

W. W. Ballard,
Cir-Saw Mill.

No 94,061.

Patented Aug 24 1869.

Fig. 1.

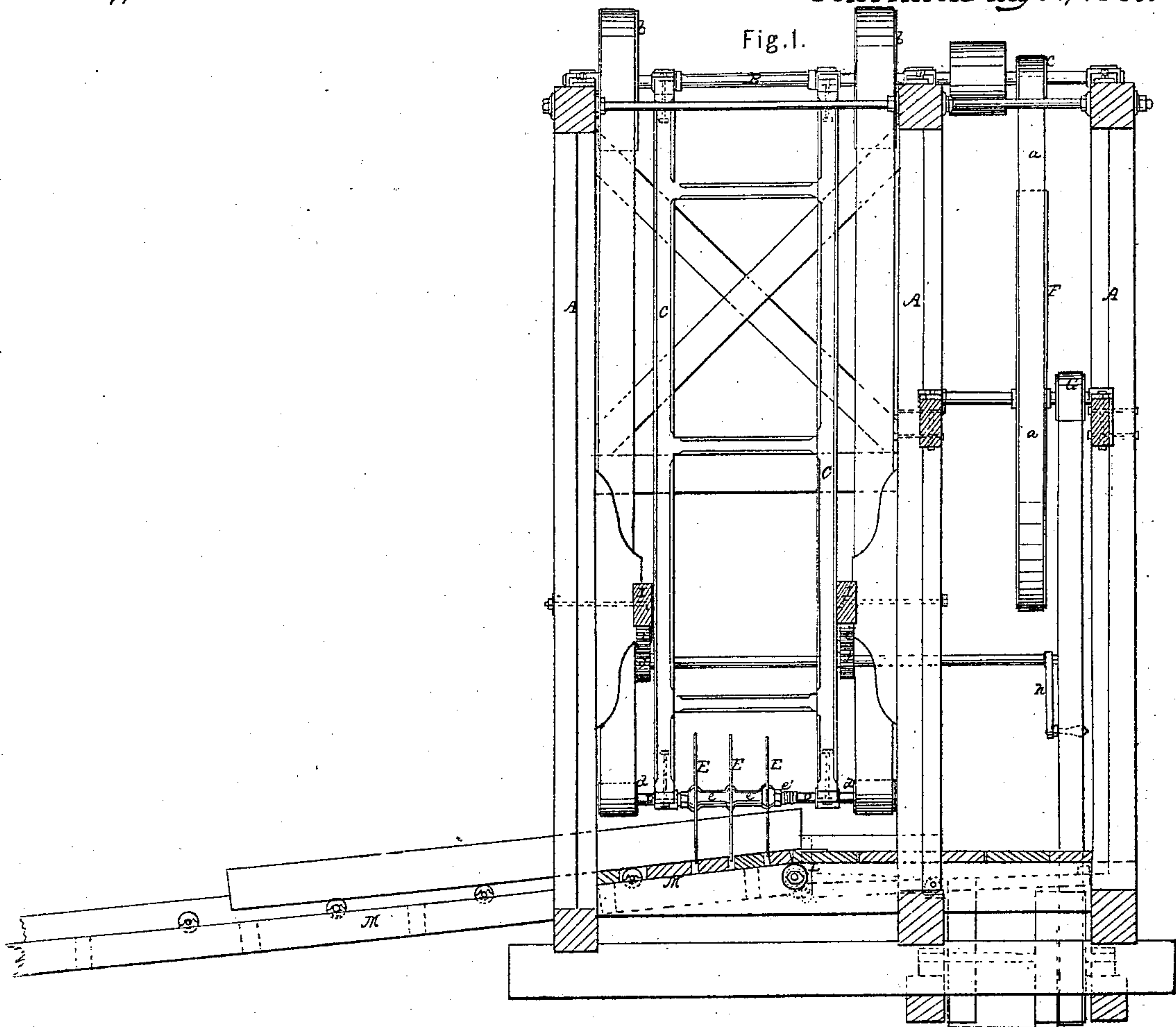
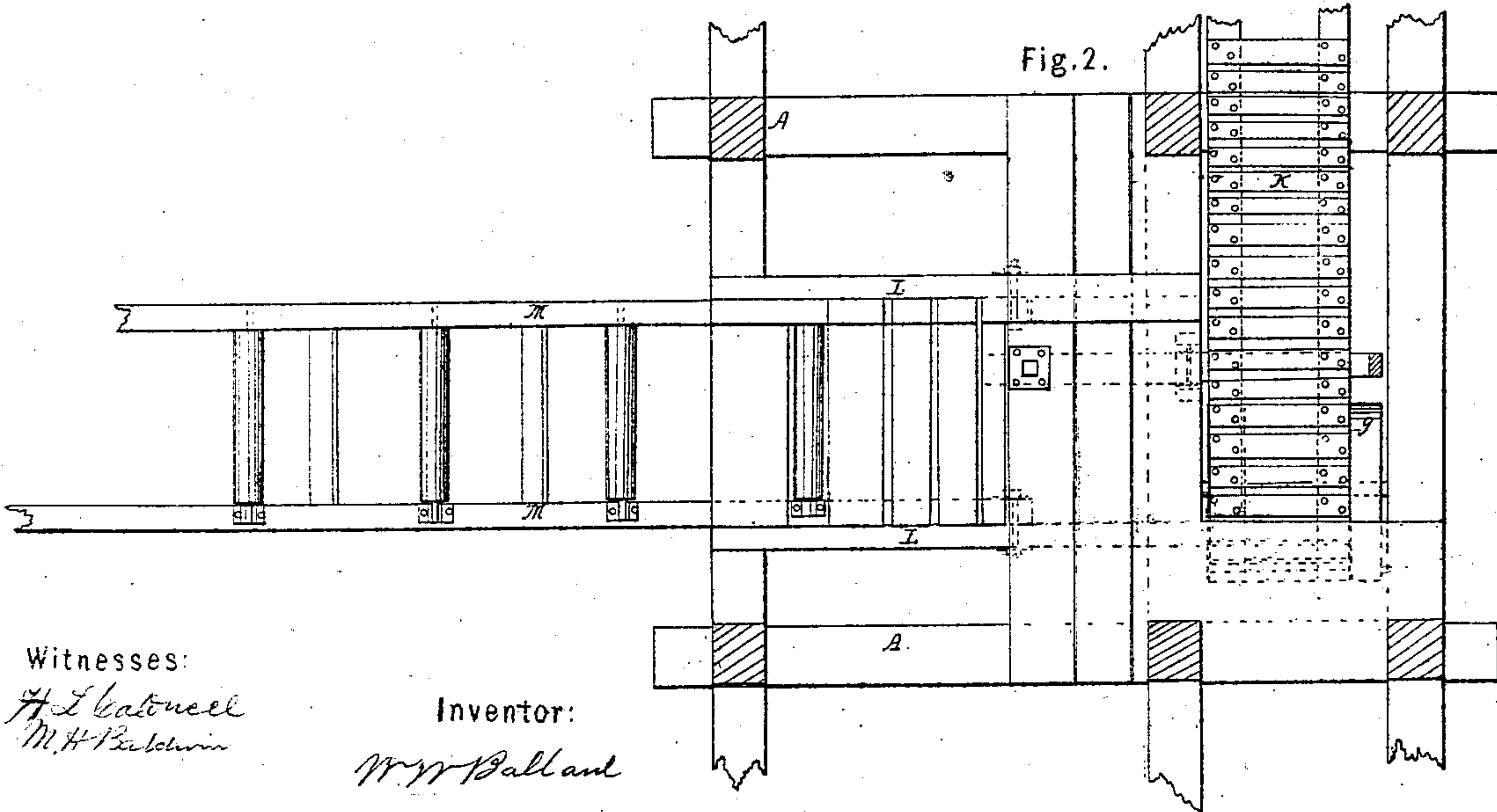


Fig. 2.



Witnesses:

H. L. Catonell
M. H. B. B. B.

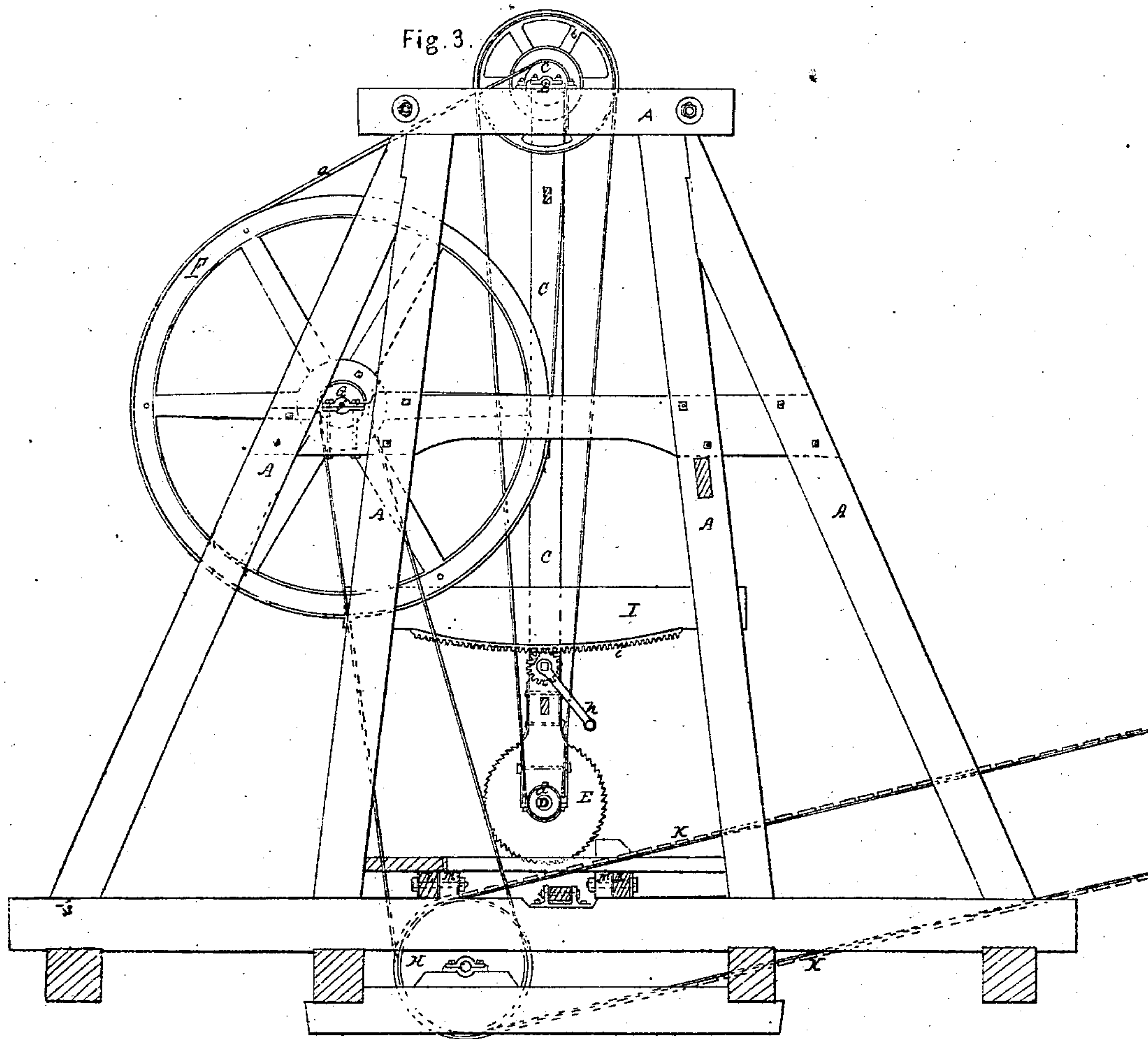
Inventor:

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WITNESSES.

H. L. Cabrelli

M. H. Baldwin

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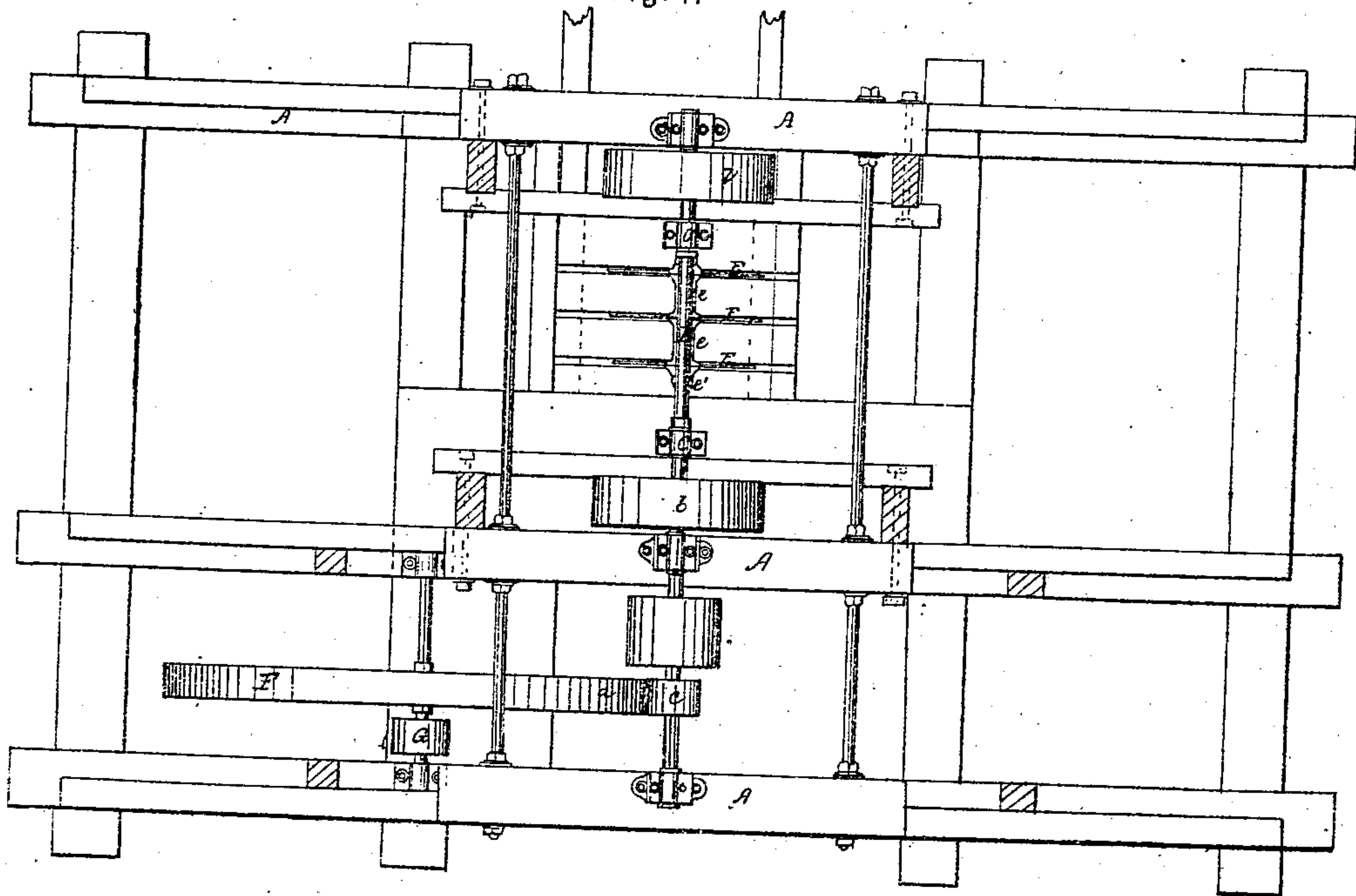
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Fig. 4.



WITNESSES.

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United States Patent Office.

WILLIAM W. BALLARD, OF ELMIRA, NEW YORK.

Letters Patent No. 94,061, dated August 24, 1869.

IMPROVEMENT IN MACHINE FOR SAWING PAVING-BLOCKS.

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 W. BALLARD, of Elmira, in the county of Chemung, and State of New York, have invented a new and useful Improvement in Machines for Sawing Blocks from Lumber, for Street-Paving; and I do hereby declare the following to be a full, clear, and correct description of the same, sufficient to enable others skilled in the machinery to which my invention appertains, to fully understand and construct the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1, Sheet I, represents a side view of the adjustable feed-table, parts of the balance of the machine being in section.

Figure 2, Sheet I, is a top view,

Figure 3, Sheet II, is a side view, and

Figure 4, Sheet II, a sectional plan of my machine.

Like letters of reference indicate like parts in the several figures.

My invention is intended for the cutting of blocks for pavement, of trapezoidal form, from a square piece of timber, two blocks being always cut together in one piece by one cut, the four sides of which piece form parallelograms, and which, by being cut in the centre, and in a line at right angles to the top and bottom of said piece, will form two trapezoidal blocks; and

It consists of an adjustable feed-table, so arranged that the timber can be so fed to the saws as to be cut at any desired angle.

A, in the drawings, represents the main frame of my machine, on the top of which, in proper bearings, moves a shaft, B.

Suspended from this shaft, and loosely grasping it, is a swinging saw-frame, C, in the lower end of which are the bearings for a shaft, D, on which the saws E are secured.

Any desired number of saws may be employed, and the size of the blocks to be cut is regulated by a number of sleeves, e, on the shaft D, between the saws E, which may be larger or smaller, as is desirable, the whole being secured on the shaft by a screw-nut, e'.

On the ends of shaft D, outside of the swinging frame C, are secured pulleys d, which connect, by means of belts, with pulleys b on shaft B, to which latter motion is imparted by means of a belt, a, pass-

ing over pulley c on shaft B, and a large belt-wheel, F, on a shaft, f, moving in proper bearings on frame A.

This shaft f carries a pulley, G, which receives its motion from a pulley, g, by means of a belt.

A drum, H, is secured on the same shaft with pulley g, and serves to give motion to an endless apron, K, which moves in the line of motion of the saws.

Secured on the under side of cross-pieces I of the frame A, are two curved racks i, into which gear the pinions j on shaft J, in the swinging frame C.

The wheels j are operated by a crank, h.

Pivoted to the end of a cross-piece, L, of the frame A, is the feed-table M, extending under the saws.

This feed-table can be placed at any desired angle to the saws, so as to regulate the angle at which the blocks are to be cut from the square timber.

The operation of the device is as follows:

Motion being imparted to the several belt-wheels and pulleys, a square piece of timber is placed on the feed-table M, and moved up to and under the saws, which have been swung back with their frame C, by means of rack i and pinion j. The saws are now moved up to the timber, and cut the blocks, after which the saws are moved back and the timber pushed up.

In pushing up the timber, the cut pieces are forced on to the endless apron K, which carries the same to any desired place. The operation of cutting is then repeated.

It will be easily understood, that by means of a cam-motion the saws may be moved back and forward automatically, and that the feeding of the timber may also be accomplished by machinery.

I have described all the parts of the machinery, to give a clear understanding of the connection of that part of it which I claim as my invention with the rest, and I desire it distinctly understood that I do not claim all the machinery herein described; but

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

The feed-table M, when made adjustable, as herein described, for the purpose of cutting blocks for street-pavements at any desired angle.

WM. W. BALLARD.

Witnesses:

M. H. BALDWIN,

H. T. CALDWELL.