

No. 629,516.

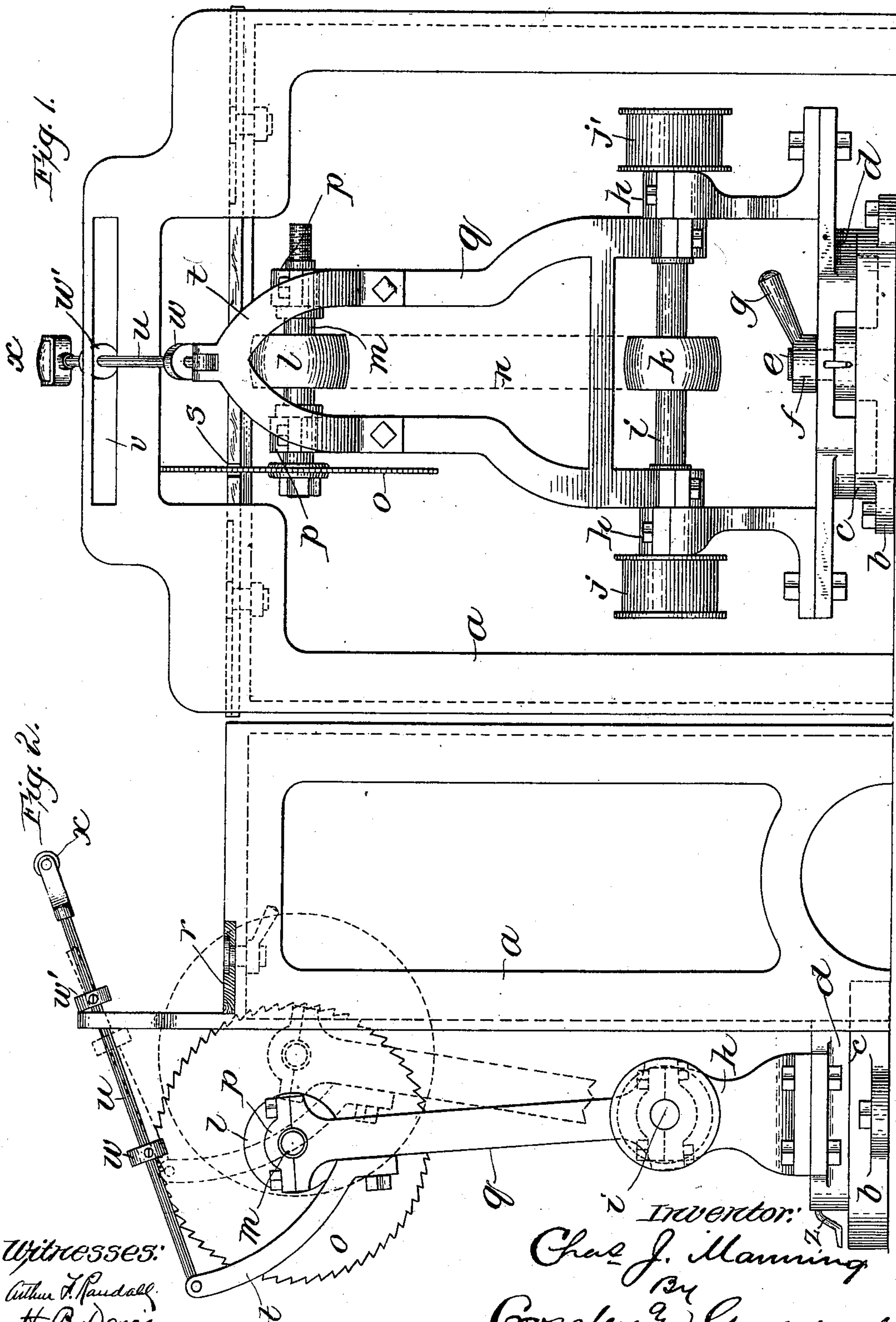
Patented July 25, 1899.

C. J. MANNING.
SAWING MACHINE.

(Application filed June 8, 1898.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:
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Inventor:
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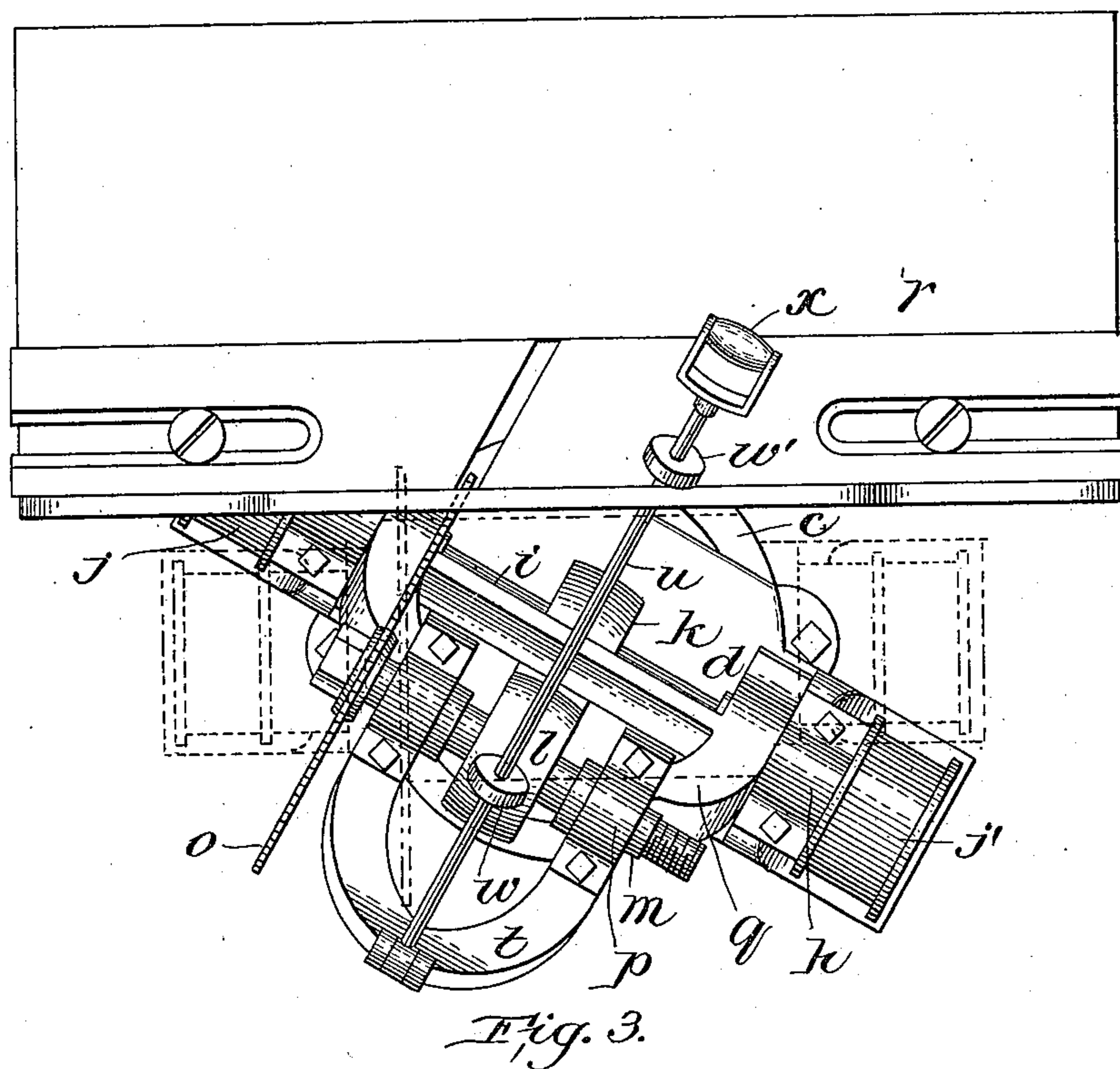
Patented July 25, 1899.

C. J. MANNING.
SAWING MACHINE.

(Application filed June 6, 1898.)

(No Model.)

3 Sheets—Sheet 2.



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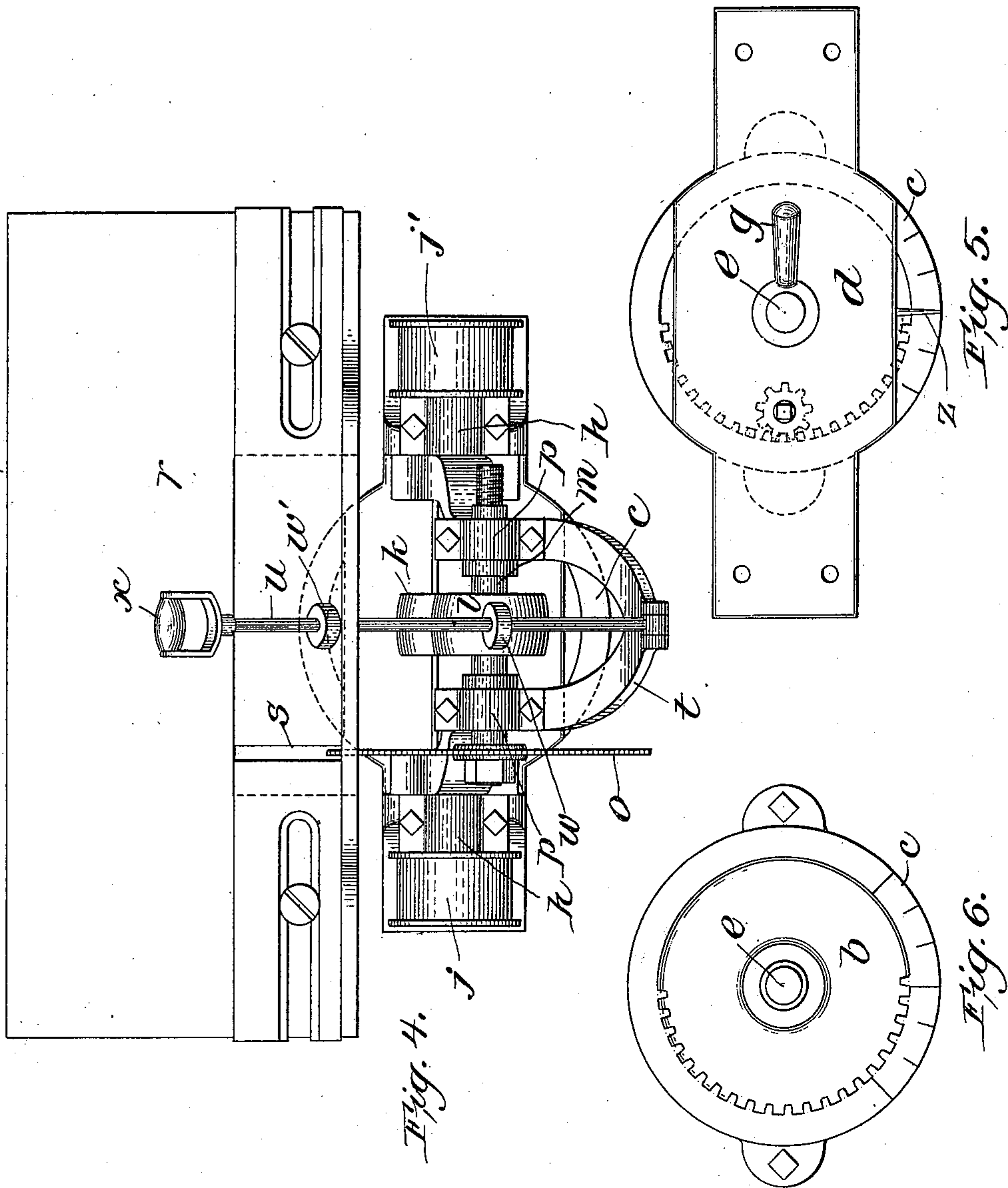
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UNITED STATES PATENT OFFICE.

CHARLES J. MANNING, OF CAMBRIDGE, MASSACHUSETTS.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 629,516, dated July 25, 1899.

Application filed June 6, 1898. Serial No. 682,648. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. MANNING, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Sawing-Machines, of which the following is a description sufficiently full, clear, and exact to enable those skilled in the art to which it appertains, or with which it is most nearly connected, to
10 make and use the same.

This invention has relation particularly to that kind of sawing-machines that are used in sawing moldings and other lumber for "inside finishing" and for other purposes.

15 It is the special object of the invention to provide a machine of simple construction and efficient organization whereby straight and angular or bevel sawing may be done with absolute exactness and with the greatest
20 readiness and ease.

To these ends the invention consists of a sawing-machine embodying in its construction a bed, an oscillatory bolster adapted to move on the bed and to be secured thereto, a
25 swinging saw-carrying frame supported by the bolster, and a stock-supporting bed or table arranged on a plane coincident with that of the saw, it being understood that the foregoing-recited means carry with them suitable
30 mechanism for operating the parts which are designed to be actuated.

The invention also consists of improvements in sawing-machines incidental to the foregoing, all as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features,
40 as the case may be, wherever they occur.

Of the drawings, Figure 1 is a front elevation of my improved sawing-machine complete, showing the bolster and saw-carrying frame adjusted to straight sawing. Fig. 2 is
45 an end view of the machine shown in Fig. 1. Fig. 3 is a plan view of the machine shown in Figs. 1 and 2, but representing by full lines the sawing means as adjusted so as to saw angular or bevel work, which is the principal
50 object of the present invention. Fig. 4 is a plan view of Fig. 1 and its adjustments. Fig. 5 is a plan view of the bed of the machine

with the bolster thereon. Fig. 6 is a plan view of the bed of the machine with the bolster removed.

In the drawings, *a* designates the frame of the machine.

b is the bed-plate, adapted to be secured to the floor of the factory or other suitable means of support. The said bed *b* is provided on its
60 upper face with a circular bearing *c* for the bolster *d*, which is adapted to rest thereon and to be oscillated around a king-bolt *e*, connected with the bed *b* and extending up therefrom and provided on its upper end with a screw-
65 thread, so as to receive a nut *f*, with which a handle *g* may be connected, so that the bolster may be turned on the bed around the king-bolt to any desired extent and then clamped
70 upon the bed by means of the nut *f*, as will be readily understood without further description.

h designates bearings secured to the bolster *d*, in which bearings the main driving-shaft *i* is journaled. The said driving-shaft may
75 be connected or belted to a counter-shaft, (not shown,) the belts from the pulleys on which counter-shaft pass about the pulleys *j j'* on the said shaft *i*. The shaft *i* is provided at a central point with a pulley *k*, about
80 which and a pulley *l* on the saw-carrying shaft *m* a belt *n* (see dotted lines in Fig. 2) is adapted to be passed, so that as the shaft *i* is rotated motion may be imparted to the saw-carrying shaft *m* and so operate the saw *o*,
85 which is supported on the shaft *m*, the latter being journaled in bearings *p* in the upper end of a frame *q*, and the saw *o* may be carried nearer to or farther from the stock-supporting bed or table *r*. The said bed or ta-
90 ble *r* is provided with a throat *s*, in which the saw operates when sawing stock placed upon the said bed. The forward part of the bed or table *r* is made removable and adjustable by means of the slots and screws formed in
95 the boards comprising said part of the bed, so that in forming the angle the throat may be provided for the operation of the saw.

t designates an extension of the frame *q*, which extension projects upwardly and out-
100 wardly from the top of the frame *q*, and to the upper end of said extension *t* there is pivoted the outer end of a handle-rod *u*, which extends through a slot *v*, formed in the up-

ward extension of the table *r*, against which the rearward edge or side of the stock is pressed when being operated upon by the saw.

The handle-rod *u* is provided with adjustable collars *w w'* and a handle *x*, so that the operator of the machine may by taking hold of the handle move or pull the saw forward until stopped by the collar *w* and then upon releasing it may move it back or allow it to drop back by its own gravity until stopped by the adjustable collar *w'*. In this manner the saw and its carrying-frame may be moved to and fro to a predetermined extent, depending upon the width or other form of the material being operated upon.

As represented in Figs. 5 and 6, the upper face of the ring *c* on the frame has a scale inscribed thereon, and an index or finger *z*, projecting outward from the bolster, points to the scale inscribed on the bed, and so affords facility for adjusting the bolster in any desired position upon the bed to secure the exact angle or bevel which it may be required to saw in the material or so as to set the bolster in order that the saw may run straight.

It is to be noted that instead of providing the handle-rod *u* for swinging the saw-carrying frame to and fro the operator might take hold of said frame itself and move it to and fro, so that the handle-rod may be dispensed with.

In case the saw is set to operate upon stock on the bed at the angle represented in full lines in Fig. 3 the belt from the counter-shaft will pass about the pulley *j*, and in case the saw is set to a different angle—for example, opposite to that shown by full lines in Fig. 3—the machine will be belted over the pulley *j'*. In this connection also it is to be noted that when the machine is belted on the pulley *j* the saw will be adjusted on the shaft *m* at the side of the machine corresponding to that on which the said pulley *j* is secured, and when the machine is set in the position shown in dotted lines in said Fig. 3 and is belted upon the pulley *j'* the saw will be secured to the opposite end of the shaft *m*.

By the improvements and organization described herein in detail I am enabled to provide an efficient, inexpensive, and convenient sawing-machine for sawing stock on either straight or different angles, such sawing or cutting of material being required in working up stock for inside finishing, &c.

In carrying out my invention I have also had in view economy and simplicity of construction so embodied as that the saving at one point shall not have been made by drawing upon the efficiency of another. In sawing up stock such as my machine is designed to be employed upon a large number of pieces or parts are first sawed at a single angle with the saw clamped firmly, so that it shall not vary in the slightest degree from that angle, and then after all of the stock is worked up that is intended to be sawed at the first-

mentioned particular angle the machine is adjusted so as to saw the stock at another end or point at another and different angle.

In adjusting the sawing means to different angles I find it best for the workman to take a moment of time to go around and swing the bolster, which not only carries the driving-shaft, but the saw-carrying frame, to the proper angle and adjust the bolster on its king-bolt to such angle, holding it at the point of adjustment so firmly as that it shall not vary in the slightest degree therefrom, and, if necessary, to change the belt from one driving-pulley to the other and then to saw the stock, as before mentioned, at the newly-adjusted angle of the saw.

The changes necessary in a well-equipped factory in the adjustment of the sawing means are not frequent or not so frequent as to be of appreciable consideration; but it is essential that the sawing-frame when adjusted should be adjusted not only accurately, but firmly, and I have found it of great advantage to adjust the bolster upon the bed by means connected with the king-bolt and that the advantages gained thereby greatly exceed those constructions providing uncertain means for adjusting the swinging saw-frame or parts connected therewith, as it has been essayed to do heretofore.

In my invention I provide an absolute bed and what is an absolute bolster upon the bed, the bed carrying the king-bolt and the bolster being adapted to oscillate about the king-bolt and to be secured to the bed by means connected with the king-bolt. The bolster carries the driving-shaft and supports thereon the swinging saw-frame.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. In a sawing-machine, the combination, with the bed, the oscillatory and adjustable bolster, the swinging saw-carrying frame supported thereby, the king-bolt *e* about which the bolster is adapted to oscillate, and means connected with the king-bolt for clamping the bolster to the bed, of the stock-supporting bed or table provided at its rear edge with an upward slotted extension, the handle-rod pivoted at its rear end to the swinging saw-frame and provided on the opposite sides of the said upward extension of the table with collars adjustable longitudinally on the handle-rod to limit the extent to which the saw-carrying frame may be swung.

2. The combination, with the bed, of the swinging adjustable bolster, extending from side to side of the bed, adapted to be clamped on the latter; the king-bolt *e*, around which the bolster is adapted to oscillate; a driving-shaft extending substantially the length of the bolster and having a belt-receiving pulley at

each end, supported in the bolster; a swing-
ing saw-frame supported on the bolster; a
saw-shaft in the swinging saw-frame; and
centrally-located pulleys on the driving-shaft
5 and saw-shaft to drive the former, by means
of a belt, from the latter.

In testimony whereof I have signed my

name to this specification, in the presence of
two subscribing witnesses, this 19th day of
April, A. D. 1898.

CHARLES J. MANNING.

Witnesses:

ARTHUR W. CROSSLEY,
ANNIE J. DAILEY.