

(No Model.)

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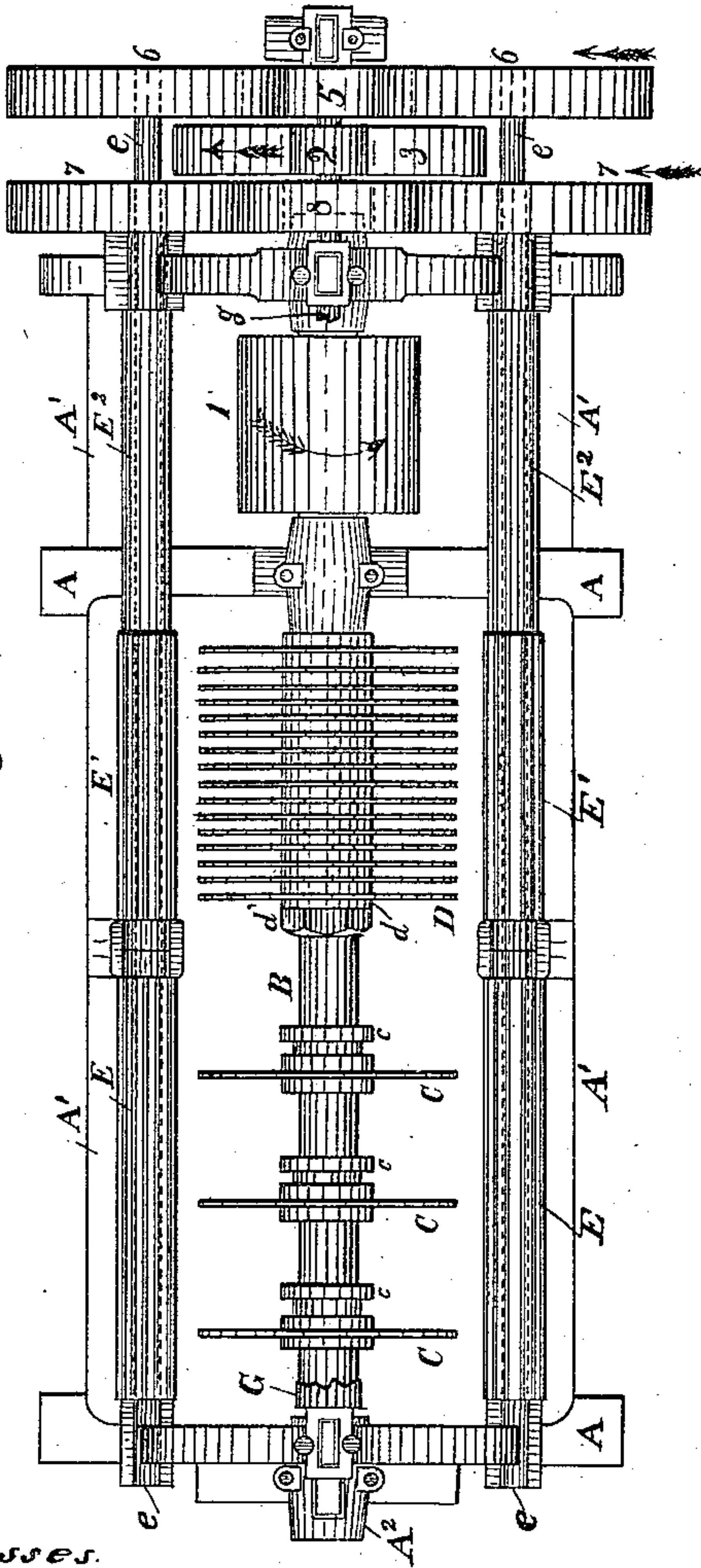
W. M. WILKIN.

COMBINED EDGER AND CANT SAWING MACHINE.

No. 336,193.

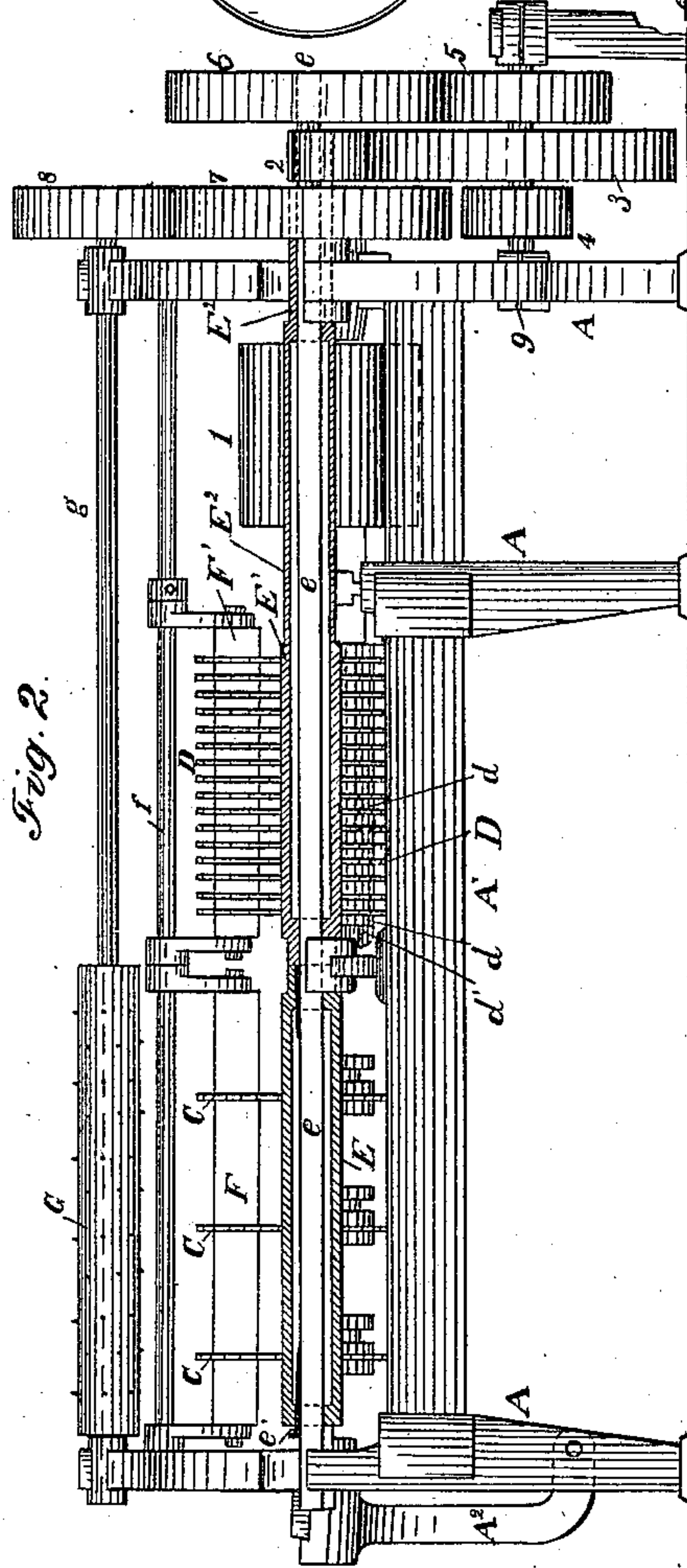
Patented Feb. 16, 1886.

Fig. 1.



Witnesses.  
W. R. Edelen  
L. D. Hanford

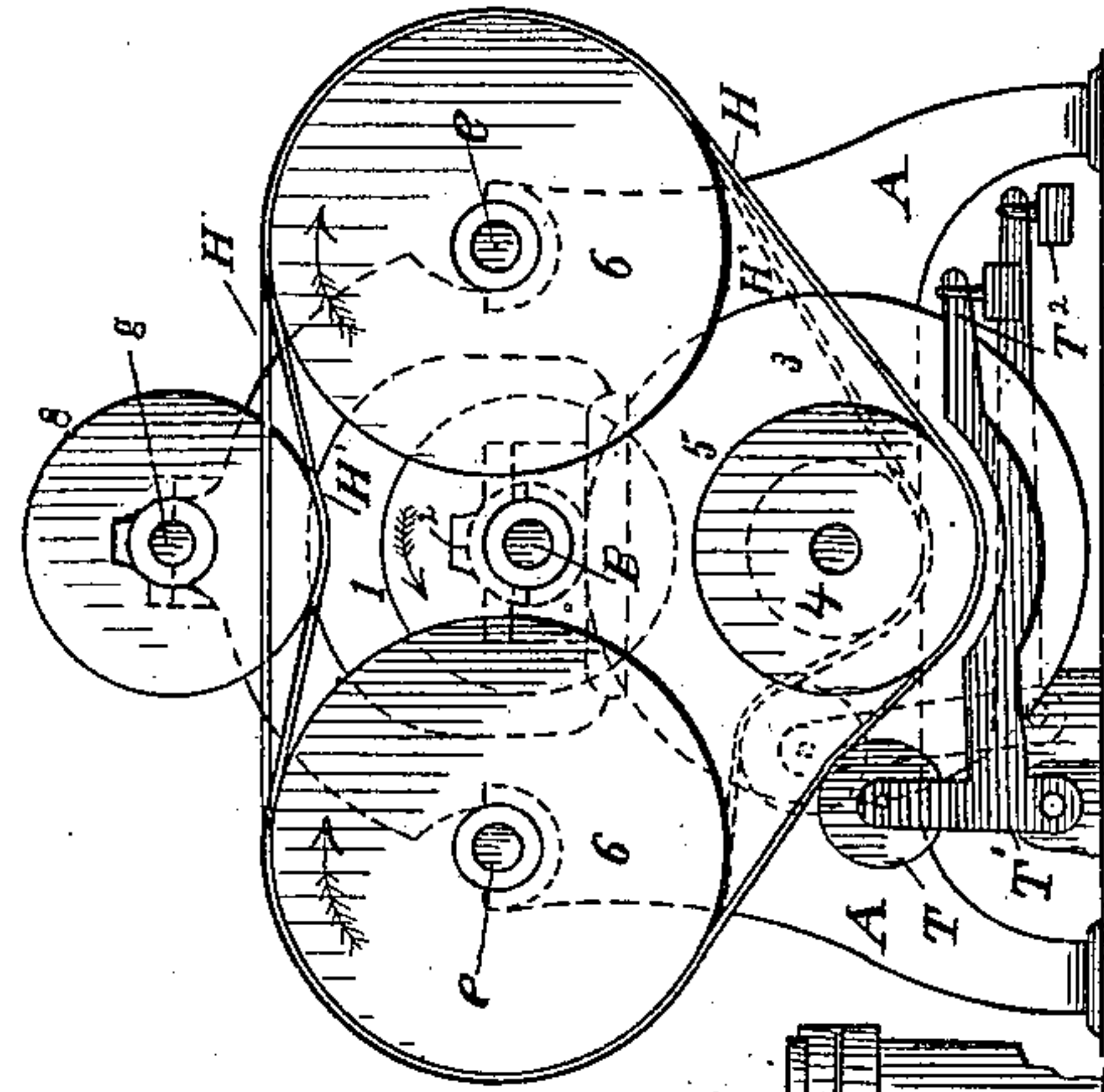
Fig. 2.



Inventor.  
Wm M. Wilkin.

for Hullock & Hullock  
Att's

Fig. 3.



(No Model.)

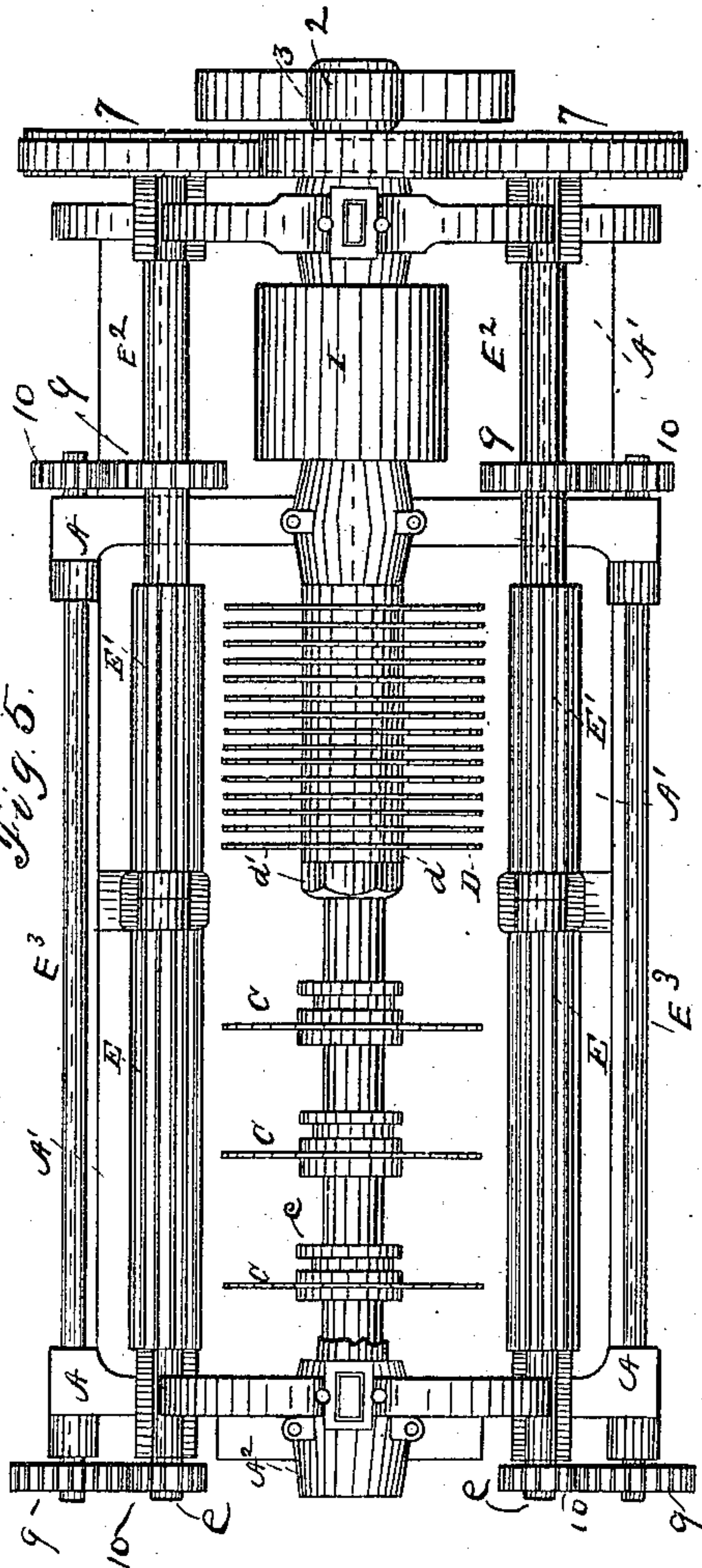
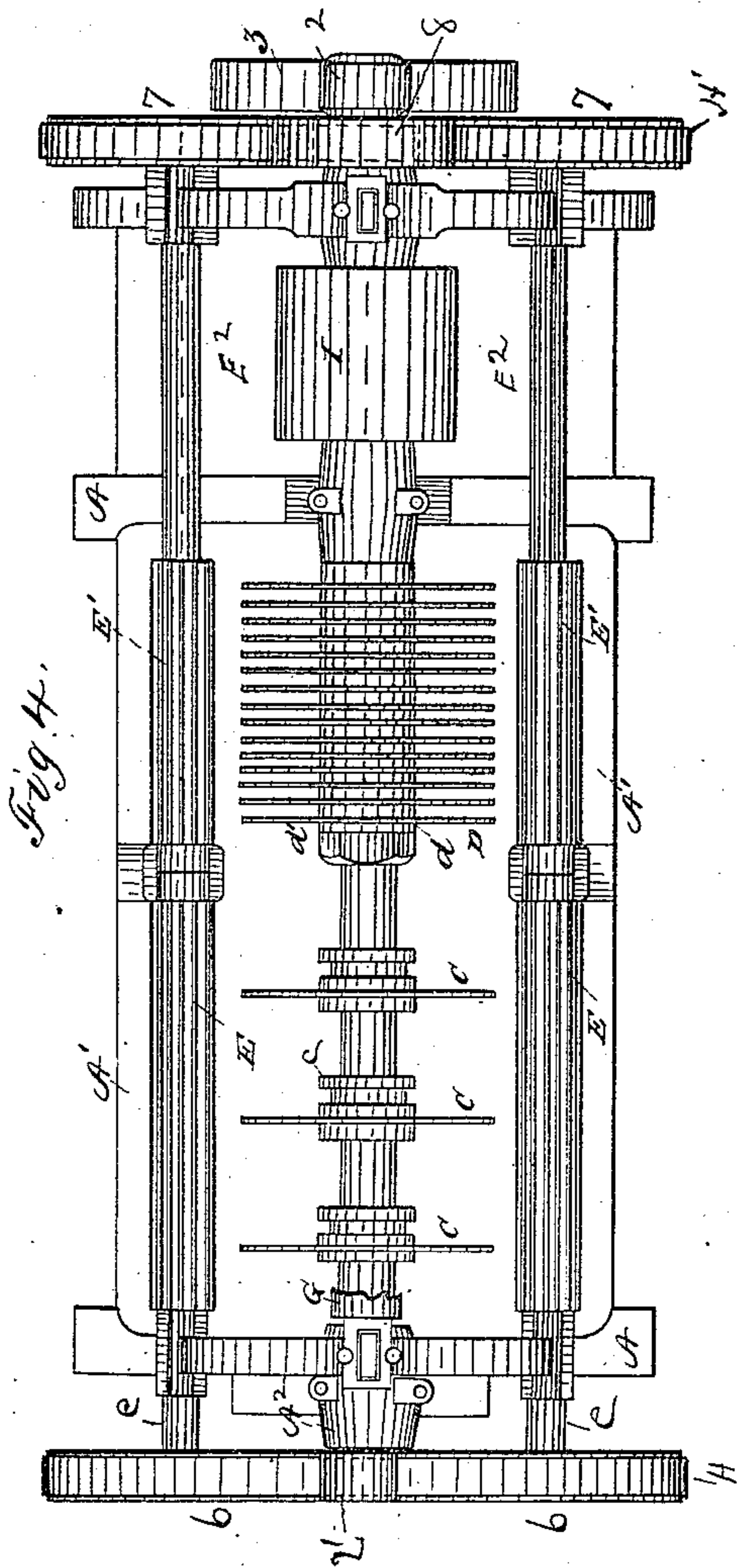
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Hallock & Hallock  
Att's



# UNITED STATES PATENT OFFICE.

WILLIAM M. WILKIN, OF ERIE, PENNSYLVANIA.

## COMBINED EDGER AND CANT SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 336,193, dated February 16, 1886.

Application filed July 25, 1884. Serial No. 138,765. (No model.)

*To all whom it may concern:*

5 B. it known that I, WILLIAM M. WILKIN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylv-  
5 vania, have invented certain new and useful Improvements in Combined Edgers and Cant Sawing Machines; and I do hereby declare the following to be a full, clear, and exact descrip-  
10 tion of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The nature, purpose, and scope of this invention will fully appear in the following general description.

15 In saw-mills there are machines for sawing off the rough slabby edges of the boards as they fall from the log, which machines are called "edgers." It is the practice in cutting  
20 up logs when the timber is of proper quality to make flooring stuff to cut out a cant about midway between the center of the log and the bark, which is thick enough to be ripped up  
25 into flooring stuff, the thick way of the cant being the width of the flooring stuff. This is done so as to bring the grain of the timber  
30 edgewise in the flooring stuff. These cants are sawed up by a battery of circular saws. It has been attempted to put this battery of  
35 saws in the edger-machine, as it is more convenient to have it there; but serious difficulties have been encountered, as follows: The battery of saws and the edger-saws are  
40 all on one arbor, and the cant is fed to the machine at one side of the point, where the boards pass to the edger, and the feeding  
45 mechanism is the same for both; but a thin board or plank can be fed to the edger-saws much faster than the thick cant can be fed to the battery of saws, and therefore it was found  
50 necessary to slow down the speed of the feeding mechanism when a cant was being sawed. The result of this was to delay matters too much, and the work of edging could not keep  
55 pace with the discharge of boards from the mill.

My invention has for its object the overcoming of this difficulty, and consists in providing a machine having both edger-saws and a battery of saws with separate feeding-rollers  
50 for each class of saws and gearing for running the two sets of rolls at different speeds, so that

the boards will pass through the edging part of the machine rapidly, while the cants will be fed to the battery at the same time and at much less speed.

55 The accompanying drawings illustrate my invention, as follows: Figure 1 is a top or plan view of the machine, the shaft *g* and roller *G* (seen in Fig. 2) being broken away. Figs. 4  
60 and 5 are similar views, and show modifications in the construction of the machine. Fig. 2 is a side elevation of the machine as shown in Fig. 1, the feed-rollers *E E'* being in  
65 section. Fig. 3 is an end view taken from the right of Figs. 1 and 2.

The belts *H H'* (seen in Fig. 3) are not seen in Fig. 1, but in Figs. 4 and 5 belts are shown.

Letters of reference designate parts, as follows: *A* and *A'*, the frame-work; *B*, the arbor of all the saws; *C*, the edger-saws; *c*, the sliding  
70 collars carrying the saws *C*; *D*, the battery of saws; *d*, the collars between the saws *D*; *d'*, the clamping-nut for holding the saws *D* in place; *E E*, the feed-rollers that carry  
75 the boards to the edger; *E' E'*, the feed-rollers for the battery; *E<sup>2</sup> E<sup>2</sup>*, the hollow shafts of the rollers *E'*; *e e*, the shafts of the rollers *E E*; *F F F' F'*, the presser-rollers over the feed-  
80 rollers. *G* is a roller commonly used in edgers for carrying back any boards that may need re-edging; *g*, the shaft of the roller *G*; 8, the pulley by which this shaft is driven. 1 is the  
85 main driving-belt pulley, and is mounted on the arbor *B*. 2 is a friction-gear on the end of the arbor. 3 is a large friction-gear, which is moved by the friction 2 and is mounted on  
90 a counter-shaft, 9. 4 and 5 are belt-pulleys of differing sizes mounted on shaft 9. 6 6 are belt-pulleys mounted on the shafts *e e*, to which the rollers *E E* are keyed. 7 7 are belt-pul-  
95 leys mounted on the hollow shafts *E<sup>2</sup> E<sup>2</sup>*, which are connected with the rollers *E' E'*. *H* is a belt which runs on pulleys 5, 6, and 6. *H'* is a belt which runs on pulleys 4, 7 7, and 8. *T T' T<sup>2</sup>* are tighteners for keeping the belts  
tight.

From the foregoing the construction of the device can be easily understood. The pulleys 4 and 5 being of different diameters and mounted on the same shaft, and the pulleys 6 6 and 7 7  
100 being of equal diameter and driven, respectively, from the pulleys 5 and 4, the speed of



the shafts driven by said pulleys 6 6 and 7 7 will differ. The pulley 4, being smaller than the pulley 5, the pulleys 7 7 will move slower than the pulleys 6 6. As the rollers E E are moved from the pulleys 6 6 they will move faster than the rolls E' E', which are moved from the pulleys 7 7.

In Figs. 4 and 5 modifications of the gearing are shown. In Fig. 4 the pulleys 7 7 are at one end and 6 6 at the other end, a belt-pulley, 2', being placed on the opposite end of the arbor from the friction-gear 2. In this construction the shafts E<sup>2</sup> E<sup>2</sup> are not made hollow, as shown in the foregoing figures. In Fig. 5 the pulleys 6 6 are dispensed with, and cog-gears 9 10 9 10 and shafts E<sup>3</sup> are used to operate the rollers E at greater speed than the rollers E'. The shafts E<sup>2</sup> E<sup>2</sup> are solid in this case, the same as in Fig. 4. These alternative constructions need no further description, as they can be easily understood from the drawings. I wish, however, to be understood as reserving the right to make specific claims for these constructions in future applications.

A difference in the speed of feeding could be secured by using different-sized rollers on a single shaft; but to obtain very much difference it would require considerable difference in the diameters of the rollers, and this would bring the face of the larger roller too high above the arbor to obtain good results.

While I have shown the feeding device geared to be operated from the arbor B, such an arrangement is not essential, as they may be geared from a counter-shaft or from the

shaft from which the main belt runs onto the pulley 1.

What I claim as new is—

1. In a combined edger and cant sawing machine, substantially as shown, the combination of two sets of saws, separate feeding mechanism for each set of saws, the feeding mechanism of one set being geared for the purpose of giving a greater speed to one feed mechanism than to the other, and gearing for operating said feed mechanism, substantially as described.

2. In a combined edger and cant sawing machine, substantially as shown, the combination of two sets of saws, for the purposes named, mounted on a common arbor, and separate feeding devices for each of said sets of saws, which are simultaneously operated at differing speed by gearing which is actuated from the said common arbor, substantially as shown.

3. In a combined edger and cant sawing machine, substantially as shown, the combination, with the arbor B, saws C C C, and saw-battery D, feed-rollers E E and E' E', and shafts e e and E<sup>2</sup> E<sup>2</sup>, of the friction-pulleys 2 and 3 and the belt-pulleys 5 6 6 and 4 7 7, and the belts H and H', said parts being constructed, arranged, and operating as shown, and for the purposes mentioned.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM M. WILKIN.

Witnesses:

JNO. K. HALLOCK,  
ROBERT H. PORTER.