

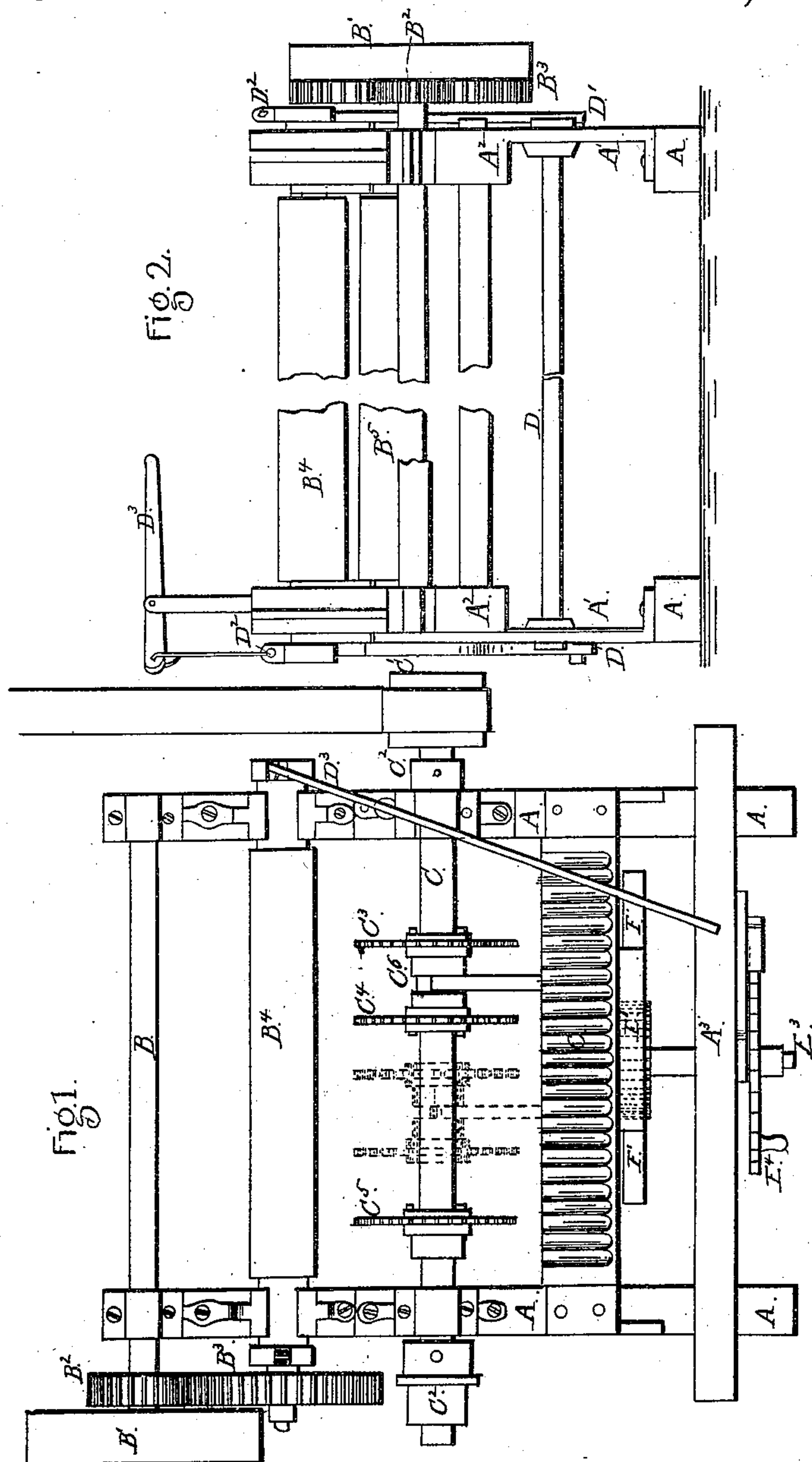
Lettellier & Leitell.

Sheet 1, 2 Sheets

Sawing Mach.

N^o 96,450.

Patented Nov. 2, 1869.



Witnesses:

A. Ruppert
C. F. Clausen

Inventors:

Leitell & Leitellier

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Sheet 2, 2 Sheets.

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FIG 4

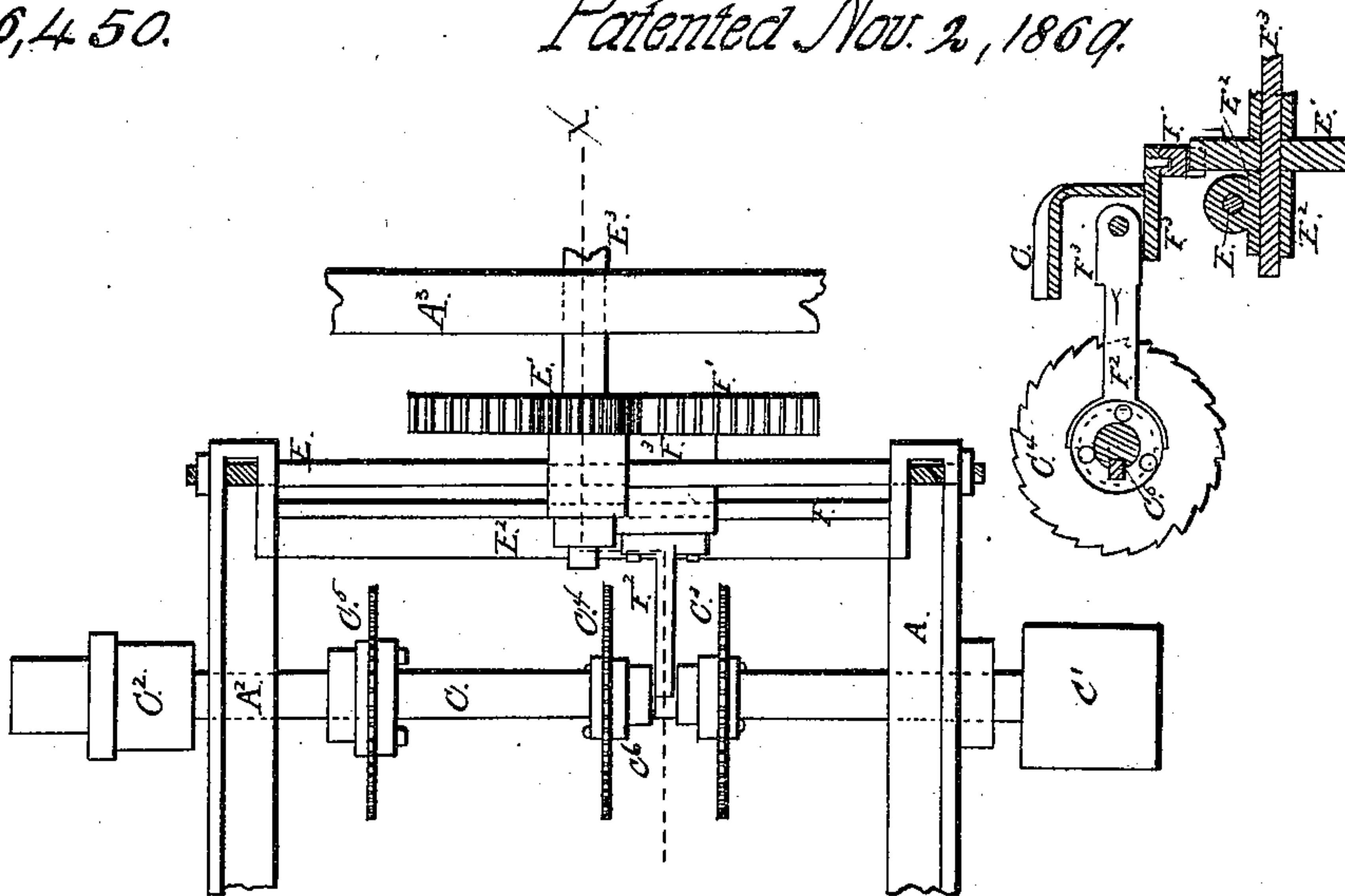
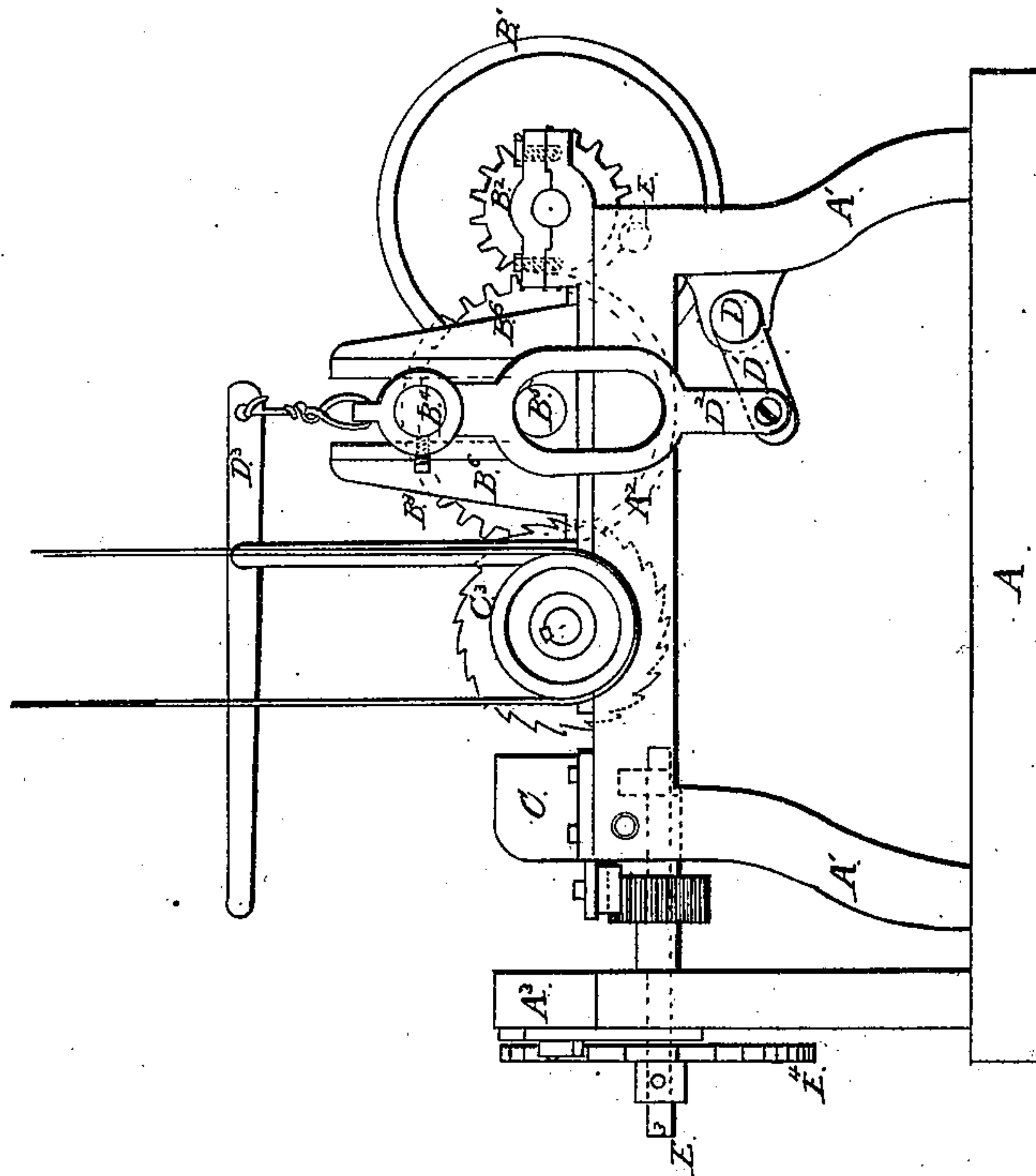


FIG 3



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JOSEPH F. LETELLIER AND ADOLPH LEITELT, OF GRAND RAPIDS,
MICHIGAN.

Letters Patent No. 96,450, dated November 2, 1869.

IMPROVEMENT IN SAWING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOSEPH F. LETELLIER and ADOLPH LEITELT, of Grand Rapids, in the county of Kent, and State of Michigan, have invented a new and useful Improvement in Machines for Edging and Splitting Lumber; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan or top view of the machine, showing the upper feed-rollers, the shaft and pulley for driving the same, the saw-mandrel, and the saws, together with the index-wheel for fixing the positions of the saws;

Figure 2 is a front elevation, showing the feed-rollers, the gearing which drives them, and the lever for raising the upper one, together with the shaft and connecting-links for that purpose;

Figure 3 is an end elevation of the machine, showing the parts in position;

Figure 4 is a plan or top view of a portion of the frame of the machine, showing the saw-mandrel, with its saws and pulleys in position, together with the gearing for regulating the position of the saws upon the mandrel; and

Figure 5 is a section on line *x x* of fig. 4.

Corresponding letters refer to corresponding parts in the several figures.

This invention relates to that class of machines which are used for edging and splitting lumber; and

It consists in providing such machines with an index-wheel, by the turning of which the position of the saws upon the mandrel can at once be fixed for cutting any desired width of strip within the capacity of the machine, from the board or plank; and

The invention further consists in the combination and arrangement of the parts composing the machine.

A¹ A¹, in the drawings, represent a frame-work of timbers, upon which the machine may be placed, they having a standard, A³, erected thereon to receive and hold the outer end of the shaft to which the index-wheel is secured. This frame and its standard are not necessary parts of the machine, and may be dispensed with, if desired, by attaching to the frame a hanger to support the shaft alluded to.

A¹ represents the frame-work of the machine, which may be made of cast-iron or of wood, and it is to have the requisite bearings attached to it, or formed in it for the shafts and rollers which extend across it.

B represents a shaft, which has its bearings in boxes attached to the rear upper surfaces of the frames A¹ A¹.

To one of the outer ends of this shaft a pulley, B¹, is attached, over which a belt passes for driving the feed-rollers.

Upon this shaft, just inside of the driving-pulley, there is a small gear-wheel, B², secured, which meshes into and drives a larger wheel, B³, which is to be secured to the outer end of the lower feed-roller B⁵.

B⁴ B⁵ represent the rollers which feed the lumber to the saws, they being arranged in the rear of such saws, so that as soon as the ends of the plank, or the strips cut therefrom, reach this roller, they will pass between the same, and be by them carried forward.

These rollers have their bearings in boxes, which work in standards B⁶, secured to the upper surface of the frame A A, as shown in fig. 3. The lower one of these rollers extends beyond the box, in which it rotates for a distance sufficient to enable it to receive the wheel B³, by which it is driven.

C represents a shaft or mandrel, which also has its bearings in boxes secured to the frames A A, while upon one of its outer ends it carries a driving pulley, C¹, over which the belt passes which drives the saws.

Outside of each of the boxes in which this shaft revolves it carries an adjustable collar, C², which are for the purpose of preventing any end traverse of such shaft.

C³ and C⁴ represent two circular saws, which are attached to a sleeve, C⁵, which slides upon but rotates with the shaft C. Midway between these saws the sliding sleeve is provided with a groove, into which the bifurcated end of an arm enters, for the purpose of sliding the same upon the shaft, a feather being inserted in such shaft to cause such sleeve to rotate therewith, but permit its longitudinal movement thereon. The red lines in fig. 1 show that these two saws may be moved upon the shaft, which movement may extend throughout that portion which is between the fixed saw C³ and the journal upon the opposite end of the shaft. These saws may be set at any desired distance apart, so as to cut any fixed width of strip.

C⁵ represents a saw, which is to be fixed upon the shaft by means of suitable collars attached thereto, and so that any required width of strip may be cut between it and the movable saw, while the fixed saw will edge the board in cases where it is not already straight.

D represents a shaft or rod, which extends across the frame, and has its bearings in projections formed upon the legs of the frame.

Upon each outer end of this shaft there is to be attached an arm, D¹, to the outer end of which a crank-pin is to be secured, and upon which works the connecting-rod or yoke D², which has a slot formed in it at the point where it passes the journal of the lower feed-roller, while upon the upper ends of these rods or yokes there is to be an aperture, which will fit upon the outer ends of the journals of the upper feed-roller, while just above such apertures there is to be formed

an eye for the reception of a connecting-rod or link, which extends therefrom up to and connects with the short arm of lever D⁴, by which the upper feed-roller is raised or lowered at pleasure, the slots in D² allowing it to move up and down without in the least affecting the lower roller.

E represents a rod, which passes through the two sides of the frame A A, to which it is secured by nuts upon its outer ends, and upon which slides the socket E², which has upon its under side a projection, in which an aperture is formed which forms a right angle to its upper portion, so that it may traverse along the rod F, from side to side of the machine, and at the same time support the shaft E³, which is secured to or within the socket, having its outer bearing in the standard A³ of the frame, and upon its outer end the index-wheel E⁴, which is serrated upon its periphery, or has projecting points formed thereon, which may be marked to correspond with the number of inches that the saw C⁴ will be from saw C⁵ when any one of such parts is brought opposite a fixed point upon the standard A³, and thus the width of the strip to be cut will be determined by turning such wheel.

Upon that portion of shaft E which is outside of the socket E², in which it rotates, there is to be secured a gear-wheel, E¹, which is keyed or otherwise attached to the shaft, so as to rotate with it, and so arranged as to mesh into the teeth of a rack for moving the saws.

F represents the rod above alluded to, which is located above the rod E, having its ends secured in the ends of G, soon to be described. Upon this rod socket E² slides.

F¹ represents a rack, which is arranged upon the slide F³, so as to be directly above the wheel F¹, and so as to be moved transversely across the machine by such wheel.

F² represents an arm, one end of which is to be bifurcated, so as to embrace the sleeve C⁶, upon the shaft C, to which saws C⁴ and C⁵ are attached. The opposite end of this arm is to be secured to a sliding frame, F³, which moves upon rod F, and to which the rack F¹ is secured, the arrangement being such, that as the dial-wheel F⁴ is turned, the saws will be moved upon the shaft, as above described.

G represents a table, over which the lumber to be

edged or split passes on its way to the saws, it being of the form shown in figs. 1 and 5, and secured to the upper surface of the frame A¹ A¹.

The upper surface of this table is to be corrugated, such corrugations being in lines parallel with the movements of the lumber to be cut, so that as the board or plank is placed upon this table, and pushed forward to and past the saws, the points or edges of such corrugations shall form guides for the lumber, and prevent it from being turned out of a line with the sides of the saws.

We are aware that a patent was granted to C. J. Hayes and Martin Newman, for an edging-machine having two saws upon a mandrel, one of which is capable of being moved thereon by means of a screw.

We do not claim the devices shown in the above referred to patent, neither do we claim any combination or arrangement there shown; but

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. In combination with a machine constructed substantially as herein described, a dial-wheel for determining the position of the saw or saws upon their shaft, and the width of the strip to be cut from the board or plank.

2. The combination and arrangement of the dial-wheel E⁴ with the gear-wheel E¹, rack F¹, sliding frame F³, and arm F², for moving the saws upon the shaft, substantially as and for the purpose set forth.

3. The within-described arrangement of the saws upon their mandrel, it being such that two strips may be cut from a board or plank at one and the same time, one of which will be of a fixed width and the other of any desired width, the latter being dependent upon the position of the movable saw with reference to the fixed saw.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

JOSEPH F. LETELLIER.
ADOLPH LEITELT.

Witnesses:

J. W. PEIRCE,
A. L. G. PEIRCE.