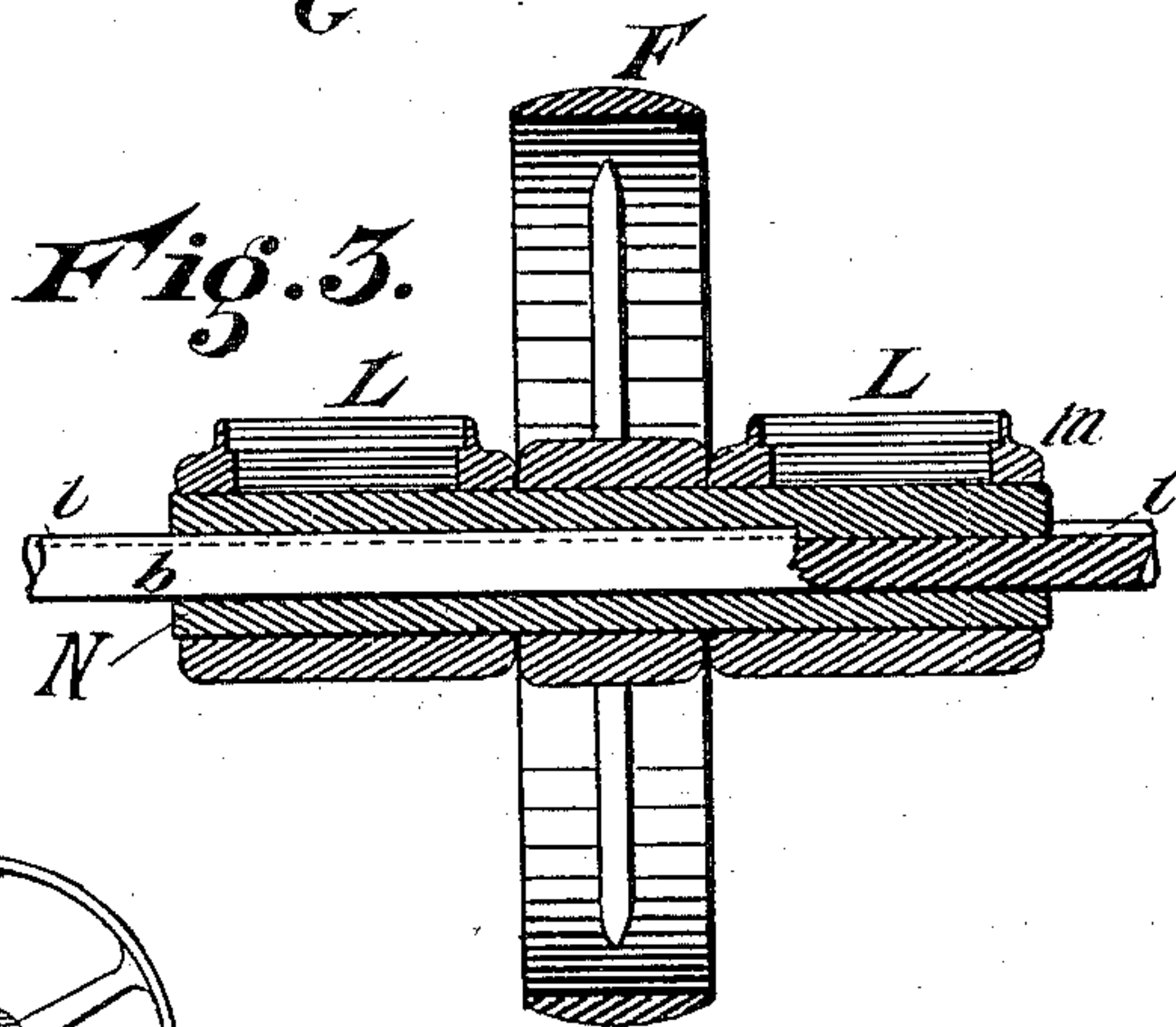
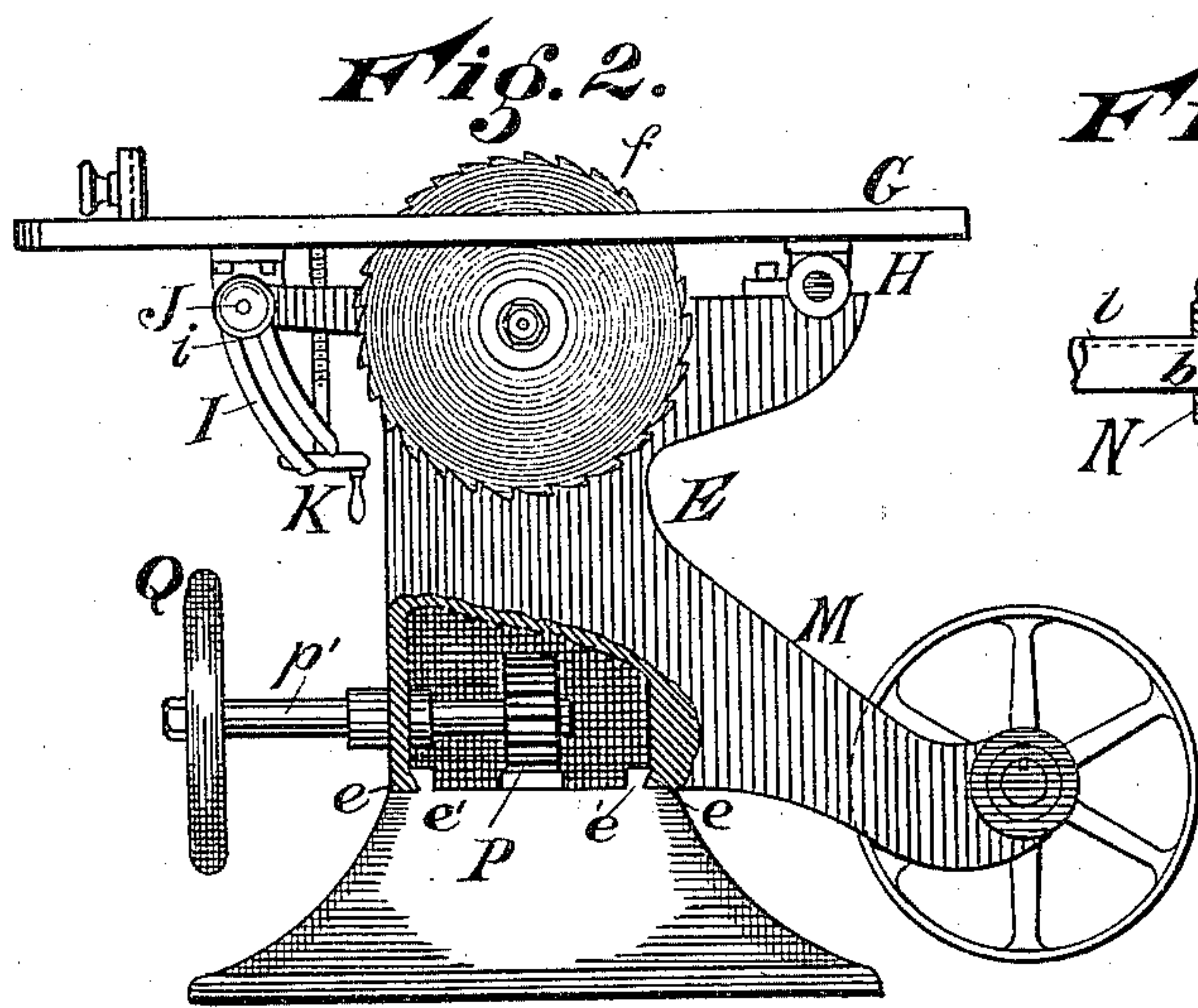
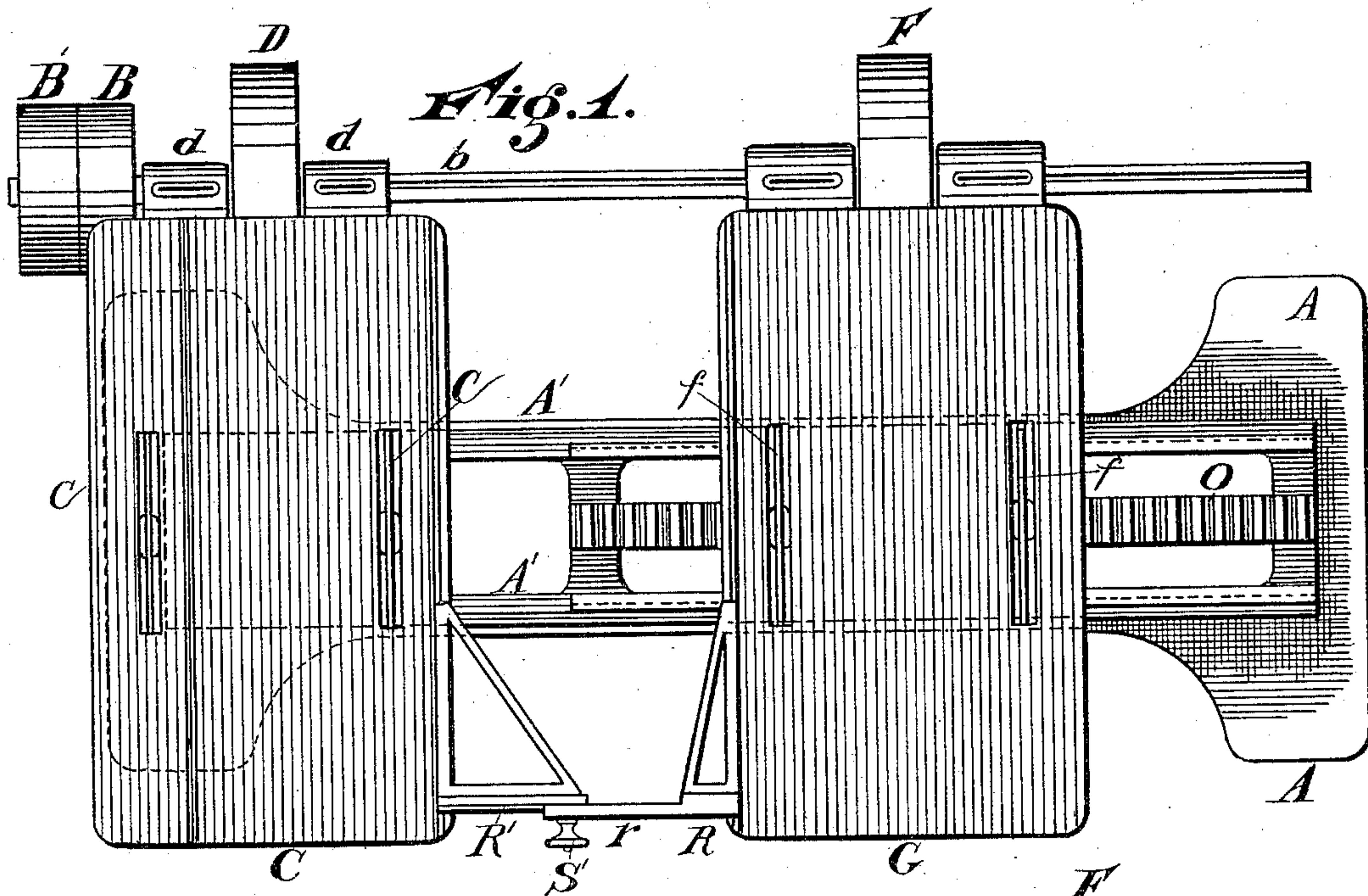


(No Model.)

J. R. THOMAS.
CIRCULAR SAWING MACHINE.

No. 307,600.

Patented Nov. 4, 1884.

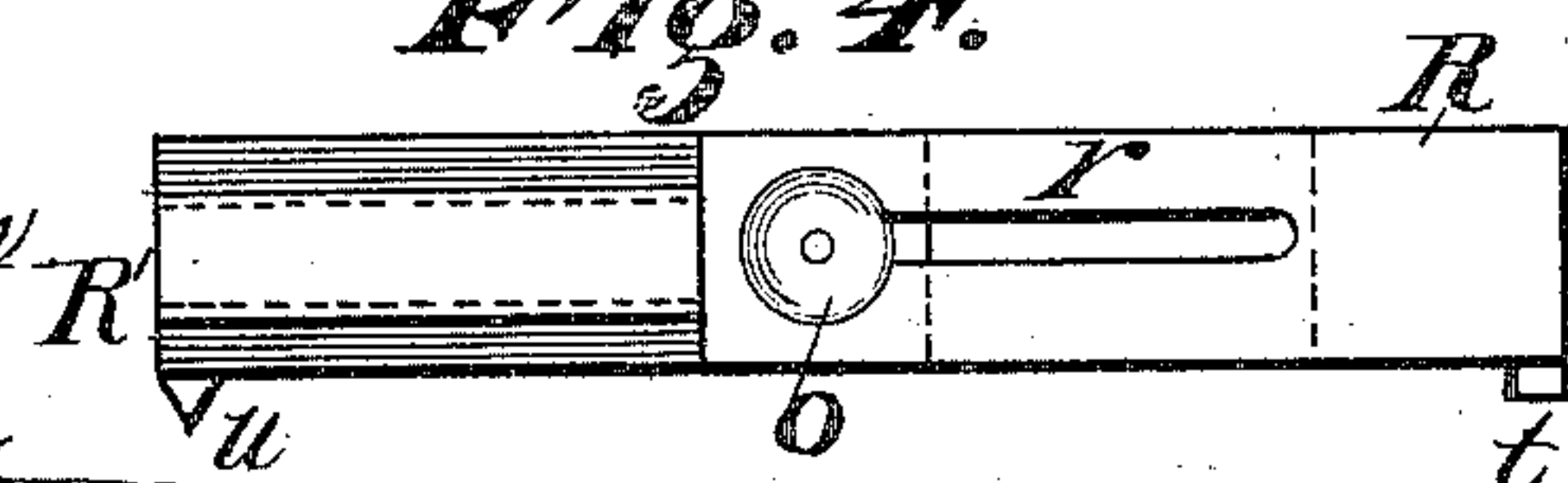


Attest

Joseph H. Sims

Thos. P. Egan

Fig. 4.



Inventor
J. R. Thomas
by Wood & Boyd
his Attorneys &c

UNITED STATES PATENT OFFICE.

JOHN R. THOMAS, OF CINCINNATI, OHIO, ASSIGNOR TO THE EGAN COMPANY, OF SAME PLACE.

CIRCULAR SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 307,600, dated November 4, 1884.

Application filed August 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. THOMAS, a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Sawing-Machines, of which the following is a specification.

My invention relates to a duplex sawing-machine.

The object of my invention is to provide an adjustable sawing-table which is made to move on ways of the frame of the machine adapted to be used in combination with the stationary sawing-table and saws, so that the distance between the saws of the adjustable and inadjustable tables may be easily and quickly regulated by the operator.

Another object of my invention is to provide a fence or bridge which spans the space between the two sawing-tables, and is made adjustable, so that it may be made wider or narrower as the adjustable table is moved to or from the inadjustable table.

Another object of my invention is to provide gains or ways in the sides of the two tables in which the saw-fence moves, and to have the saw-fence connecting the two tables on a plane with the top surface of the two tables, all of which will be fully set forth in the description of the accompanying drawings, forming a part of this specification.

Figure 1 is a top plan view of my improvement. Fig. 2 is an end elevation of the adjustable table, partly sectional, showing the adjusting devices. Fig. 3 is a vertical longitudinal section through the pulley and shaft of the adjustable driving devices. Fig. 4 is an end elevation of the adjustable fence.

A represents the base of the machine. The end of the base of the frame which supports the stationary table is represented by dotted lines in Fig. 1.

A' represents the frame-pieces connecting the two bases A A'. These parts are preferably made of iron, cast in one piece, and slotted between the pieces of A A'.

B represents the driving-pulley keyed upon shaft *b*. B' represents the loose pulley running as an idler on said shaft *b*.

C represents the stationary table.

c c represent two saws secured to shaft, which is driven by transmitting-pulley D, keyed upon shaft *b*.

d represents the bearings for shaft *b*.

E represents a reciprocating end piece of the frame, which moves upon ways *e*. These ways *e* are shown as having dovetailed ribs *e'*, which engage similar dovetailed projections formed upon the adjustable base E. Other forms of ways might be used instead of these here shown.

F represents an adjustable driving-pulley, driving-saws *f*, secured to shaft journaled upon the adjustable frame-piece E, and adapted to move therewith.

G represents the adjustable saw-table, which is secured to the adjustable frame E by means of a hinge, H, one end of which journals in the top of said frame E.

I represents a slotted bracket attached to the under side of the table G, opposite to the hinge H.

i represents an arm projecting outwardly from the frame-piece E, in which is tapped a clamp-screw, J, which clamps the bracket I between the head of the screw-bolt and the adjusting-screw J.

K represents the adjusting-screw tapping through the arm *i*, and bearing against the under side of table G, so that it may be adjusted up and down. The table D may also be hinged to the frame in the same manner.

My improvement is constructed so as to have the table G, saw *f*, and driving-pulley F move laterally to or from the stationary table C and saw *c* and driving-pulley D, so as to adjust the distance between the two inner saws at will. For this purpose shaft *b* is provided with a longitudinal feather, *l*.

L represents bearings for shaft *b*, which are attached to arms M, which project rearward from the adjustable frame E.

N represents a sleeve journaled in the bearings L, which is provided with a downwardly-projecting feather, *m*, which fits in the longitudinal groove *l*. Driving-pulley F is keyed or secured to the sleeve N, so as to revolve therewith and slide on shaft *f*.

O represents a rack-bar secured to the frame

A A' parallel to the path of travel of the movable frame E.

P represents a pinion keyed upon shaft p' , which is journaled to the frame E, projecting inwardly.

Q represents a hand-wheel for turning pinion P, so as to move frame E backward or forward, as desired. Frame E is preferably made hollow for lightness and economy as well as to form a housing for pinion P, which works within said hollow or opening. It will be seen that as hand-wheel Q is revolved pinion P turns, and, meshing with the rack O, it causes the frame E to move on its ways backward or forward, and, as sleeve N and shaft P' are feathered, F will move longitudinally thereon in unison with table G and frame E; hence the table G, with driving parts of the saws f , can be adjusted to any desired distance to or from table C.

R R' represent an adjustable fence, formed of two pieces, preferably of brace form, as shown in Fig. 1.

r represents a projecting rail on brace R, which overlaps rail of fence R'.

S represents a set-screw passing through rail r , for securing it in any desired position. The rail r is preferably provided with a groove fitting a tongue upon rail R', so as to prevent vertical motion of the fence. When it is desired to adjust the table G, set-screw S is loosened and the table is adjusted to or from table C. Set-screw S is tightened to hold the parts in proper relative position.

In order that the fence may be on a line with the top surface of the table, gains or grooves are cut in the tables C and G by halving them down a depth corresponding to the thickness of the rails of the fence R R', so that the top of the rails of the fence shall be flush with the top surface of the table.

Fig. 4 represents tongues $t u$, which fit in corresponding grooves formed in the gains of tables C and G, one being shown square and the other V-shaped. The tongue t is made rectangular, so as to assist in holding table G in position. This adjustable fence is an important feature in my machine, as the fence allows the stuff to be slid laterally upon the tables C and G without any filling-piece, as has hitherto been employed, and hold the stuff securely in position for sawing.

The rear of rails of the fence R R' may be made to project above the surface of the table, so as to form a back guide and prevent the stuff from being crowded away from the saws when the fence is moved up to carry the stuff forward for sawing.

I claim—

1. The combination, with the base-frame A, provided with the stationary saw-table C, of the driving-shaft b , the sleeve N, feathered on the shaft, the base E, sliding on the base-frame, and having laterally-projecting arms M, provided with bearing L, in which the ends of the sleeve are journaled, the saw-table G, carried by the upper end of the sliding base, the rack mounted on the base-frame, and the pinion housed in the sliding base, substantially as described.

2. The combination, with the table C and the longitudinally-adjustable table G, of a fence spanning the space between the tables and lying flush with the upper surface of the tables, said fence being composed of two parts adjustably connected together, one part being carried by the stationary table and the other part by the adjustable table, so that the adjustment of the latter adjusts the parts of the fence one upon the other, substantially as described.

3. The combination, with the table C and the longitudinally-adjustable table G, of the fence composed of two adjustably-connected parts spanning the space between the tables, one part carried by the stationary table and the other part by the adjustable table, so that the adjustment of the latter adjusts the parts of the fence one upon the other, substantially as described.

4. The combination, with the saw-tables, one of which is adjustable to and from the other, of the braces R R', secured, respectively, to the adjacent edges of the tables, and one provided with a rail adjustably connected with the other, so that the braces are adjusted to and from each other by the movements of the adjustable table, substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN R. THOMAS.

Witnesses:

THOS. P. EGAN,
FRED. C. WEIR.