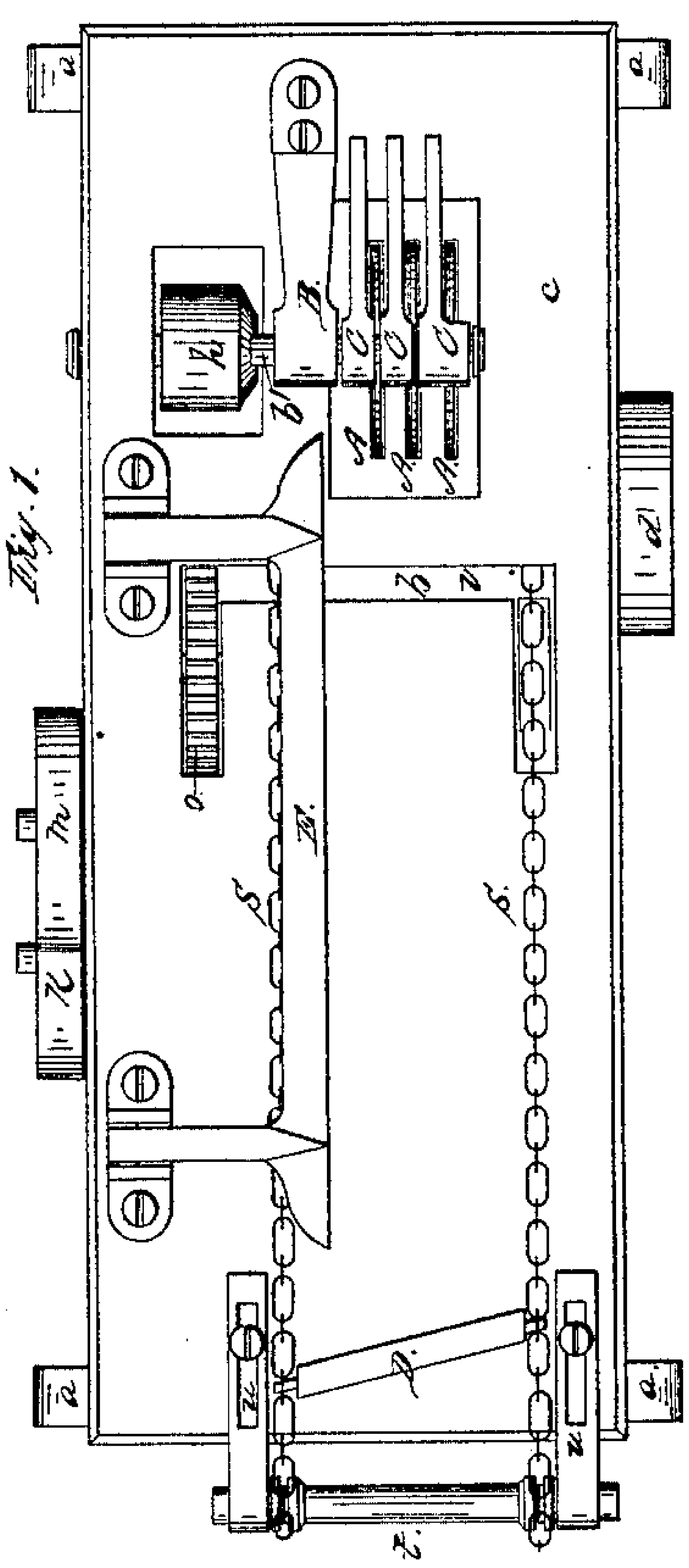
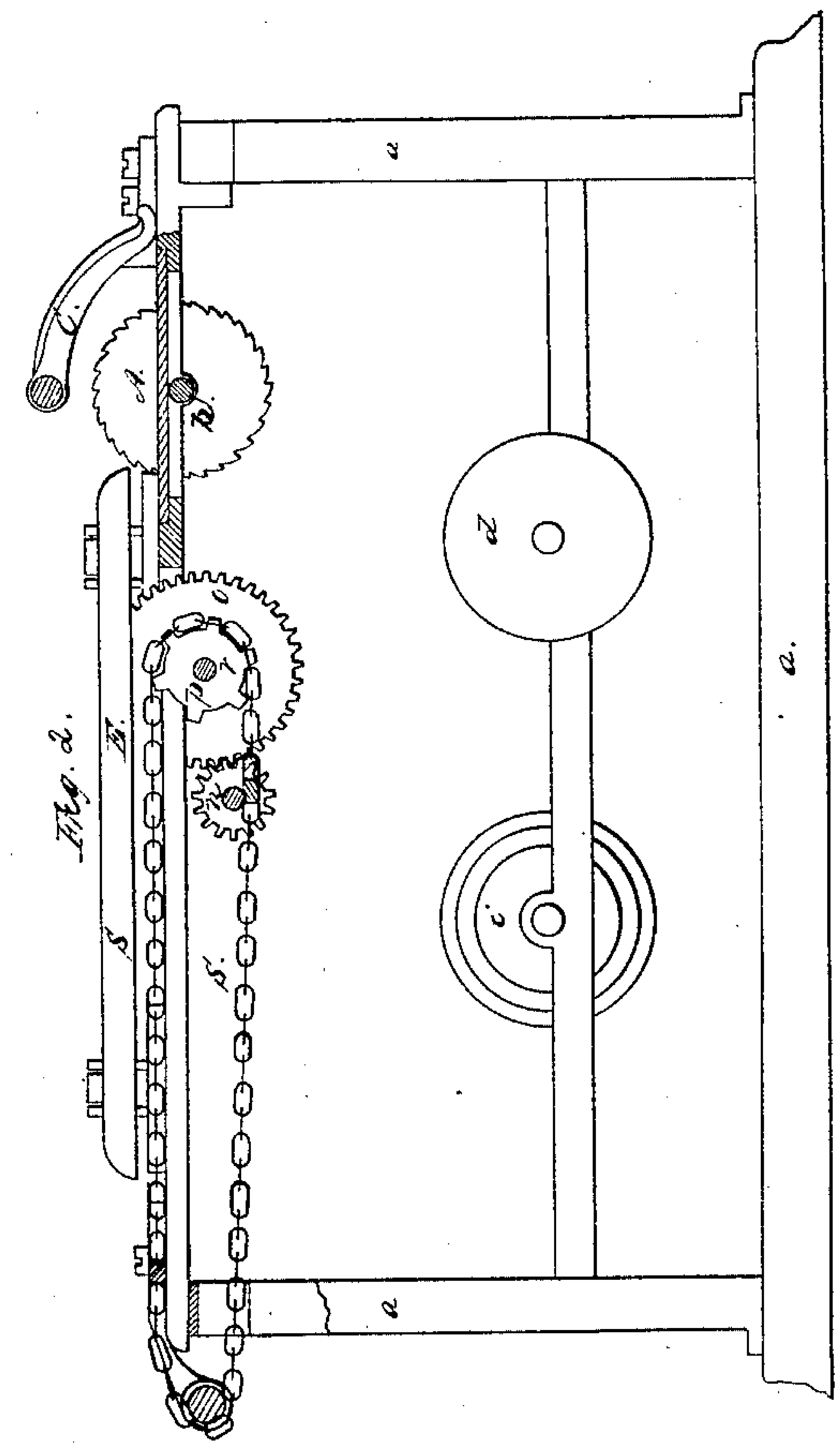
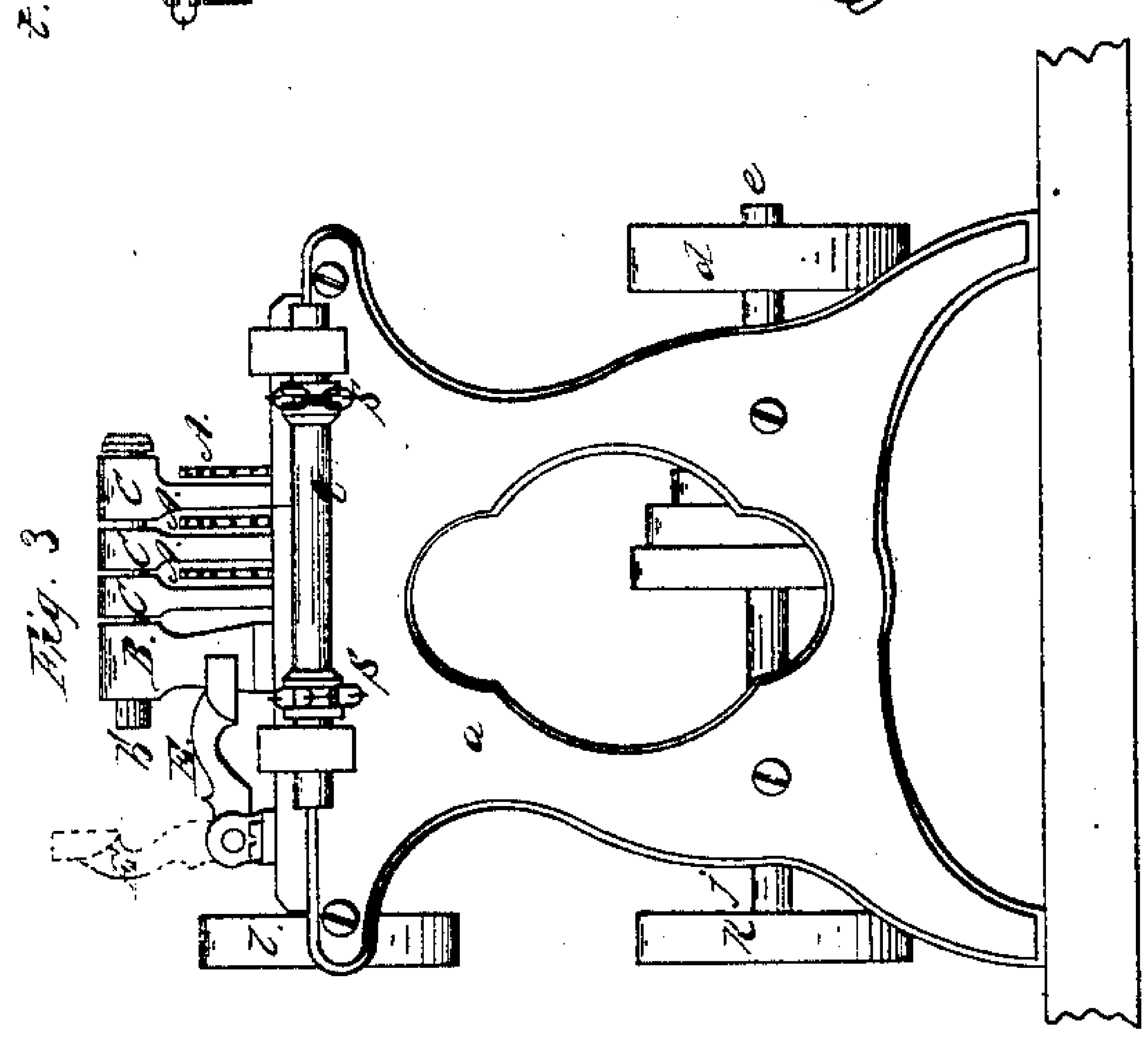
E. H. Hancock,

Making Laths.

No. 24,869. Patented July 26, 1859.







Witnesses

B. Aober Lindell
H. H. Young

Inventor.

E. H. Hancock

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

E. H. HANCOCK, OF AUGUSTA, GEORGIA.

SAWING-MACHINE.

Specification of Letters Patent No. 24,869, dated July 26, 1859.

To all whom it may concern:

Be it known that I, E. H. HANCOCK, of Augusta, in the county of Richmond and State of Georgia, have invented certain new and useful Improvements in Sawing Machinery, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1, represents a plan or top view of a sawing machine with my improvement applied thereto. Fig. 2, represents a side elevation of the same with a portion of the framing broken away to show the mechanism more clearly, and Fig. 3, represents a front elevation of the machine showing more particularly the relative arrangement of the saws, guard levers, and swinging guide; the red lines showing the latter when raised out of the way, and the black lines representing its position when in operation.

I call that end of the machine from which the lumber is fed to the saws the front, and that at which it is discharged, the rear. That side of the machine on the right of a person standing in front of the machine and facing the same, I call the right side, the other the left.

My invention is more particularly adapted to that class of machines in which a series of circular saws are mounted on a common shaft in order to effect the cutting up of the entire log at one operation.

It is of considerable importance that the log should be kept steadily pressed against the saws and fed thereto with a steady motion, while at the same time it is desirable to avoid any positive locking of the log to the carriage in order that it may be freely discharged when cut up. To accomplish this object I mount the logs on head blocks carried by an endless chain and inclined so that their right ends, or those farthest from the guide shall be slightly in advance of the ends next to it so that as the log advances to the saws it is wedged against the guide, and thereby kept steady, while at the same time its rear end is free to pass between the saws, as it is not fastened to the head blocks. A log thus unconnected to the feeding mechanism after being cut through is liable to be caught by the back of the saws, and thrown by their rapid rotation toward the front of the machine, sometimes to the serious injury of the attendant. To obviate this difficulty I provide a series of hinged levers one to each saw, the free ends of which rest upon the lumber as it comes from the saw and thereby counteract its tendency to fly up.

In the accompanying drawings the mechanism is represented as mounted in a suitable frame (*a*). The saws (A) are mounted on a shaft (*b*) which rotates in journals secured to the underside of the table or platform (C). A curved bracket (B) is bolted to the platform in such a position that its arm (*b'*) is perpendicular to the shaft (*b*) on which the saws are hung. The guard levers (C) are hinged loosely on this arm in order that they may have free play in the path of a vertical circle.

Rotary motion may be imparted to the pulley (*d*) in any suitable manner. This pulley is mounted on a shaft (*e*) underneath the table, which carries a set of speed pulleys, and a driving pulley; the latter of which by means of a band drives a pulley (*h*) on the shaft (*c*) which carries the saws. A band from the speed pulleys drives a set of similar pulleys (*i*) on a shaft (*j*) which carries a pulley (*k*) on its left end. A band from this pulley drives a pulley (*l*) and shaft (*m*) on the latter of which is a toothed pinion (*n*) gearing into a spur wheel (*o*) on a shaft (*p*) just beneath the table. This shaft carries sprocket wheels (*r*) which actuate the endless chain (*s*) carrying the head blocks (D). The bearings of the roller (*t*) over which the endless chain traverses are in slotted brackets (*u*) adjusted by set screws in order to tighten or loosen the chain; which passes through a slot (*v*) in the table just in front of the saws.

To the left side of the table a swinging guide (E) is hinged in such manner that it may be thrown back out of the way when required, as clearly shown by the red lines in Fig. 3.

The operation of the machine is as follows: A log having been placed between the head blocks rotary motion is communicated to the shaft (*e*) which drives the saws and feeding mechanism. The bolt is gradually fed up to the saws being pressed firmly against the swinging guide by the inclined head blocks until they come to the opening or slot in front of the saws, through which they pass and return under the table.

When a large log or one having no straight edge is to be sawed the swinging guide is turned up out of the way. As the

stuff passes out at the back of the machine its ends are kept down by the weight of the hinged guard levers, and the attendants thus protected from injury by the sawed stuff being thrown forward by the saws. I prefer to make these guards separate instead of in one piece because the top of the bolt is not always of the same height.

Having thus fully described my improved sawing machine, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combination of the yielding guard levers or their equivalent, with the rotary saws substantially as, and for the purpose described.

2. The head blocks D, swinging guide (E) circular saws (A) and guard levers (C) when arranged and operating substantially as, and for the purpose set forth.

The above specification of my impt. in sawing machines signed by me this 19th day of April 1859.

E. H. HANCOCK.

Witnesses:
G. YORKE AT LEE,
H. H. YOUNG.