

A. D. CATLIN.  
RESAWING MACHINE.

No. 449,772.

Patented Apr. 7, 1891.

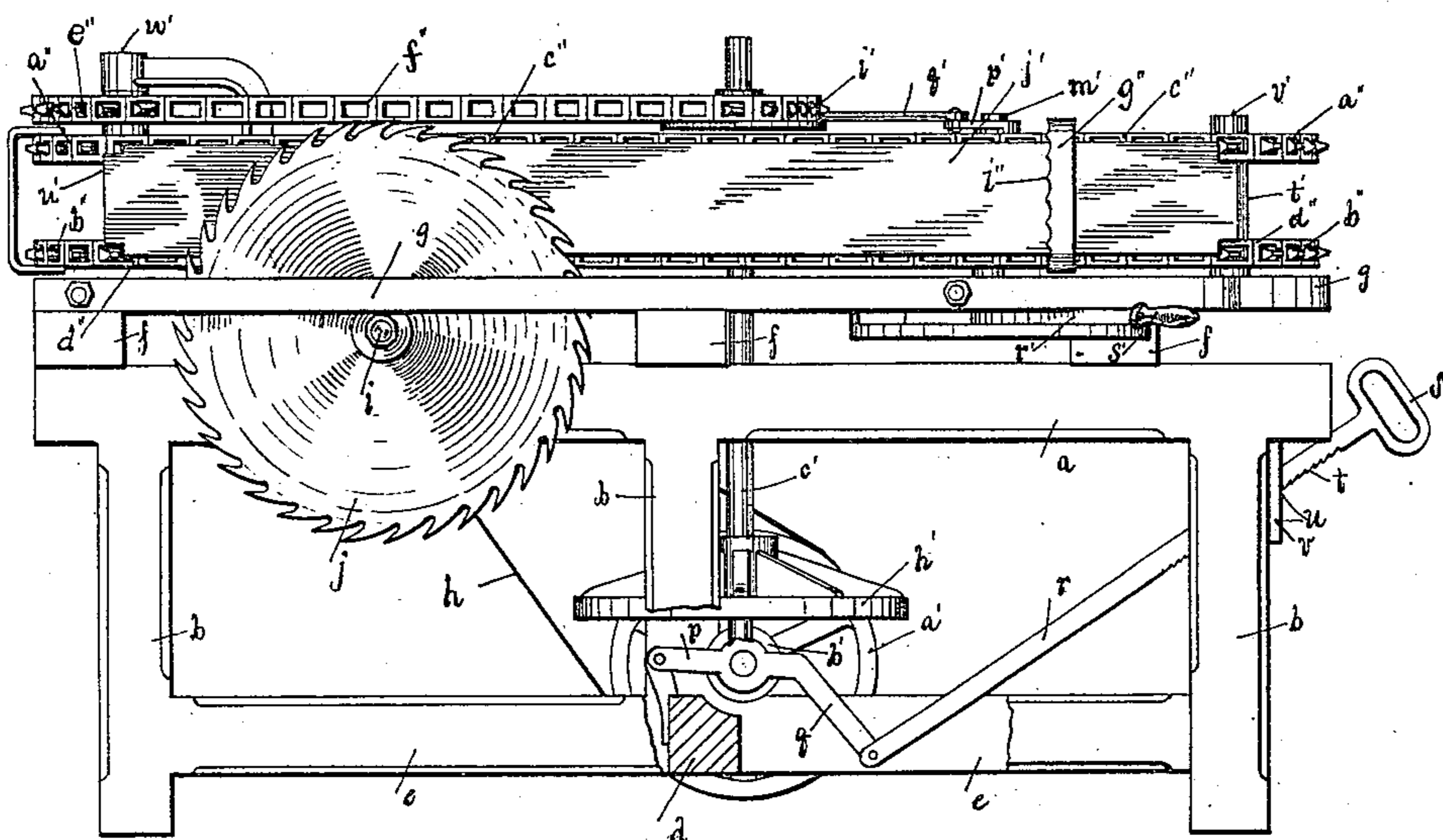


Fig. 1

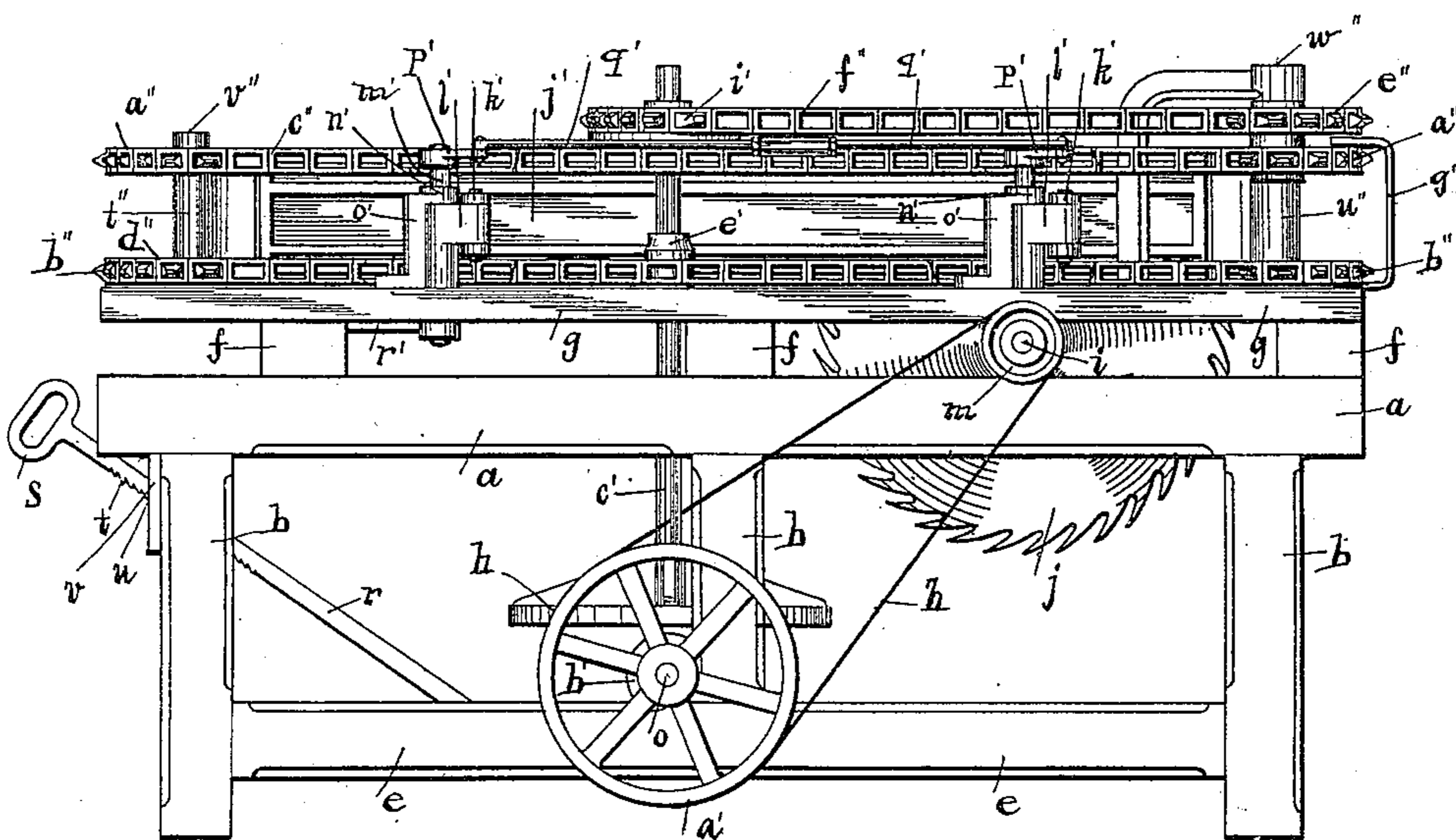


Fig. 2.

ATTEST

J. F. Mount  
J. Fred. Beckhusinger

INVENTOR.

A. D. Catlin  
By Jas. B. Thomas  
Atty.

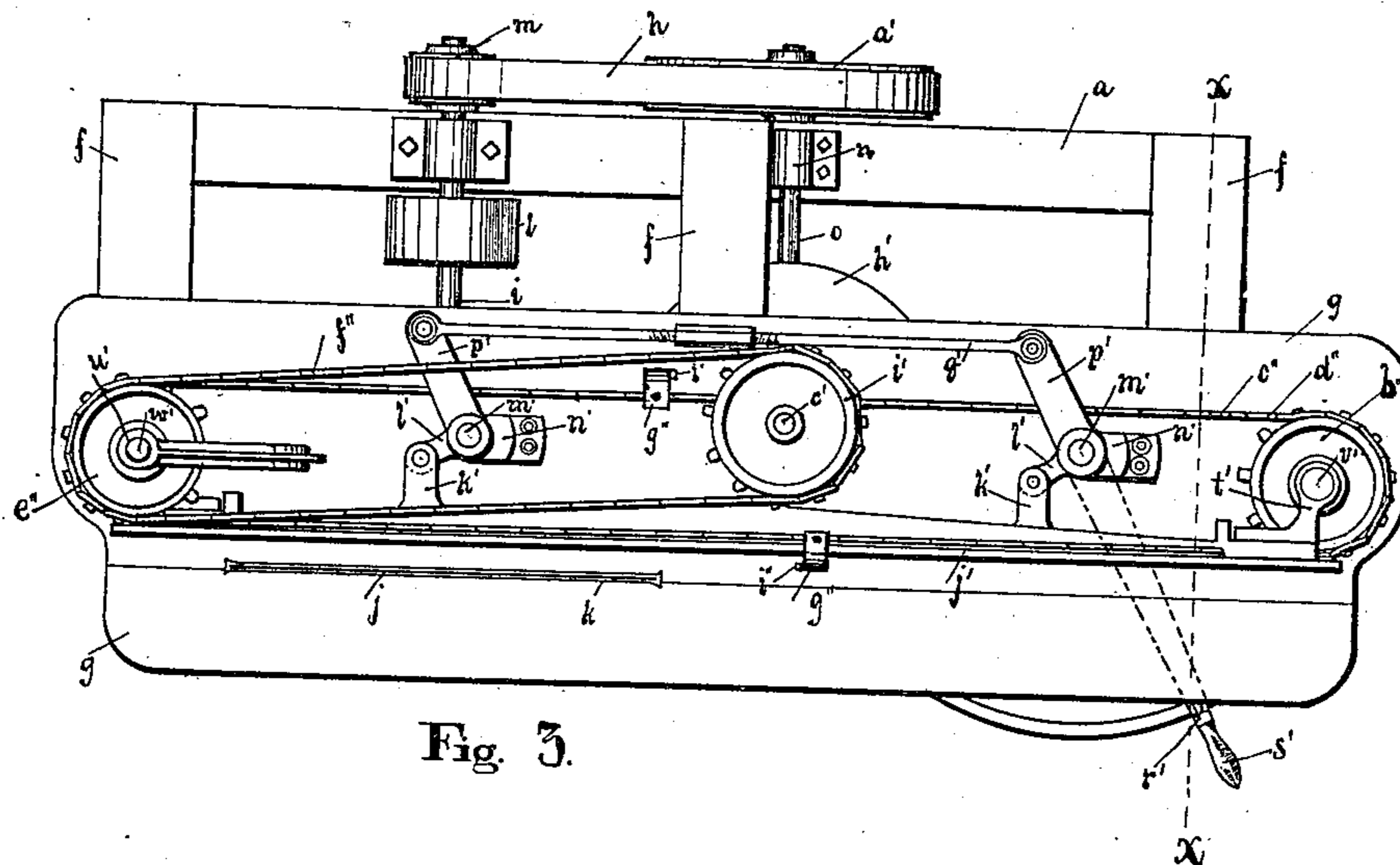
(No Model.)

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**Fig. 3.**

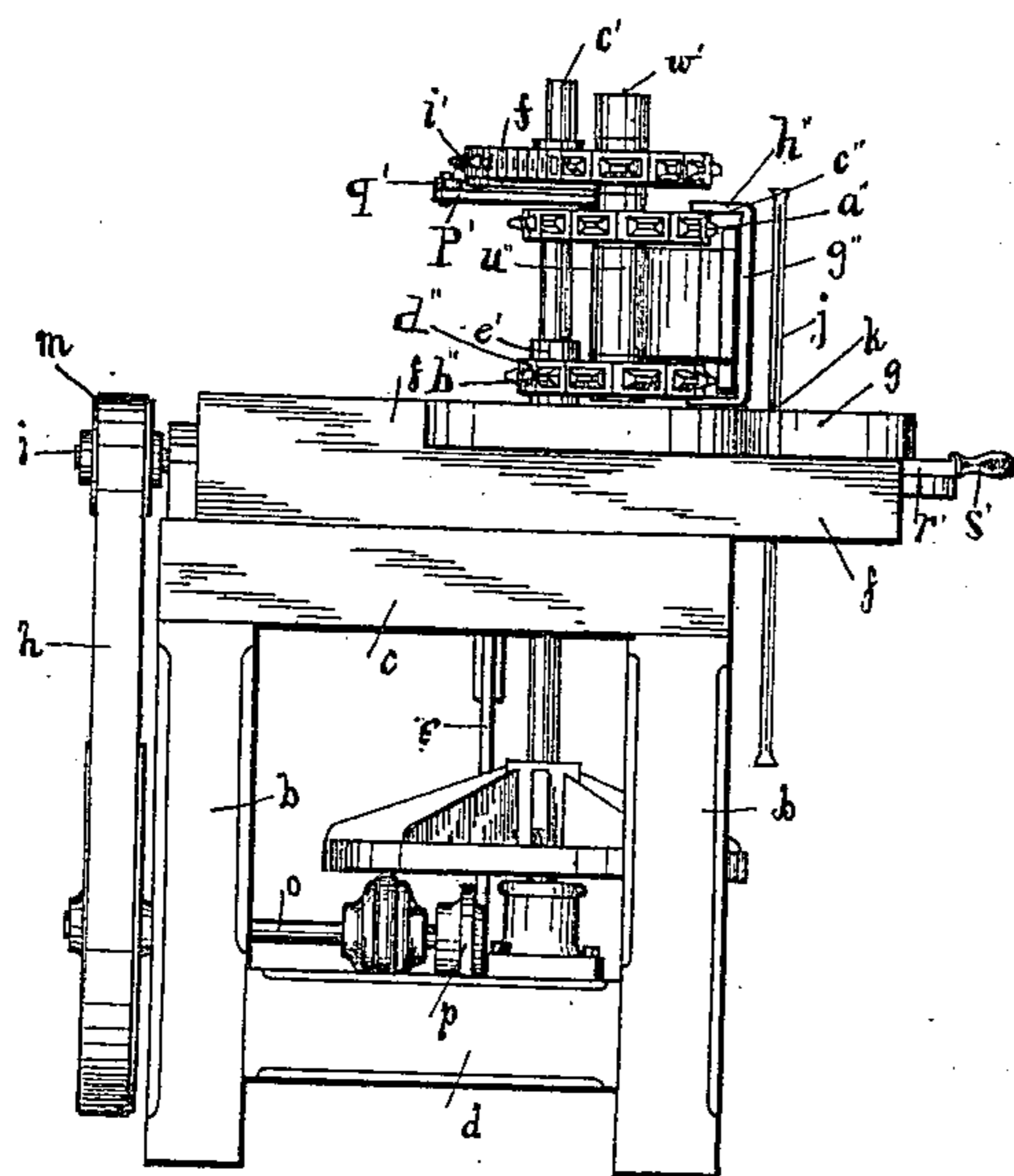
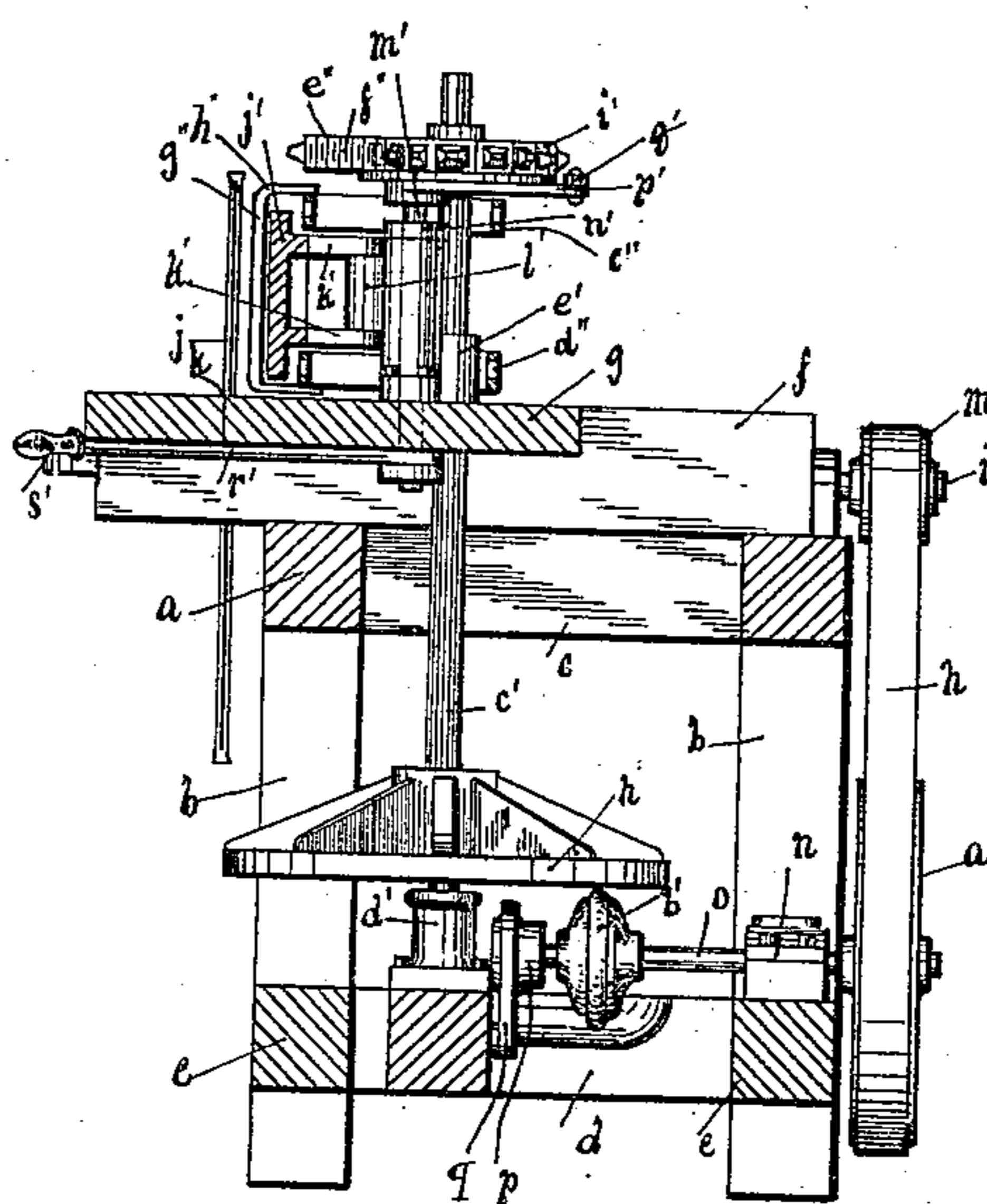


Fig. 4.



**Fig 5.**

ATTEST

J. F. Mount  
J. Fred. Beckhisinger

INVENTOR

Del. to Cathin  
 By Jas E Thomas  
 Atty.

# UNITED STATES PATENT OFFICE.

ABEL D. CATLIN, OF CHATTANOOGA, TENNESSEE, ASSIGNOR TO K. L. CATLIN  
OF SAME PLACE.

## RESAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 449,772, dated April 7, 1891.

Application filed May 17, 1890. Serial No. 352,247. (No model.)

*To all whom it may concern:*

Be it known that I, ABEL D. CATLIN, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Resawing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in circular sawing machines, and pertains more especially to improvements in that class of sawing-machines which are adapted to resawing slabs, cull-boards, &c., into box material, heading, crate material, &c., and make marketable products thereof.

The object of this invention is to provide a machine whereby the available portions of slabs and refuse of saw-mills may be cheaply and easily made useful and valuable material.

Another object of the invention is to arrange and construct a machine for resawing slabs, &c., so that the parts may be quickly and accurately adjusted for cutting pieces of different thicknesses, and so that the speed of the feeding devices may be changed without loss of time in order to resaw pieces of different widths to the best advantage, and so as to produce accurately and evenly sawed boards.

The invention consists in the combination and arrangement of the several devices and contrivances which are assembled together in the construction of the machine, and which I shall hereinafter fully explain in detail, and specifically set forth in the claims of this specification.

My improved machine is illustrated in the accompanying drawings, throughout which the same letters of reference indicate the same parts or elements.

Figure 1 represents a front side view in elevation of my improved resawing-machine, partly sectional. Fig. 2 is a rear view of the same. Fig. 3 is a plan view, and Fig. 4 is a

rear end view, of the same. Fig. 5 is a section 50 of Fig. 3, taken at  $x x$ .

$a$  represents the longitudinal bed-pieces of the frame of the machine, and  $b$  are legs which support the bed-pieces.

$c$  are upper cross-pieces, while  $d$  are lower 55 cross-pieces, and  $e$  are lower longitudinal pieces, all of which are secured by their ends to the legs  $b$  by any suitable means.

Transversely with and upon the pieces  $a$  are secured the supporting-pieces  $f$ , the front 60 ends of which extend over the front side of the bed-piece  $a$ , and upon these pieces  $f$  is secured a table  $g$ , extending from end to end of the frame.

$i$  is a saw-arbor carrying the saw  $j$  and is jour- 65 naled in suitable boxes resting upon the bed-pieces  $a$ , and is arranged with the end which carries the saw projecting over the front side of the bed-piece, and a slot  $k$  is arranged in the table to receive the saw, so that the saw 70 will project above the table to nearly one-half of its diameter, and a pulley  $l$  is mounted on the arbor for carrying a belt to impart a rotary motion thereto, and on the outer rear end of the arbor is mounted a pulley  $m$ , upon 75 which is placed a suitable belt  $h$  for driving the feed mechanism.

Upon the rear lower frame-piece  $e$  is arranged a suitable box  $n$ , in which is mounted a transverse shaft  $o$ , while the inner end of 80 the shaft, which is located near the middle of the frame, is supported by an oscillating box  $p$ , having a downwardly-extending lever  $q$ , to the lower end of which is pivoted one end of a rod  $r$ , the opposite end of the rod extending 85 to the front end of the frame, and is provided with a handle  $s$  in a convenient location to be grasped by the hand, and the rod is also provided with a series of notches  $t$ , which engage with a catch  $u$ , arranged in the guide-piece  $v$ , 90 which supports the end of the rod, and upon the outer end of the shaft  $o$  is mounted a pulley  $a'$ , over which the belt  $h$ , carried by the pulley  $m$ , is passed, and upon the inner portion of the shaft is mounted a friction- 95 wheel  $b'$ .

$c'$  is a vertical shaft with its lower end resting in a stop  $d'$ , which is supported upon the

cross-piece  $d$  in proximity to the inner end of the shaft  $c'$ , while the upper end of the shaft is supported by a box  $e'$ , secured to the table  $g$ , (or to some other convenient portion of the frame,) from which it projects upwardly.

Upon the lower portion of the shaft is mounted a friction-disk  $h'$ , arranged to engage its lower side face with the friction-wheel  $b'$  when the shaft  $o$  is elevated by the rod  $r$  for that purpose, and upon the upper end of the shaft  $c'$  is mounted a sprocket-wheel  $i'$ .

$j'$  is a vertical gage-plate extending the entire length of the table  $g$ , and is arranged with its front face on the inner side of and adjacent to the saw and with its lower edge near to the surface of the table, and  $k'$  are rigid arms projecting rearwardly from the back side of the plate, and to the outer ends of these arms are pivotally secured the outer free ends of the arms  $l'$ , which project toward the rear end of the machine from the vertical shafts  $m'$ , which are supported by the lower ends passing into or through the table or boxes supported thereon, while their upper ends are sustained in position by boxes  $n'$ , carried by columns  $o'$ , which are firmly secured to the surface of the table by their lower ends.

The shafts  $m'$  are also provided with rearwardly-projecting radial arms  $p'$ , which lie substantially at a right angle with the arms  $l'$ , and the outer free ends of the arms  $p'$  are connected to each other by the rod  $q'$ , the ends of which are pivoted thereto.

The lower end of the shaft  $m'$  near the front end of the machine projects below the table  $g$ , and upon this end is rigidly secured one end of a lever  $r'$ , and the opposite end of the lever extends to the front side of the machine and is provided with a handle  $s'$ , which projects beyond the edge of the table, so as to be easily grasped by the operator, and which being drawn toward the front end of the machine oscillates the shaft  $m'$ , to which it is secured, and through the radial arms  $p'$  and the rod  $q'$  also oscillates the other shaft  $m'$ , and the oscillation of the shaft  $m'$  in the direction stated swings the outer ends of the arms  $l'$  toward the front and moves the vertical plate toward the saw, while the rearward movement of the lever  $r$  moves the parts in the opposite direction and retreats the vertical plate from the saw.

At the ends of the vertical plate  $j'$  and projecting backwardly therefrom are arranged the supporting-boxes  $t'$  and  $u'$ , and in these boxes are journaled the vertical shafts  $v'$  and  $w'$ , and on these shafts which project beyond the boxes are mounted the upper sprocket-wheels  $a''$  and lower sprocket-wheels  $b''$ , and a link belt  $c''$  is passed over the sprockets  $a''$ , while the lower link belt  $d''$  is passed over the lower sprockets  $b''$ , and upon the upper end of the rear shaft  $w'$ , which projects above the sprockets  $a''$  thereon, is mounted a sprocket  $e''$ , over which and over the sprocket-wheel  $i'$  is passed a link belt  $f''$ .

$g''$  are vertical feed-bars extending across from the chain belt  $c''$  to the belt  $d''$ , and the end portions  $h''$  of the bars are turned at a right angle backwardly and pivotally secured to the link belts  $c''$  and  $d''$ , so that the central portion  $g''$  thereof will pass over the front surface of the vertical plate  $j'$ , the ends of which are rounded off to allow the bars to pass without catching, and the front edge of each bar is provided with a series of spurs  $i''$ , adapted to catch into the piece to be sawed.

Power being applied to revolve the saw-arbor and saw, motion is communicated therefrom to the shaft  $o$  by the belt  $h$ , and the friction-wheel  $b'$ , operating on the disk  $h'$ , imparts revolution to the vertical shaft  $c'$ , which by means of the link belt  $e''$  revolves the shaft  $w'$  and causes the link belts  $c''$  and  $d''$  to move over their sprockets and carry the vertical bars  $g''$  toward the rear over the face of the vertical gage-plate  $j'$ . The slab or board to be resawed is placed with one edge resting upon the table  $g$  and with its flat or plane surface resting against the gage-plate, and the spurs  $i''$  on the vertical bars then engage with the end of the piece and carry it toward the saw, which, cutting into the rear end, retains the piece in position until it is divided longitudinally, as intended, and then the portion on the outside of the saw drops over upon the table to be returned for another cut, while the dimension-piece sawed off is carried beyond the saw by the feeding-bar.

For changing the thickness of the pieces cut off the vertical plate, feeding-belts, and bars are moved or retreated from the saw by moving the handle  $s'$  to oscillate the shafts  $m'$  in the required direction, the arms  $p'$  being of an equal length, as also is the length of the arms  $l'$  equal to each other, so that a uniform movement is given to both ends of the vertical gage-plate, while the feeding-bars moving close to the surface of the plate allow quite thin pieces to be cut off. I do not, however, limit my invention altogether to the use of a circular saw for cutting the stock, as a common form of band-saw may as easily be used in the place of the circular saw, and the effect of the operation of the parts will be the same.

Having described my improvement, what I claim as my invention is—

1. In a resawing-machine, the combination of a frame carrying a table, the saw-arbor journaled on the frame and carrying a saw with its upper portion projecting through the table, a vertical gage-plate beside the saw and above the table, and means, substantially as described, for moving the gage-plate to and from the saw, the vertical shafts in rear of the feed-plate and mounted in boxes secured to the ends of the feed-plate and carrying the upper and lower sprockets, the upper and lower endless feeding-chains mounted on the said sprockets and in rear of the said gage-plate, with the vertical feed-bars for moving over the face of the gage-plate and having their upper and

lower ends bent backward and secured to the upper and lower chains, and devices for moving the chains and feed-bars, substantially as set forth.

- 5 2. In a resawing-machine, the combination, with a frame carrying a table, a saw-arbor mounted on the frame and carrying a saw projecting through the table, the vertical shafts  $m'$ , supported in boxes above the table and provided with the arms  $l'$ , and the radial  
10 arms  $p'$ , coupled together by the rod  $q'$ , a lever for oscillating the shafts, a vertical gage-plate above the table and provided with backwardly-projecting arms pivoted to the outer  
15 ends of the arms, of the vertical shafts  $v'$  and  $w'$ , journaled in boxes upon the end portions

of the said gage-plate and carrying the upper sprockets  $a''$  and the lower sprockets  $b''$ , the link belt  $c''$  on the sprockets  $a''$  and the link belt  $d''$  on the sprockets  $b''$ , the vertical  
20 feed-bars  $g''$ , having their end portions bent backwardly and secured to the upper and lower link belts, and mechanism for imparting a rotary motion to the said shafts  $v'$  and  $w'$ ,  
25 substantially as set forth.

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

ABEL D. CATLIN.

Witnesses:

LANE LYLE,  
J. P. HOSKINS.