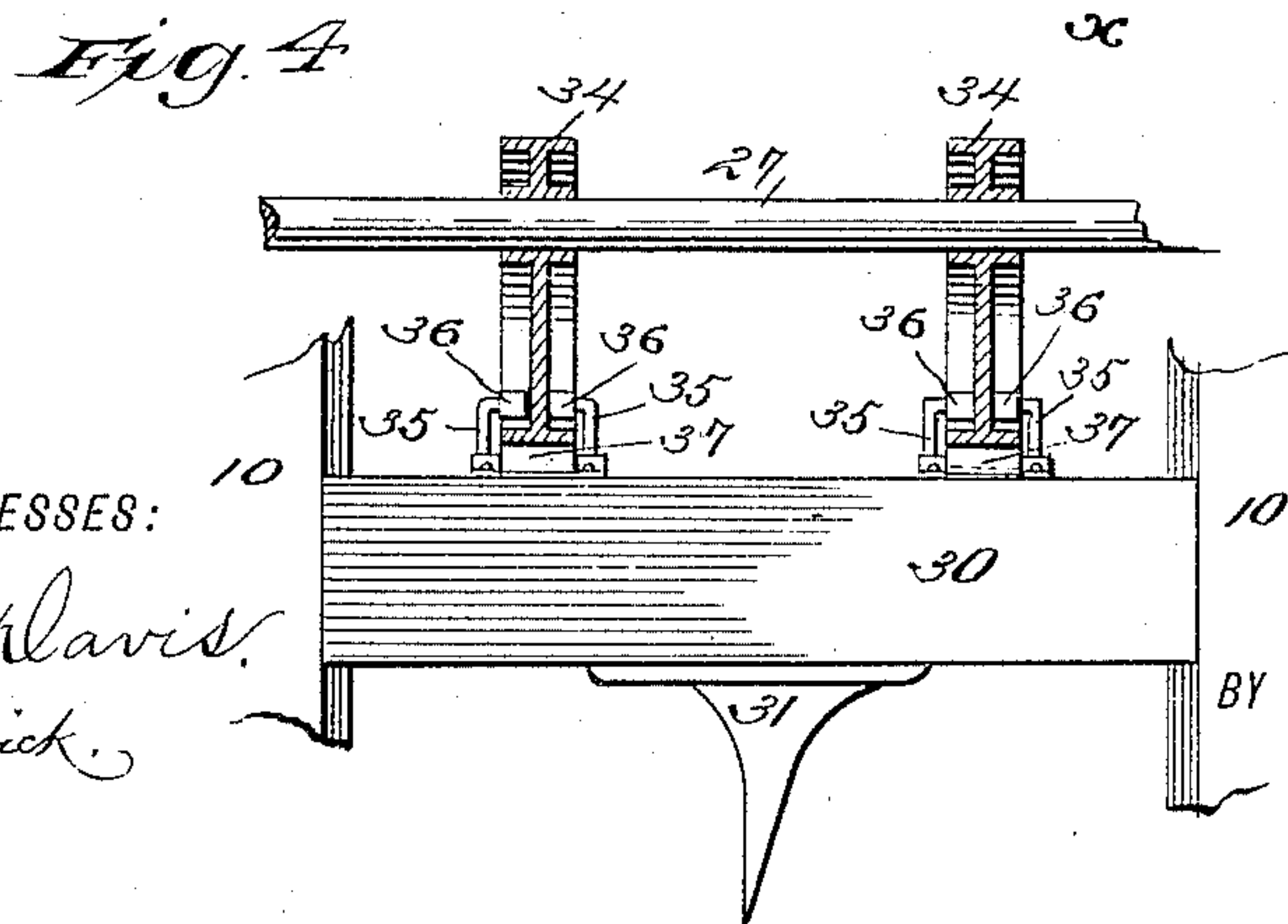
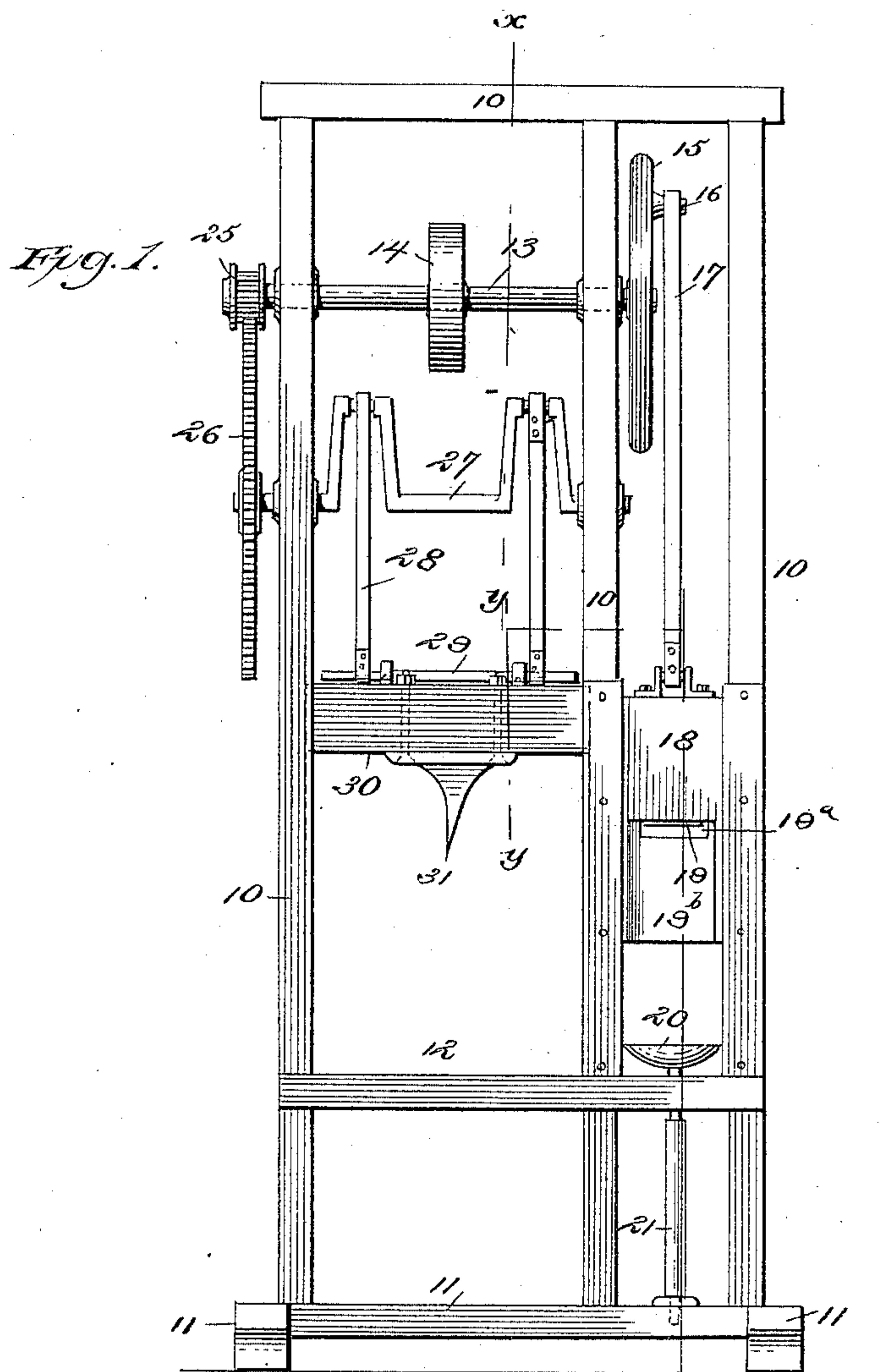


(No Model.)

2 Sheets—Sheet 1.

O. W. STEARNS.  
COMBINED BLOCK BARKING AND SPLITTING MACHINE.  
No. 401,866. Patented Apr. 23, 1889.



WITNESSES:

*N. R. Davis.*  
*W. Sedgwick.*

INVENTOR.

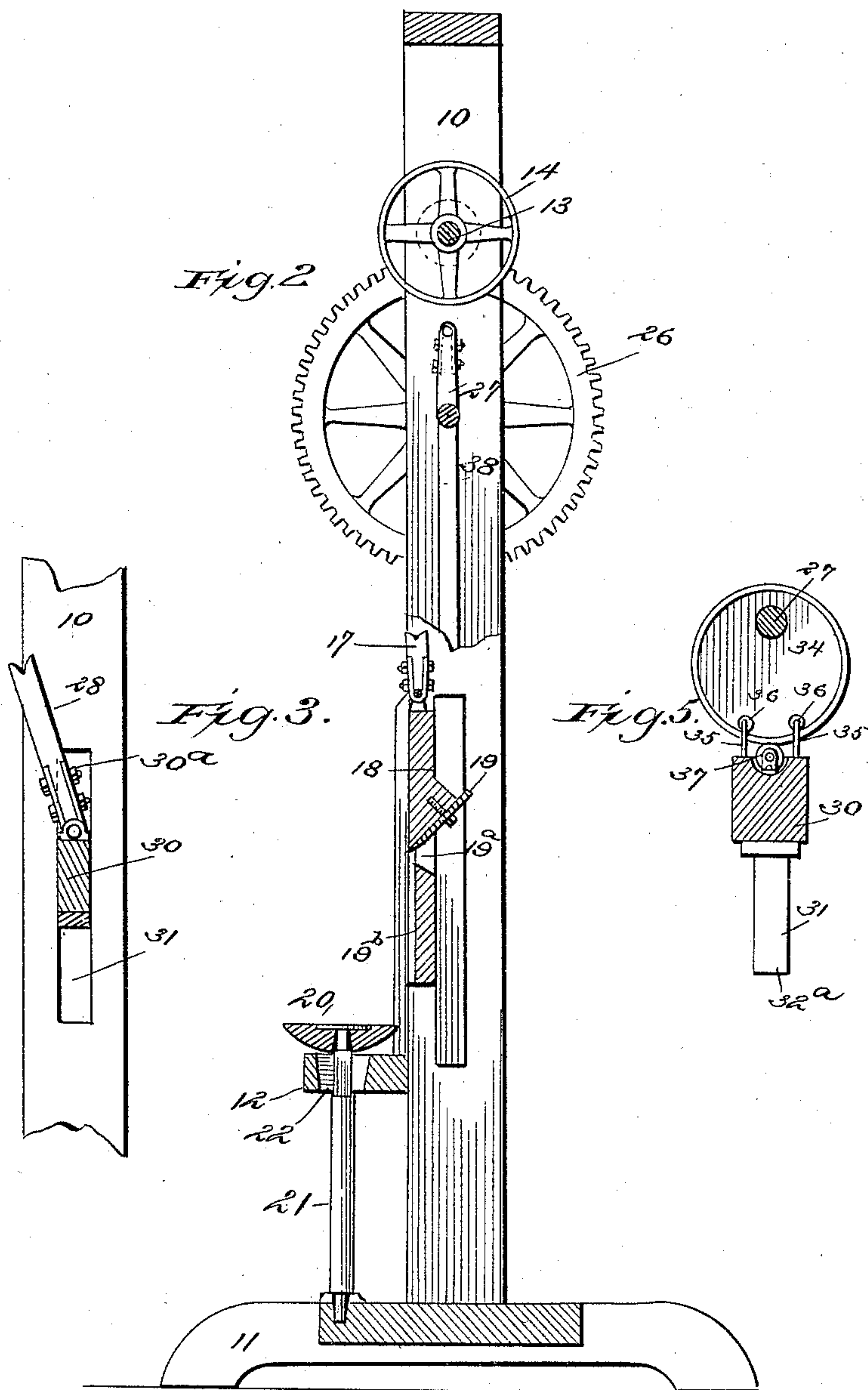
*O. W. Stearns*  
*Munn & Co.*

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

O. W. STEARNS.  
COMBINED BLOCK BARKING AND SPLITTING MACHINE.  
No. 401,866. Patented Apr. 23, 1889.



WITNESSES:

*W. R. Harris*  
*Co. Sedgwick.*

INVENTOR,

*O. W. Stearns*

BY

*Munn & Co.*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

OTIS W. STEARNS, OF JOHNSON, VERMONT.

## COMBINED BLOCK BARKING AND SPLITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,866, dated April 23, 1889.

Application filed June 2, 1888. Serial No. 275,800. (No model.)

*To all whom it may concern:*

Be it known that I, OTIS W. STEARNS, of Johnson, in the county of Lamoille and State of Vermont, have invented a new and Improved Combined Block Barking and Splitting Machine, of which the following is a full, clear, and exact description.

The machine is specially designed for preparing blocks suitable for being sawed into tub-staves.

The object of the invention is to provide a machine of simple construction having a vertically-reciprocating barking-knife and a vertically-reciprocating splitter, both operated from the one main or drive shaft at different speeds and arranged in proximity to each other, whereby as the log is barked it may be convenient to the splitter-knife.

The invention consists in the construction and combination of parts, as hereinafter described and claimed.

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

Figure 1 is a front elevation of a machine constructed in accordance with my invention. Fig. 2 is a side elevation in section on the line *x x*, Fig. 1. Fig. 3 is a section through the cross-head carrying the splitter-knife and its operative connections; the section being taken on line *y y* of Fig. 1. Fig. 4 is a front view, partly in section, of a portion of the machine, illustrating a modification, hereinafter referred to; and Fig. 5 is a transverse section of the said modification.

The frame 10 of the machine is provided with a suitable base, 11, and with a stationary table or bed, 12, and in the upper portion of the frame 10, in suitable bearings, is the main shaft 13, that is driven by a drive-pulley, 14, which may receive motion through a belt from any convenient power. On the inner end of the main shaft 13 is keyed a fly-wheel, 15, and to a crank-pin, 16, on said fly-wheel is connected a pitman, 17, whose opposite end is connected with the vertically-reciprocating slide 18, which is provided with a bark-cutter, 19, the said cutter projecting through the front of the said slide through a transverse opening, 19<sup>a</sup>, therein. The face of the slide 18 below the knife 19 is reduced or formed

with a recess, 19<sup>b</sup>, for receiving the bark portion of a block.

In order that the block may be projected into recess 19<sup>b</sup> and presented to the cutter 19 and be rotated to successively present new surface thereto, I provide the machine with a table, 20, which is loosely mounted or swiveled on a vertical post, 21, that projects above the bed 12 through a slot, 22, therein, the lower end of the said post being stepped in one of the members of the base 11. The table 20, in addition to being capable of being turned, may also be oscillated on the post 21, whereby, when the said post, and with it the table 20, is thrown forward to bring the block beneath the cutter 19, the table may be oscillated to cause the block to assume a vertical position, and thus be parallel to the path of movement of said knife. In practice the play of the post 21 and table 20 toward the slide 18 will be so small that it is provided for by merely loosely stepping the said post in the base 11 of the frame.

On the outer end of shaft 13 is keyed a pinion, 25, which meshes with a large gear-wheel, 26, that is keyed onto the cranked shaft 27, the rotation of which communicates through connecting-rods 28 a vertically-reciprocating motion to the cross-head 30, which carries the splitter-knife 31, the connecting-rods 28 being connected to the rod 29, secured to the said cross-head 30. By this construction it will be seen that the bark-cutter 19 is reciprocated more rapidly than the splitter-knife 31, each being therefore adapted for the work to be performed by it, and the capacity of each is such that one will bark a block while the other is splitting and removing the heart from one.

In Figs. 4 and 5 I have illustrated a modified means for effecting the reciprocation of the splitter-knife. In these figures the shaft 27 is not cranked, but is provided with flanged eccentrics 34, which are held to the cross-head 30 by angular arms 35, which are secured to said cross-head, their horizontal members carrying friction-rollers 36, receiving beneath them the flanges of the said eccentrics, and thus causing the cross-head to respond to the movement of the eccentrics. The peripheries or bearing-faces of the eccentrics bear against friction-rollers 37, secured to the



top surface of the cross-head 30, as shown. In other respects the cross-head 30 and its splitter-knife 31 are the same as in the other figures.

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

1. The combination, in a block barking and splitting machine, of a reciprocating slide, a  
10 bark-cutter projecting at an incline through said slide to plane off the bark from the blocks, and a reciprocating cross-head carrying a splitting-knife, both operated from the one main shaft at different speeds, substantially as described.

2. The combination, with the main shaft 13, the fly-wheel 15 thereon, the pitman 17, cranked to said fly-wheel, the pinion 25, carried by the shaft 13, and the vertically-recip-  
20 rocating slide 18, of the gear-wheel 26, the cranked shaft 27, on which the gear-wheel 26 is keyed, and the reciprocating cross-head 30, carrying a splitter-knife and connected with shaft 27, substantially as shown and  
25 described.

3. A barking and splitting machine com-

prising the frame, a main shaft journaled therein, a vertical slide, 18, operated from said shaft and having an inclined knife or bit, 19, projecting beyond its working-face to  
30 plane the bark off the blocks, a table below and in front of the said slide, and a vertically-reciprocating splitter, also operated from said main shaft, substantially as set forth.

4. The combination, with the frame and the  
35 vertically-reciprocating bark-planing cutter, of the post 21, stepped at its lower end to rock toward and from the frame and cutter, and the table on the upper end of the post, substantially as set forth.

5. The combination, with the shaft 13 and the reciprocating slide 18, operated from said shaft, of the cranked shaft 27, also operated from shaft 13 through pinion 25 and gear-  
40 wheel 26, the connecting-rods 28, the rod 29, and the cross-head 30, carrying a splitting-knife, 31, substantially as described.

OTIS W. STEARNS.

Witnesses:

C. E. STEARNS,  
N. L. GRISWOLD.