



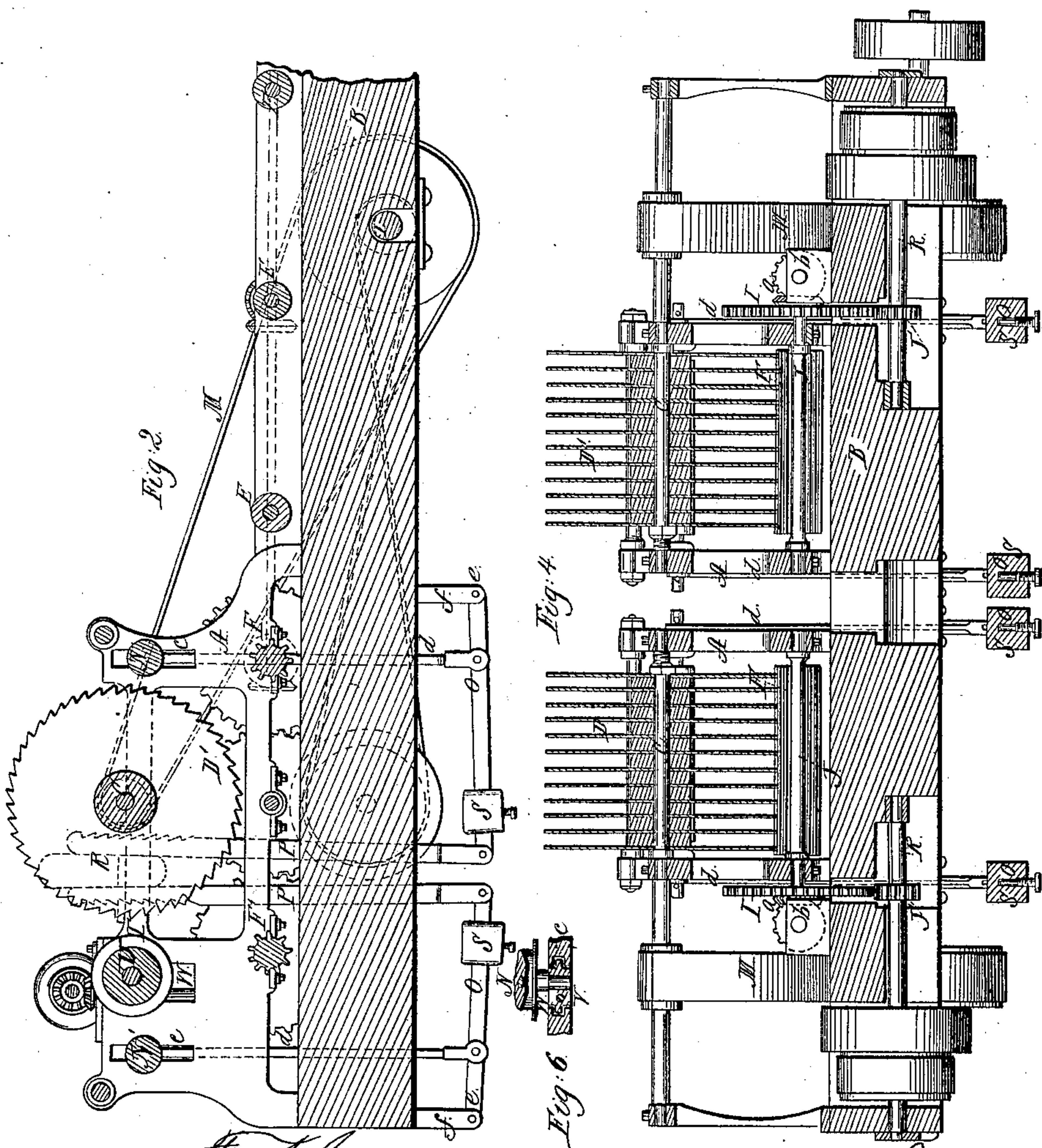
3 Sheets, Sheet 2.

J. Davis,

Circular Saw Mill.

N<sup>o</sup> 60,486.

Patented Dec. 18, 1866.



Witnesses: J. A. Jackson  
J. W. Service

Inventor: James Davis  
Per Mumpsey  
Attorneys



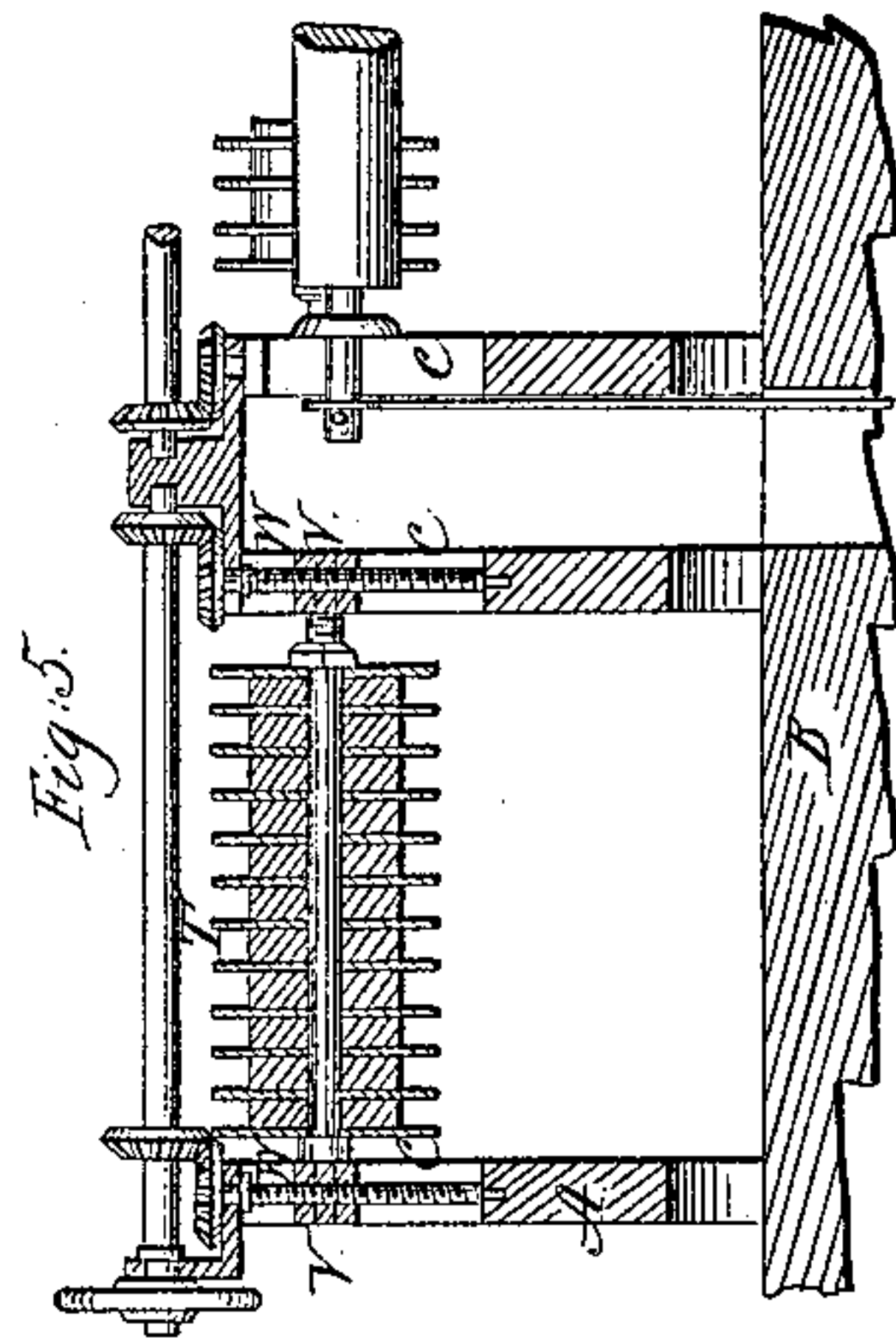
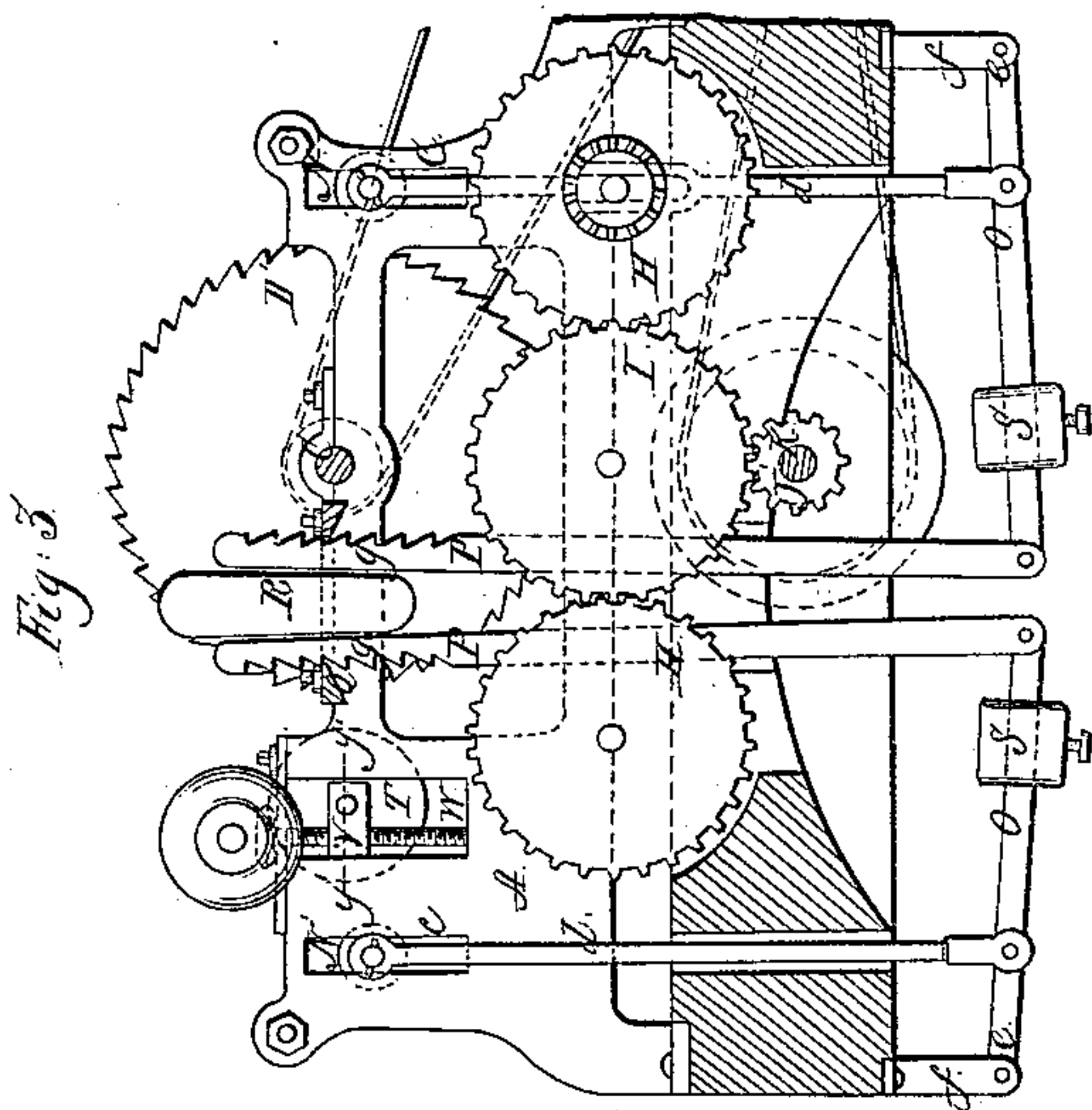
3 Sheets, Sheet 3.

J. Davis,

Circular Saw Mill.

N<sup>o</sup> 60,486.

Patented Dec. 18, 1866.



Witnesses:

J. A. Jackson  
J. A. Service

Inventor:

James Davis  
Per Munnice  
Attorneys

# United States Patent Office.

## IMPROVEMENT IN SAW MILLS.

JAMES DAVIS, OF BUFFALO, NEW YORK.

*Letters Patent No. 60,486, dated December 18, 1866.*

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, JAMES DAVIS, of Buffalo, in the county of Erie, and State of New York, have invented a new and improved Machine for Sawing Logs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the arts to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, sheet No. 1, is a plan or top view of my invention.

Figure 2, sheet No. 2, a side sectional view of the same, taken in the line  $x x$ , fig. 1.

Figure 3, a side sectional view of a portion of the same, taken in the line  $y y$ , fig. 1.

Figure 4, a transverse vertical section of the same, taken in the line  $z z$ , fig. 1.

Figure 5, a transverse vertical section of a portion of the same, taken in the line  $x' x'$ , fig. 1.

Figure 6, a horizontal section of a portion of the same, taken in the line  $y' y'$ , fig. 3.

Similar letters of reference indicate like parts.

This invention relates to a new and improved circular-saw mill of that class in which a gang of saws are employed.

The invention consists in an improved feeding mechanism for feeding the logs or cants to the saws, as hereinafter fully shown and described.

A A represent two frames secured to a proper base or flooring, B, and each having an arbor or shaft, C, upon it. On these arbors or shafts, C, circular saws, D D', are keyed at suitable distances apart to suit the thickness of the stuff to be sawed. One gang or series of saws, D, may be placed at such a distance apart as to saw boards, and the other gang, D', adjusted or arranged at such a distance apart as to saw planks. E E' represent two series of rollers on which the cant is placed. These rollers, two or more of each series, are driven by gears  $a$  and shafting  $b$ , from gearing connected with the fluted feed-rollers, F, of the device. (See fig. 1.) The rollers E E' present the cants to the feeding device of the saws. This feeding device, which constitutes the invention, is constructed and arranged as follows: In the lower parts of the frames A A', and directly in front of the saws D D', there are fitted fluted rollers, F, which work in fixed bearings, and similar fluted rollers, F', are placed in the lower parts of the frames A A', at the rear of the saws, the rollers F F' being in the same horizontal plane. The rollers F F' have toothed wheels, H, on their outer ends, and these wheels are connected by an intermediate gear-wheel, I, as shown clearly in fig. 3, the wheels I being on shafts J, and gearing into pinions J', on shafts K, which are driven by belts K', from a driving or power-shaft L, the saw arbors or shafts, C, being also driven from said shaft by belts M M. In the frames A A', and above the fluted rollers F F', there are placed adjustable rollers, N N'. These rollers have smooth peripheries, and their journals are fitted in or pass through vertical oblong slots,  $c$ , in the frames A A', and into the upper ends of vertical bars,  $d$ , the lower ends of which are pivoted to levers, O, one end of which are secured by fulcrum pins,  $e$ , to pendants,  $f$ , attached to the base or flooring, B, as shown in fig. 3. The opposite ends of the levers, O, are pivoted to the upright bars, P, which extend up by the outer sides of the frames A A', and pass through guides, Q, the bars, P, having rack-teeth,  $g$ , made in them to catch on the ends of the guides Q, the teeth,  $g$ , being retained thereon by keys or wedges, R, which are driven down between the upper parts of the bars P, as shown in fig. 3. On each lever, O, there is placed an adjustable weight, S, secured in position by a set-screw,  $h$ . By adjusting the bars, P, higher or lower, the rollers N N' may be made to bear with a greater or less pressure on the log and cause the same to bear upon the lower fluted rollers, F F', which feed the log to the saws and discharge the boards or planks therefrom. In case it is desired to have the upper or pressure rollers, N N', yield or give, the keys or wedges, R, may be removed, and the weights, S, adjusted to give the desired downward pressure to said rollers. Directly behind each gang of saws there are placed a series of circular plates, T. These plates are placed on shafts, U, the ends of which are fitted in slides, V, having screws, W, passing through them, by which the slides may be raised and lowered. (See fig. 5.) These circular plates are adjusted higher or lower in the saw-kerfs and prevent the saws from binding and heating therein. They however comprise no part of this invention, as they are included in the subject-matter of another application. The rollers, E E', effect a great saving in labor, as the cant may be turned over upon them direct from the carriage on which its slabs were cut or sawn off, and said rollers conduct at once the cant to the feed-rollers, F N,



which feed the cant to the saws, the cant of course being placed on either series of rollers E or E', according to whether boards or planks are to be sawed.

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

Adjusting the rollers N N' by means of bars d, levers O, weights S, notched bars P, guides Q, and wedges R, as and for the purpose specified.

The above specification of my invention signed by me this 18th day of June, 1866.

JAMES DAVIS.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.