the saw D that each board cut by it is ripped up into lath at the same time.

On the top of the frame-plates A A are ways *d d*, on which a carriage, F, slides, and on it another carriage or frame, I I, which is provided with dogs *f f*, lever *g*, and ratchet *h*, to hold the wood, and carry it up to the saws, the carriage F F being provided with a rack, *i i*, and pinion *j*, on a vertical shaft, J, on which are two bevel-wheels, *k* and *l*, of different size, to be operated by corresponding bevel-wheels, *m* and *n*, on a horizontal shaft, I, on which is a gang of pulleys, K, driven by a belt from the main driving-shaft, so that any required feed can be given to the carriage, the back movement being two or three times faster than the forward movement. By the action of the lever G, the carriage F is alternately run back and forward.

I do not claim broadly the use of friction or gear-wheels, by which a saw-carriage is moved at different speeds, for that is old, and common property; but

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

The arrangement of the two sets of bevel-gear, *k m* and *l n*, placed centrally in the machine, to be operated by the hand-lever G, for reversing the motion of the log-carriage, and moving it forward and back, alternately, at a different rate of speed, substantially as and for the purposes herein set forth.

WM. G. BULGIN.

Witnesses:

EDM. F. BROWN,

J. B. WOODRUFF.