

(No Model.)

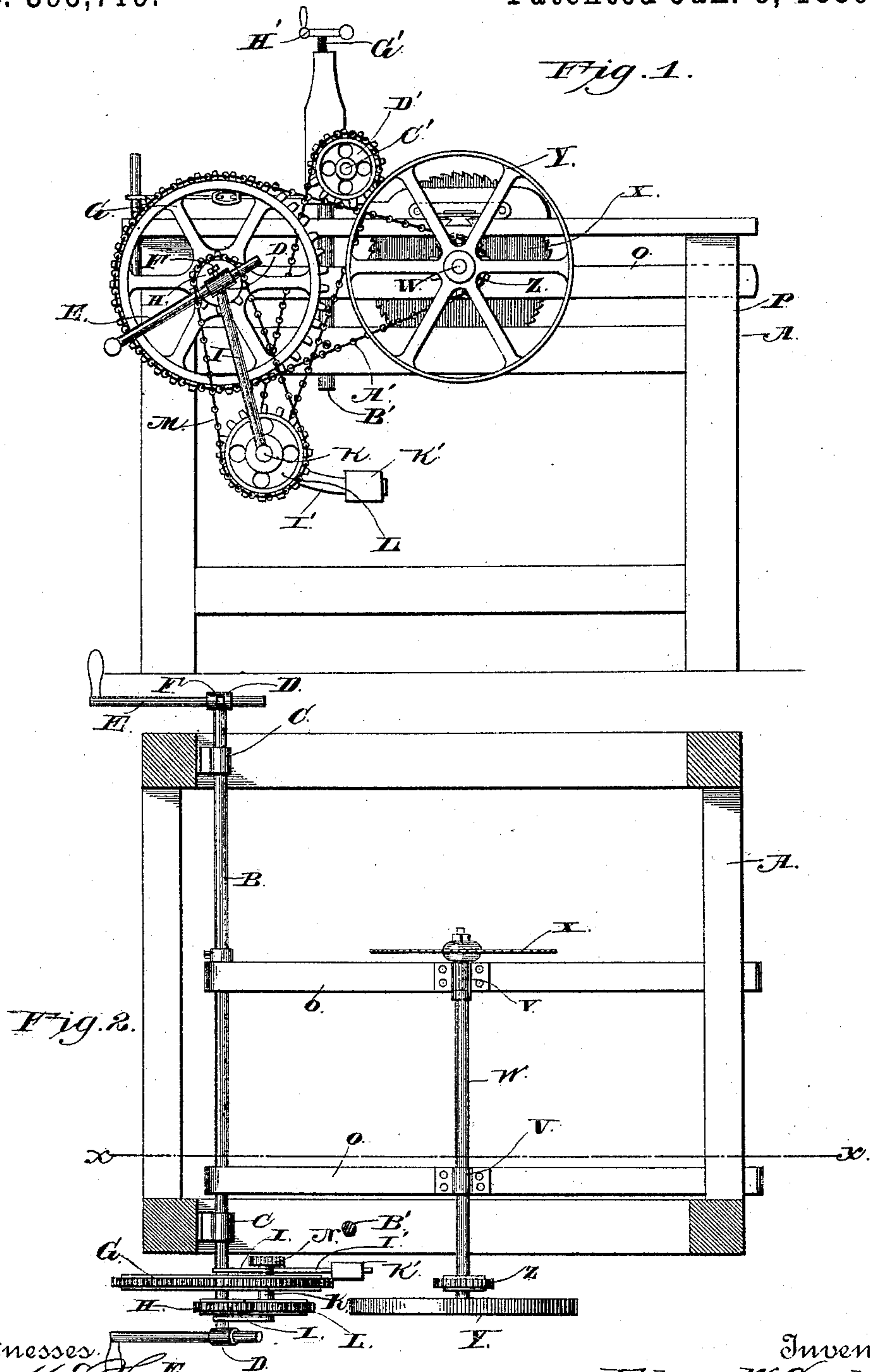
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E. W. SNEDEKER.

SAWING MACHINE.

No. 395,719.

Patented Jan. 8, 1889.



Witnesses.
M. C. Fowler.
C. J. Siggers.

Inventor.
Edgar W. Snedeker

By *his* Attorneys

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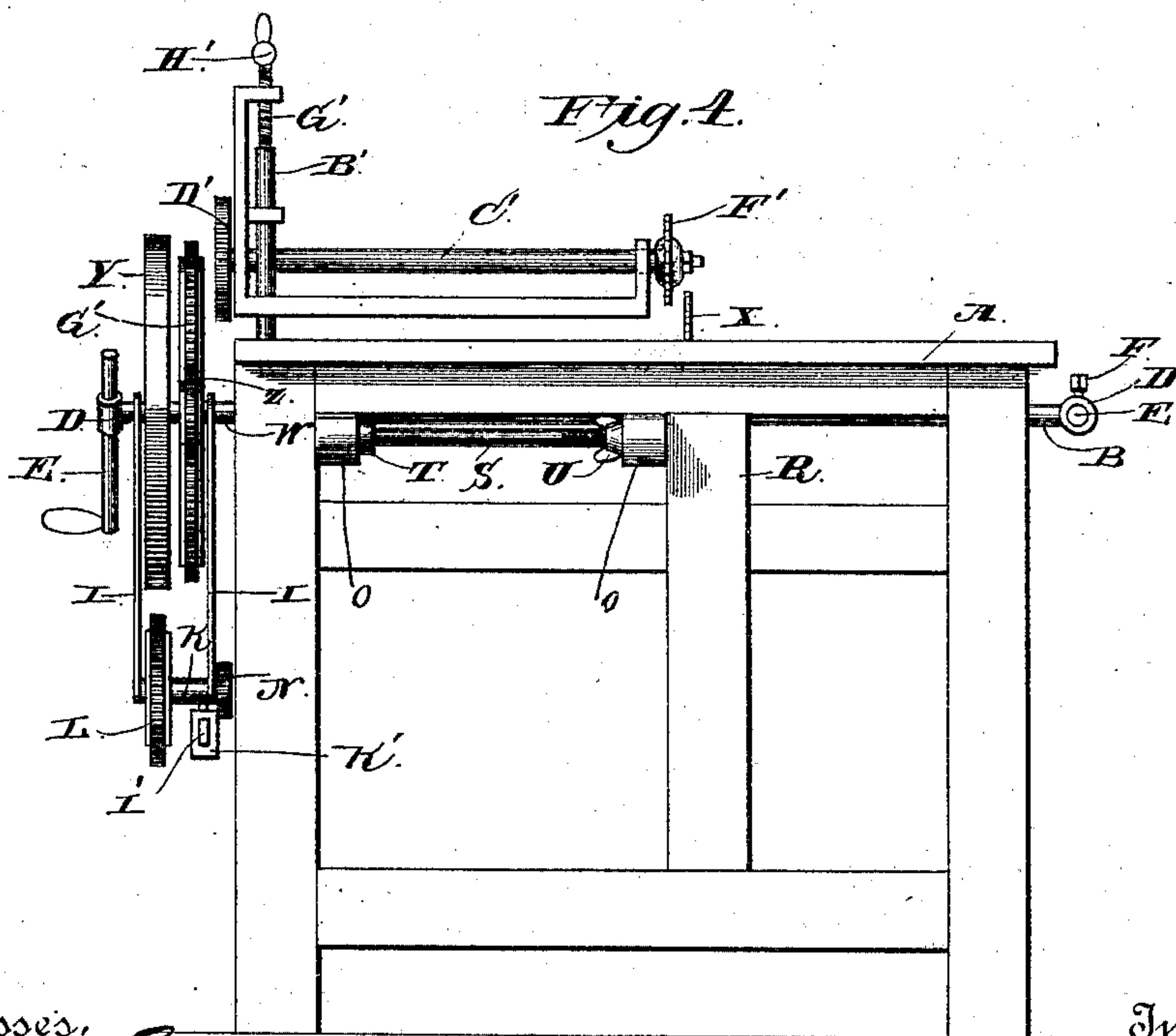
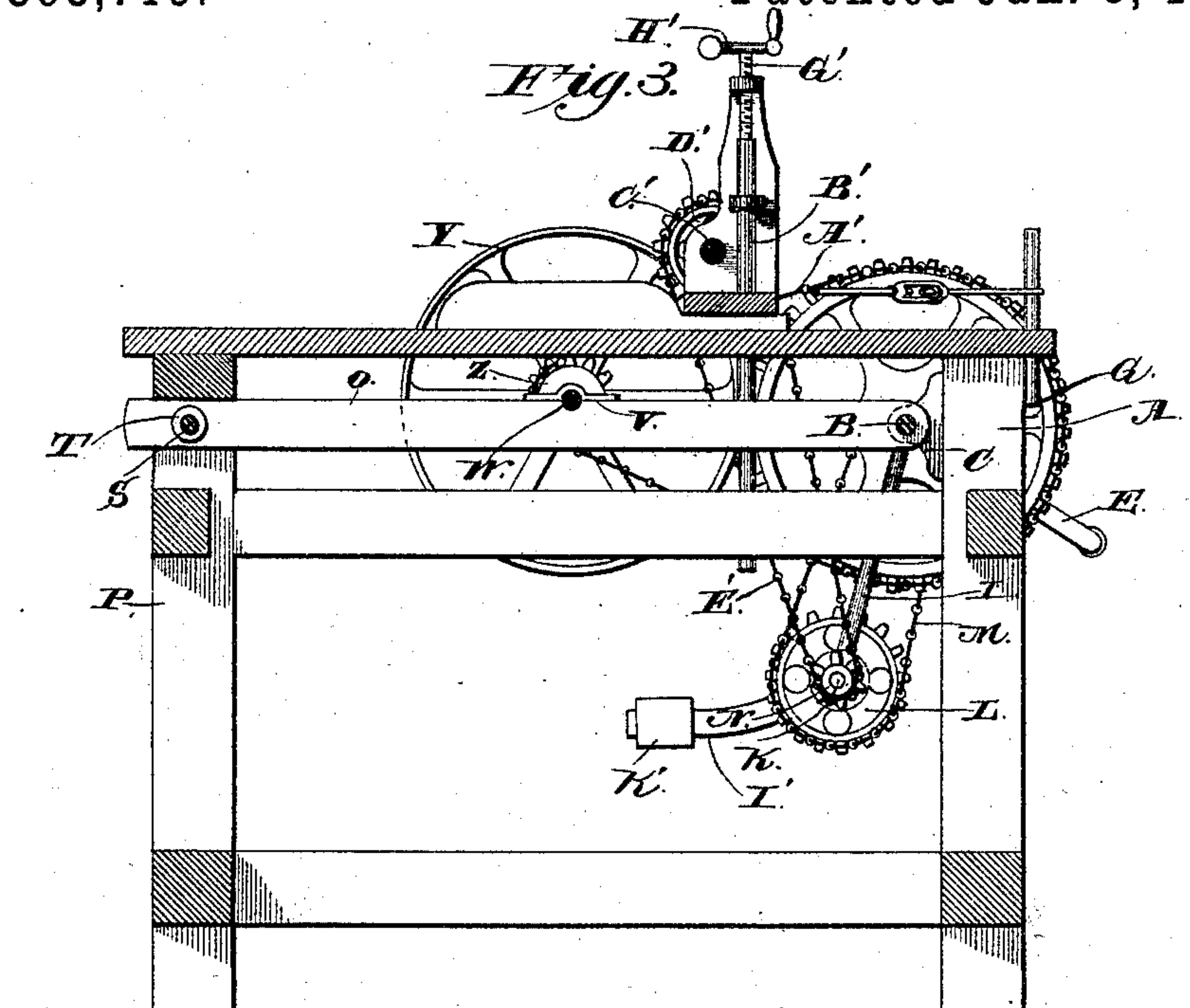
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UNITED STATES PATENT OFFICE.

EDGAR WYVILL SNEDEKER, OF JAMESBURG, NEW JERSEY.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 395,719, dated January 8, 1889.

Application filed April 25, 1888. Serial No. 271,805. (No model.)

To all whom it may concern:

Be it known that I, EDGAR WYVILL SNEDEKER, a citizen of the United States, residing at Jamesburg, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Sawing-Machines, of which the following is a specification.

My invention relates to an improvement in self-feeding rip-sawing machines; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a sawing-machine embodying my improvement. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal sectional view taken on the line xx of Fig. 2. Fig. 4 is an end elevation.

A represents a vertical rectangular table or frame of suitable size, height, and construction. B represents a driving-shaft, which is journaled in suitable bearings, C, at one end of the same, near the upper side thereof. The said shaft extends entirely across the same, and its ends project beyond the side of the frame and are provided with transverse sockets D, in which are inserted adjustable crank-arms E, the latter being secured in the sockets at any desired adjustment by means of set-screws F, with which the sockets are provided.

On one of the projecting ends of the shaft B is keyed a large sprocket-wheel, G, and on the outer side of said wheel G is a smaller sprocket-wheel, H, which is also keyed to the said shaft.

I represents a pair of parallel arms which have their upper ends pivoted or hinged on the shaft B and arranged on opposite sides of the wheels G H. Said arms I drop normally to nearly a vertical position by their own weight, and the lower ends of said arms are connected by a transverse shaft, K, which is journaled therein. To the said shaft is keyed a sprocket-wheel, L, which is in line with the wheel H, and is connected thereto by an endless sprocket-chain, M. Near the opposite end of the said shaft K is keyed a small sprocket-wheel, N. An arm I', having weight

K', is connected to shaft K and serves to keep the chain from slipping between the sprocket-wheels.

O represents a pair of parallel bars which have their front ends pivoted or hinged on the shaft B, and have their rear ends guided vertically between one of the corner-posts P of the frame and the vertical brace-post R, which is secured at a suitable distance from the said corner-post. A rod, S, connects the rear ends of the parallel bars O, has its ends socketed in the said bars, is provided near one end with a flange or collar, T, that bears against the inner side of one of the bars, and has on its opposite end an adjusting-nut, U, which engages a threaded portion of the rod. By turning this adjusting-nut the rear ends of the parallel bars may be compressed firmly against the corner-post P and the brace or guide post R, so as to secure the outer ends of the parallel bars at any desired vertical adjustment, as will be very readily understood. The said parallel bars and the connecting-bolt S constitute a saw-frame which is adapted to be raised or lowered, as before stated. On the upper sides of the bars O, near their central portion, are secured bearing-blocks V, in which is journaled a transverse saw-arbor, W, to the inner end of which is secured a circular rip-saw, X, of suitable diameter. To the extreme outer end of the saw-arbor is secured a fly-wheel, Y, and at a suitable distance from the inner end of the fly-wheel, and in line with the wheel G, is a small sprocket-wheel, Z, which is keyed to the saw-arbor and is connected to the wheel G by means of an endless sprocket-chain, A'.

B' represents a vertical standard, which is secured on one side of the frame A, and extends above the same. On the said standard is secured a vertically-movable bearing, in which is journaled a short transverse shaft, C'. To the outer end of the said shaft is keyed a sprocket-wheel, D', of suitable diameter, which is connected to the wheel N by means of an endless sprocket-chain, E', and to the inner end of the said shaft is keyed a feeding-wheel, F'.

In the upper end of the bearing is a threaded bearing, in which is secured a vertical adjusting-screw, G', which is provided at

its upper end with a crank or hand wheel, H', by means of which it may be rotated. The lower end of this adjusting-screw bears upon the upper side of the standard B', and thereby said shaft may be lowered by turning the said screw so as to cause the feed-wheel to engage the upper side of a board of any thickness that is being ripped by the machine, so as to feed the same to the saw.

It will be understood that when the shaft C' is raised and lowered the shaft K, journaled in the lower end of the pivoted arms I, will be also raised and lowered, so as to maintain the sprocket-chain E' at all times at the necessary tension to convey motion from the shaft K to the said feed-shaft C'. The saw-frame or bars O are adapted to be raised and lowered, as before stated, to enable the saw to be used on boards of any thickness. Inasmuch as the said frame or bars are pivoted on the driving-shaft B, the saw-arbor travels in a path which is concentric with the shaft B, and thereby the endless sprocket-chain A', which is employed to convey motion from the shaft B to the saw-arbor, will be kept at all times at the requisite tension. By thus connecting the driving, feed, and saw shafts by sprocket chains and wheels the friction is reduced to the minimum and there is no lost motion in any portion of the machine, and the machine is rendered much easier to operate than if the said shafts were connected together by ordinary pulleys and endless belts.

Having thus described my invention, I claim—

1. The combination of the frame having the vertical standard B', the driving-shaft journaled in the frame, the saw-frame hinged on said shaft, the saw-arbor journaled in said frame and having the wheel connected to a wheel on the driving-shaft, for the purpose set forth, the swinging frame I, pivoted to the driving-shaft, the shaft K, journaled in said swinging frame, the wheels and endless chain connecting said shaft to the main shaft, the vertically-movable frame guided on standard B', the shaft C', journaled in said frame and having the feed-wheel, and the wheels and endless chain connecting said shaft C' with the shaft K, substantially as described.

2. The combination, in a sawing-machine, of the frame A, having the posts or guides P R, the driving-shaft journaled in the said frame, the wheel G on said shaft, the parallel bars O, having one end pivoted to the driving-shaft and having their free ends arranged between the guide-posts P R, clamping device to secure the free ends of the said bars to the said posts at any desired vertical adjustment, the saw-arbor journaled in bearings on the bars O and having the wheel Z, and the endless chain connecting the wheels Z and G, substantially as described.

3. The combination, in a sawing-machine, of the driving-shaft having the wheel H, the swinging frame or arm I, pivoted to the said shaft and having the shaft K, provided with the wheels L N, the sprocket-chain connecting the wheels H L, the vertically-movable shaft C', having the feed-wheel, for the purpose set forth, and the wheel D', and the sprocket-chain connecting the wheel D' to the wheel N, substantially as described.

4. In a sawing-machine, the driving-shaft having the wheel H, the swinging frame or arm I, pivotally hung therefrom and having the shaft K, provided with the wheels L N, the sprocket-chain connecting the wheels H L, the adjustable shaft C', having the wheel D', the sprocket-chain connecting the wheel D' to the wheel N, and the weighted arm I' for the frame I, as set forth.

5. In a sawing-machine, the combination of the shaft W, having the saw X, the driving or main shaft having the wheels G H, the sprocket-wheel Z on shaft W, the chain connecting wheels G Z, the swinging frame I, having the sprocket-wheels L N, the chain connecting the wheels H L, the shaft C', having the sprocket D', and the chain connecting the sprocket-wheel N to the sprocket-wheel D', as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EDGAR WYVILL SNEDEKER.

Witnesses:

W. C. CROSBY,
A. B. CROSBY.