

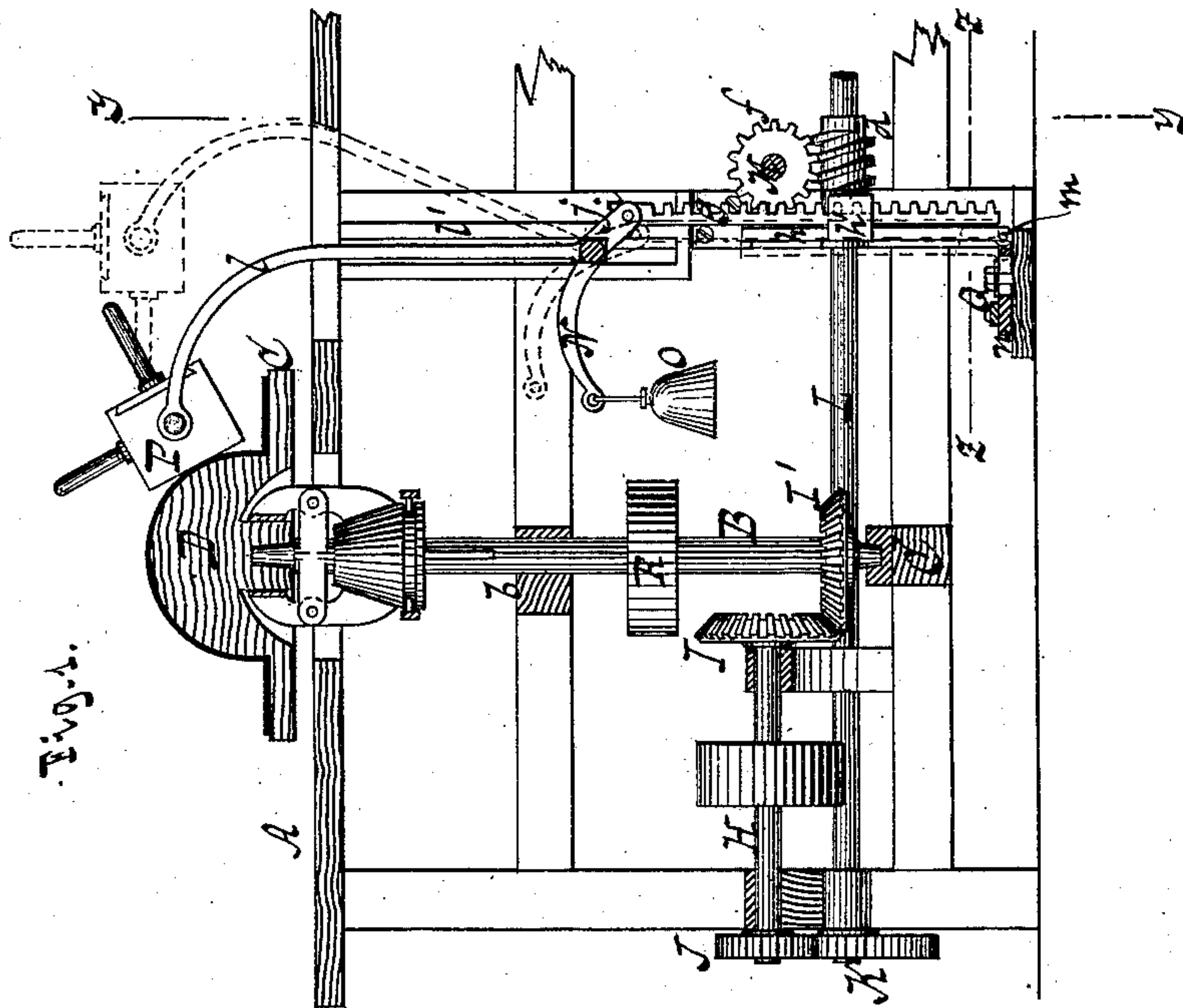
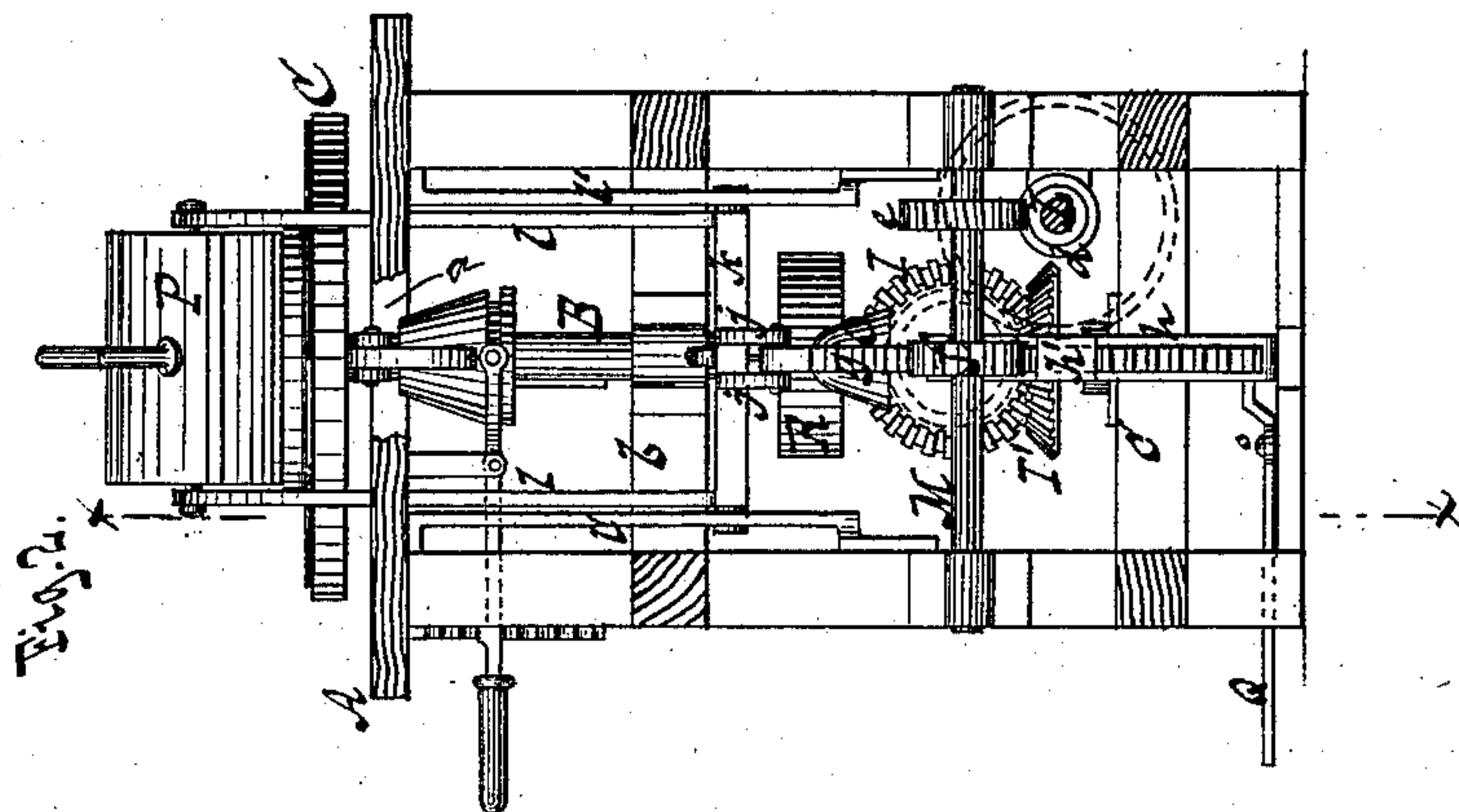
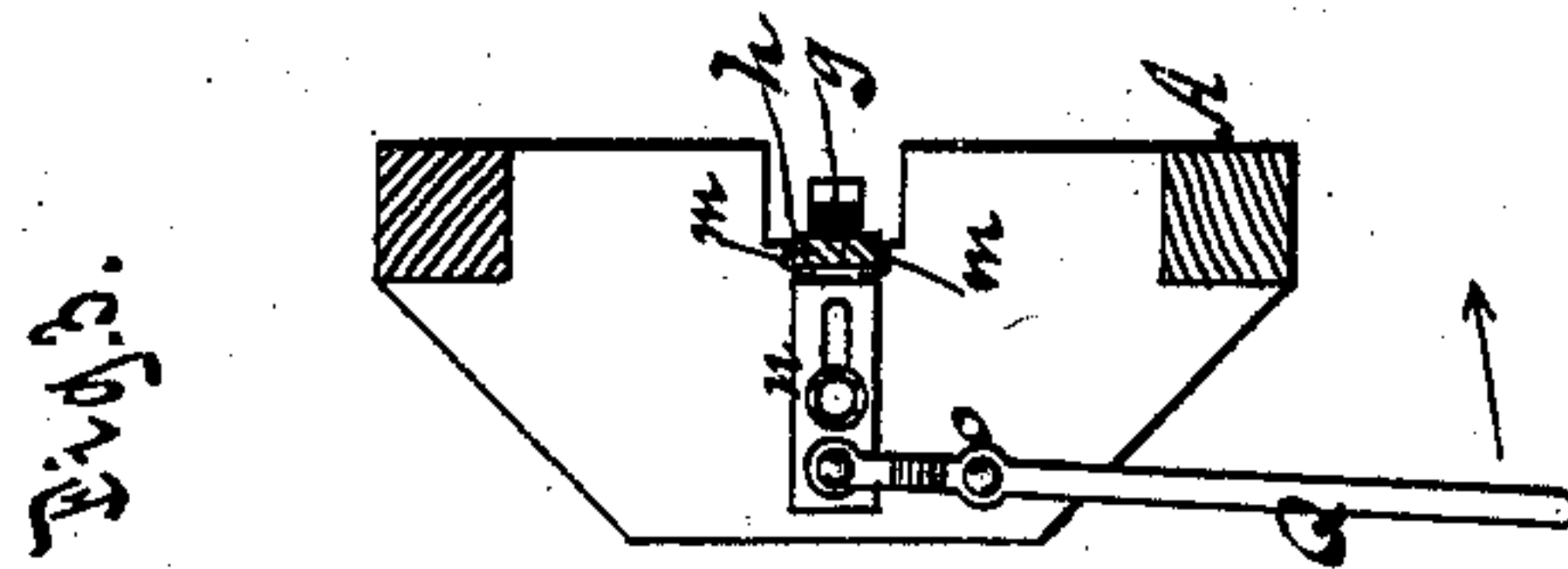
(No Model.)

C. KEARCHER & S. EDGETT.

HAT FINISHING MACHINE.

No. 248,182.

Patented Oct. 11, 1881.



Witnesses
Otto Shufeldt
William Miller

Inventors.
Charles Kearcher
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their attys

UNITED STATES PATENT OFFICE.

CHARLES KEARCHER AND STEPHEN EDGETT, OF ORANGE, NEW JERSEY.

HAT-FINISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 248,182, dated October 11, 1881.

Application filed September 3, 1881. (No model.)

To all whom it may concern:

Be it known that we, CHARLES KEARCHER and STEPHEN EDGETT, citizens of the United States, residing at Orange, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Hat-Finishing Machines, of which the following is a specification.

This invention relates to an improvement on that class of hat-finishing machines which is described in Letters Patent No. 234,783, granted to us November 23, 1880.

The object of our invention is to simplify the construction of the machine, the particular means employed being fully illustrated in the accompanying drawings and pointed out in the following description and claims.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section in the plane $x x$, Fig. 2. Fig. 2 is a transverse vertical section in the plane $y y$, Fig. 1. Fig. 3 is a horizontal section in the plane $z z$, Fig. 1.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a table or frame, which supports the working parts of our machine. In the top of this table is an opening, a , through which extends a vertical shaft, B, which has its bearings in traverses $b c$, and to which a revolving motion is imparted by suitable mechanism, as will be hereinafter more fully explained. On the upper end of said shaft is firmly mounted a platform, C, which is intended to support the hat-block D. This hat-block is secured to the platform by any suitable clamping mechanism—such, for instance, as that described in the Patent No. 234,783.

The shaft B receives its motion from a driving-shaft, H, on one end of which is mounted a bevel-wheel, I, while on its other end is mounted a cog-wheel, J. The bevel-wheel I gears in a corresponding bevel-wheel, I', mounted on the vertical shaft B. The cog-wheel J gears in a cog-wheel, K, mounted on a horizontal shaft, L, that carries a worm, d . This worm engages with a worm-wheel, e , mounted on a transverse shaft, M, that carries a cog-wheel, f , and this cog-wheel meshes into a rack-bar, g , that is fitted into a vertical guide, h , and passes through a box, h' , secured to said guide, so that when the cog-wheel f revolves it will impart to the rack-bar a movement in a

vertical direction, and when the guide is moved in or out it carries the rack-bar with it.

The upper end of the rack-bar is connected by a pivot, i , with an arm, j , which extends from a rock-shaft, k , the rounded ends of which have their bearings in slotted guides l , so that said rock-shaft can be raised and lowered, and also partially turned.

N is an arm which extends from the rock-shaft in a direction opposite to the arm j , and from which is suspended a weight, O. From said rock-shaft rise two arms, $l l$, to the upper ends of which is pivoted the smoothing-iron P.

The lower end of the vertical guide h of the rack-bar g is connected by a pivot, m , to a slide, n , which can be moved by a lever, Q, Fig. 3, which has its fulcrum on a pivot, o , secured in the base of the frame A.

When the smoothing-iron is thrown from the position shown in full lines in Fig. 1 to that shown in dotted lines, and at the same time the lever Q is moved in the direction of the arrow marked near it in Fig. 3, the rack-bar is thrown out of gear with the cog-wheel f , and the rock-shaft k remains stationary; but if the rack-bar g is in gear with the cog-wheel f the rock-shaft k receives an upward motion, while the smoothing-iron is held in contact with the hat on the block D by the action of the weight O, and by the upward pressure of the rack-bar g on the arms j , and, if desired, this pressure can be increased by means of one of the handles of the smoothing-iron.

The principal advantage gained by the construction of the machine as above described over the mechanism described in Patent No. 234,783 is superior cheapness and simplicity and superior convenience in the operation. Another advantage which we gain is that we can connect a number of our machines to one and the same driving-shaft. This purpose is accomplished by placing the worm-shaft L in a horizontal position, so that it can be extended through a number of machines, and by mounting on the vertical shaft B a pulley, R, from which motion can be transmitted to the vertical shaft B of the second machine, and so on.

We disclaim distinctly everything shown and described in Patent No. 234,783.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as herein-

before described, of the revolving platform which carries the hat-block, the arms *l l*, which carry the smoothing-iron, the rock-shaft *k* and its arm *j*, the guides *l'* for the rock-shaft, the 5 rack-bar *g*, pivoted to arms *j*, the vertical guide *h* for the rack-bar, the slide *n* and lever *Q*, and the cog-wheel *f*.

2. The combination, substantially as herein-
before described, of the vertical shaft B, car-
10 rying the platform C, the pulley R, mounted on said shaft, the horizontal shaft L, carrying the worm *d*, the transverse shaft M, carrying the cog-wheel *f*, the rack-bar *g*, moving in a vertical guide, *h*, the arms *j*, pivoted to the

upper end of the rack-bar, the slide *n*, pivoted 15 to the lower end of the guide *h*, the rock-shaft *k* and its slotted guides *l'*, and the arms *l l*, extending from said rock-shaft and carrying the smoothing-iron.

In testimony whereof we have hereunto set 20 our hands and seals in the presence of two subscribing witnesses.

CHAS. KEARCHER. [L. S.]
S. EDGETT. [L. S.]

Witnesses:

GEO. P. KINGSLEY,
JAMES H. BROWN.