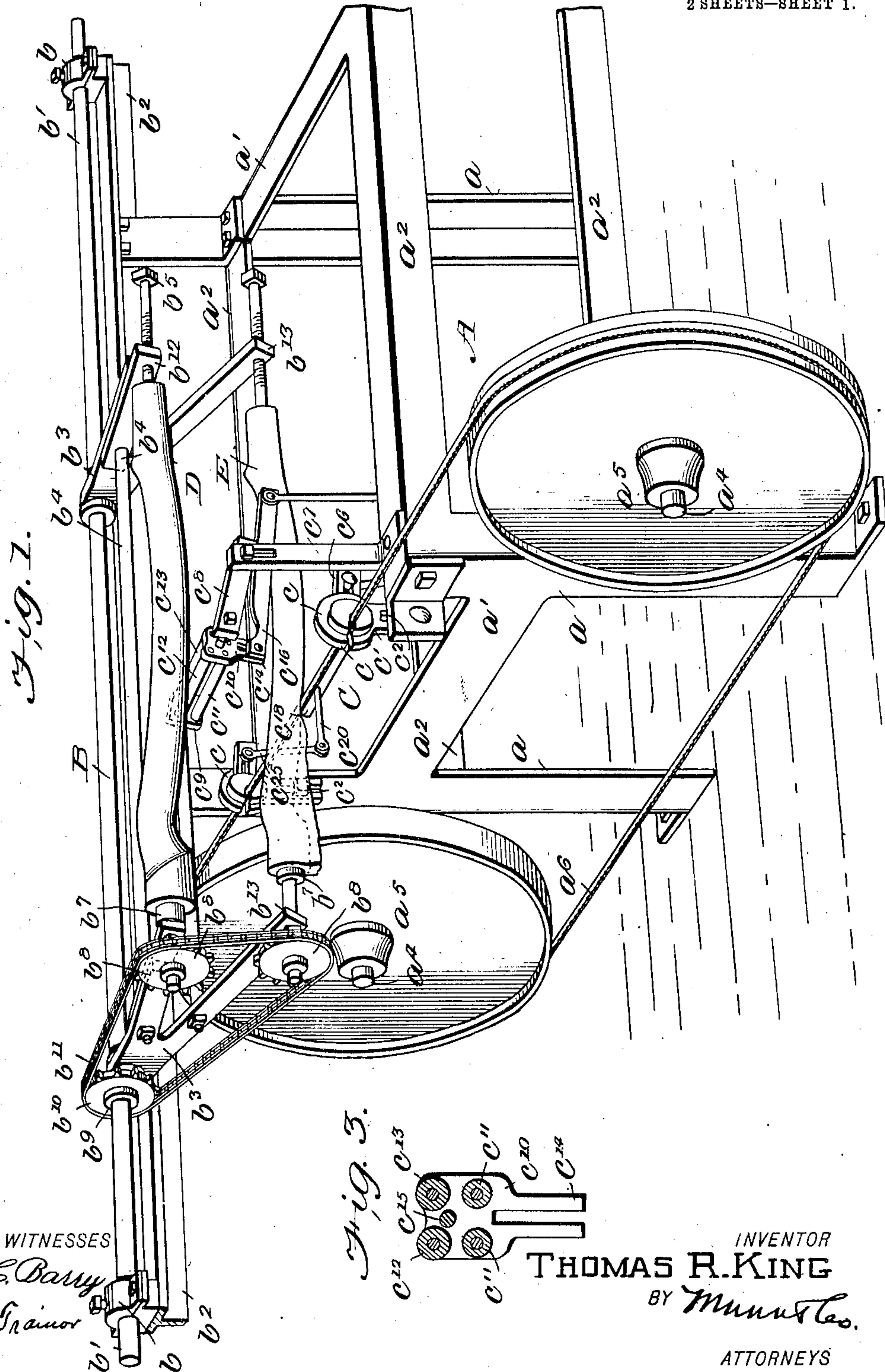


No. 860,486.

PATENTED JULY 16, 1907.

T. R. KING.  
SAWING MACHINE.  
APPLICATION FILED OCT. 30, 1906.

2 SHEETS—SHEET 1.



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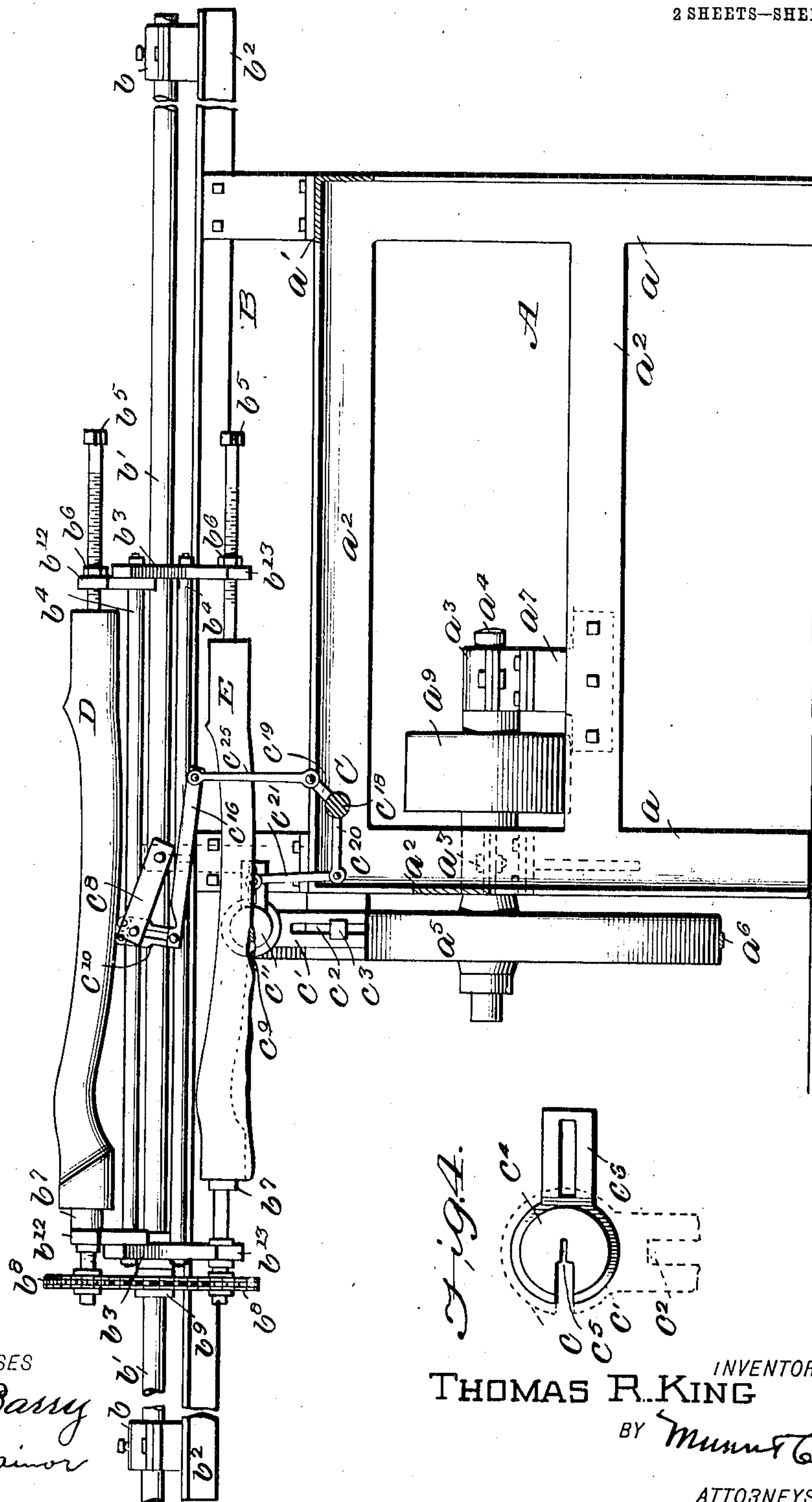
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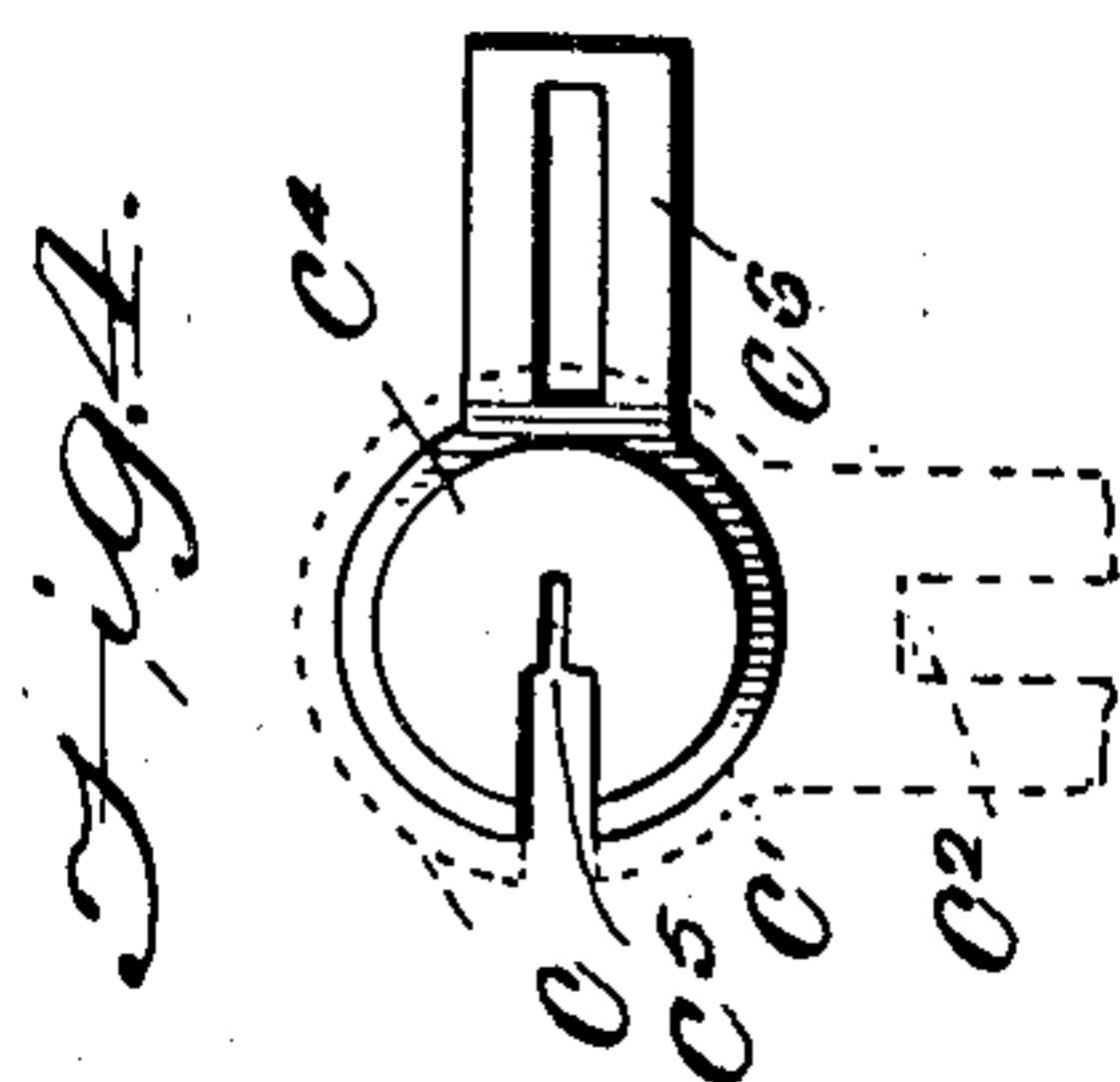
2 SHEETS—SHEET 2.

*Fig. 2.*



WITNESSES

*J. C. Barry*  
*C. E. Trainor*



THOMAS R. KING

BY *Munn & Co.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

THOMAS R. KING, OF HOPE, ARKANSAS.

## SAWING-MACHINE.

No. 860,486.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed October 30, 1906. Serial No. 341,306.

*To all whom it may concern:*

Be it known that I, THOMAS R. KING, a citizen of the United States, and a resident of Hope, in the county of Hempstead and State of Arkansas, have invented  
5 an Improvement in Sawing-Machines, of which the following is a specification.

My invention is an improvement in machines for sawing irregular forms, and consists in certain novel constructions and combinations of parts hereinafter  
10 described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of my invention. Fig. 2 is a central longitudinal section thereof. Fig. 3 is a detail view of one of the plates of the rocking frame;  
15 and Fig. 4 is a detail of one of the twisting blocks.

In the present embodiment of my invention, a frame A is provided, comprising the uprights *a* connected by the cross-bars *a'*, and the longitudinal bars *a''*. Brackets *a'* are secured to each of the lower longitudinal bars on  
20 the outer side thereof near the front of the frame, and bearings *a''* are provided in the brackets and on the adjacent upright, in which are journaled shafts *a'''*, the shafts being arranged longitudinally of the machine upon each side thereof, and provided with pulleys *a''''*,  
25 upon which is supported a band saw *a''''''*. A pulley *a''''''* is secured to one of the shafts *a'''* and may be driven from any suitable source of power.

A pattern and work support B is arranged upon the frame, the said support comprising a plurality of yokes *b''*, spaced apart from each other, and connected by  
30 bolts *b'''*, the body portion of the yokes being journaled upon a shaft *b''''* journaled in bearings *b''''''* on a beam *b''''''* arranged longitudinally of the frame, and the arms *b''''''*, *b''''''* of the one yoke are parallel with the arms *b''''''*, *b''''''* of the other yoke.  
35

The yokes are slidable upon the shaft *b''''*, and it will be evident from the construction that the support B is movable transversely of the direction of motion of the saw. The arms *b''''''*, *b''''''* of one of the yokes have  
40 journaled in the free end thereof chucks *b''''''*, provided with sprocket wheels *b''''''* outside of the support, and the yoke *b''''''* provided with the chucks has the bearing in the body portion thereof extended to form a sleeve *b''''''*, upon which is journaled another sprocket wheel *b''''''*, the  
45 sprocket wheels being connected with each other by a chain *b''''''*. All of the sprocket wheels *b''''''*, *b''''''*, are of equal size, and it will be evident that when one of said sprocket wheels is rotated, the other sprocket wheels must necessarily rotate an equal distance.

The arms *b''''''*, *b''''''* of the yoke at the opposite end of the frame, have threaded therethrough bolts *b''''''*, the inner ends of the bolts being pointed, and lock nuts *b''''''* are provided for locking the bolts. The pattern D is supported between the chuck and the bolt of the arms  
50 *b''''''*, and the work E is supported between the chuck and the bolt of the arms *b''''''*, and it will be understood

that by the above construction, the pattern and the work are always retained in the same relative position with respect to each other.

Means C are provided for twisting the saw upon an  
60 axis parallel with the cutting edge thereof, said means comprising circular bearings *c''*, the body portion *c''''* thereof being slotted as at *c''''*, and secured to the frame by the set screw *c''''*. Cylindrical blocks *c''''* are journaled in the bearings, the said blocks being provided with  
65 radial slots *c''''* for receiving the saw, and with radial arms *c''''* projecting from the blocks. The bearings are arranged upon each side of the work, and comparatively close thereto, the slots *c''''* being enlarged near the outer portions thereof, in order to permit the free passage of  
70 the teeth of the saw. The bearings C are also slotted as at *c''''*, to permit the passage of the saw when it is removed from the blocks.

A bracket *c''''* is secured to one of the longitudinal beams of the frame, and is provided with an angular  
75 portion *c''''* to which is pivotally connected a rocking frame comprising spaced plates *c''''*, *c''''*, connected together by bolts *c''''*. One of the plates *c''''* is pivotally connected with the angular portion *c''''* by a bolt *c''''*, and is provided with a slotted arm *c''''* depending there-  
80 from. Rollers *c''''*, *c''''* are journaled in the plates, the rollers being parallel with each other, and are adapted to rest against the lower face of the pattern, thus supporting the pattern and work support B. The rollers  
85 *c''''*, *c''''*, are parallel with the direction of movement of the saw, and are consequently transverse to the pattern, so that the length of the pattern passes thereover, when the support is moved upon the shaft.

A rock shaft *c''''* is journaled in the frame, behind the saw, the rock shaft being provided with an upwardly  
90 projecting arm *c''''*, and with forwardly projecting arms *c''''*. Links *c''''*, *c''''*, connect the arm *c''''* with the slotted arm *c''''* of the plate *c''''*, and links *c''''* connect the arms *c''''* with the arms *c''''* of the cylindrical blocks.

It will be evident from the description, that the  
95 movement of the rocking frame is transmitted to the twisting mechanism through the above described connection, thus constraining the saw to follow that surface of the pattern moving over the rollers.

In operation, the pattern and the work having been  
100 placed in proper position in the support, and the saw started, the support is moved from left to right, a strip being removed from the work by the saw during the said movement. The support is then returned to its original position, and the pattern is partially rotated to bring  
105 another surface in contact with the rollers of the rocking frame. The work moves in accordance with the pattern, and when the support is again moved from left to right, another strip is removed from the work. This operation may be repeated, as often as necessary, or  
110 until the entire periphery of the pattern has been brought into contact with the rollers. It will be evi-



dent that the less the amount of rotation of the pattern between each successive movement, the more nearly will the finished work correspond to the pattern.

I claim:

- 5 1. A machine for the purpose set forth comprising a framework, shafts journaled at opposite sides of the framework and parallel with each other, pulleys on the shafts, a band saw supported by the pulleys, a shaft journaled longitudinally of the framework on the top thereof,
- 10 a frame supported by the shaft and movable longitudinally thereon, said frame comprising spaced yokes having their body portions journaled on the shaft, the arms of the one yoke being parallel with the arms of the other yoke, rods for securing the yokes together, chucks journaled in the
- 15 ends of the arms of one yoke and provided with the sprocket wheels, a sprocket wheel journaled loosely on the body portion of the yoke, a chain connecting the sprocket wheels together, bolts having pointed ends threaded through the arms of the other yokes, and cooperating
- 20 with the chucks to support the work and a pattern, a bracket on the framework adjacent to the saw, a rocking frame comprising a plate pivoted to the bracket, said plate having a slotted arm, a second plate spaced apart from the first plate, bolts connecting the plates, and a pair
- 25 of parallel rollers journaled in the plates, said rollers being arranged transversely of the pattern and adapted to support the same, circular bearings on each side of the work and adjustable vertically on the frame, cylindrical blocks having slotted arms journaled in the bearings, said
- 30 blocks having radial slots for receiving a run of the saw, a rock shaft on the frame, said shafts having arms projecting toward the circular bearings, and an upwardly projecting arm, links connecting the arms with the arms of the blocks, and a link connecting the slotted arm of the
- 35 plate with the upwardly projecting arm of the rock shaft, whereby movement of the rocking frame is imparted to the blocks.

2. A machine for the purpose set forth, comprising a framework, a flexible saw supported for movement trans-
- 40 versely of the framework, a shaft journaled longitudinally of the framework on the top thereof, a frame supported by the shaft and movable longitudinally thereof, said frame comprising spaced yokes having their body portions journaled on the shaft, the arms of the one yoke be-
- 45 ing parallel with the arms of the other yoke, rods for se-

curing the yokes together, chucks journaled in the ends of the arms of one yoke and provided with sprocket wheels, a sprocket wheel journaled loosely on the body portion of the yoke, a chain connecting the sprocket wheels together, bolts having pointed ends threaded through the arms of the other yoke and cooperating with the chucks to support the work and a pattern, respectively, cylindrical blocks rotatably mounted on each side of the work, said blocks having radial slots for receiving a run of the saw, a rocking frame below the pattern, said frame having rollers journaled therein transversely of the pattern, and upon which the pattern rests, and a connection between the rocking frame and the blocks, whereby the movement of the frame is imparted to the blocks.

3. A machine for the purpose set forth, comprising a flexible saw, a shaft arranged transversely of the direction of movement of the saw, a frame supported by the shaft and movable longitudinally thereof, said frame comprising spaced yokes having their body portions journaled on the shaft, the arms of the one yoke being parallel with the arms of the other yoke, a pattern, means for rotatably supporting the pattern and the work between the arms of the yokes, means in connection with the support for causing the pattern and the work to rotate in unison, a rocking frame provided with the rollers upon which the pattern rests, said rollers being transverse to the pattern, twisters comprising cylindrical blocks having radial slots to receive the saw, and a connection between the rocking frame and the blocks, whereby the movement of the frame is imparted to the twisters.

4. A machine for the purpose set forth, comprising a flexible saw, a shaft arranged transversely of the direction of movement of the saw, a frame supported by the shaft movable longitudinally thereof, means in connection with the frame for supporting a pattern and the work in a fixed relative position with respect to each other, a rocking frame provided with a plurality of rollers upon which the pattern rests, said rollers being transverse to the movement of the pattern, twisters comprising cylindrical blocks having radial slots to receive the saw, and a connection between the rocking frame and the blocks whereby the movement of the frame is imparted to the twisters.

THOMAS R. KING.

Witnesses:

J. F. GORIN,  
E. ROSE.