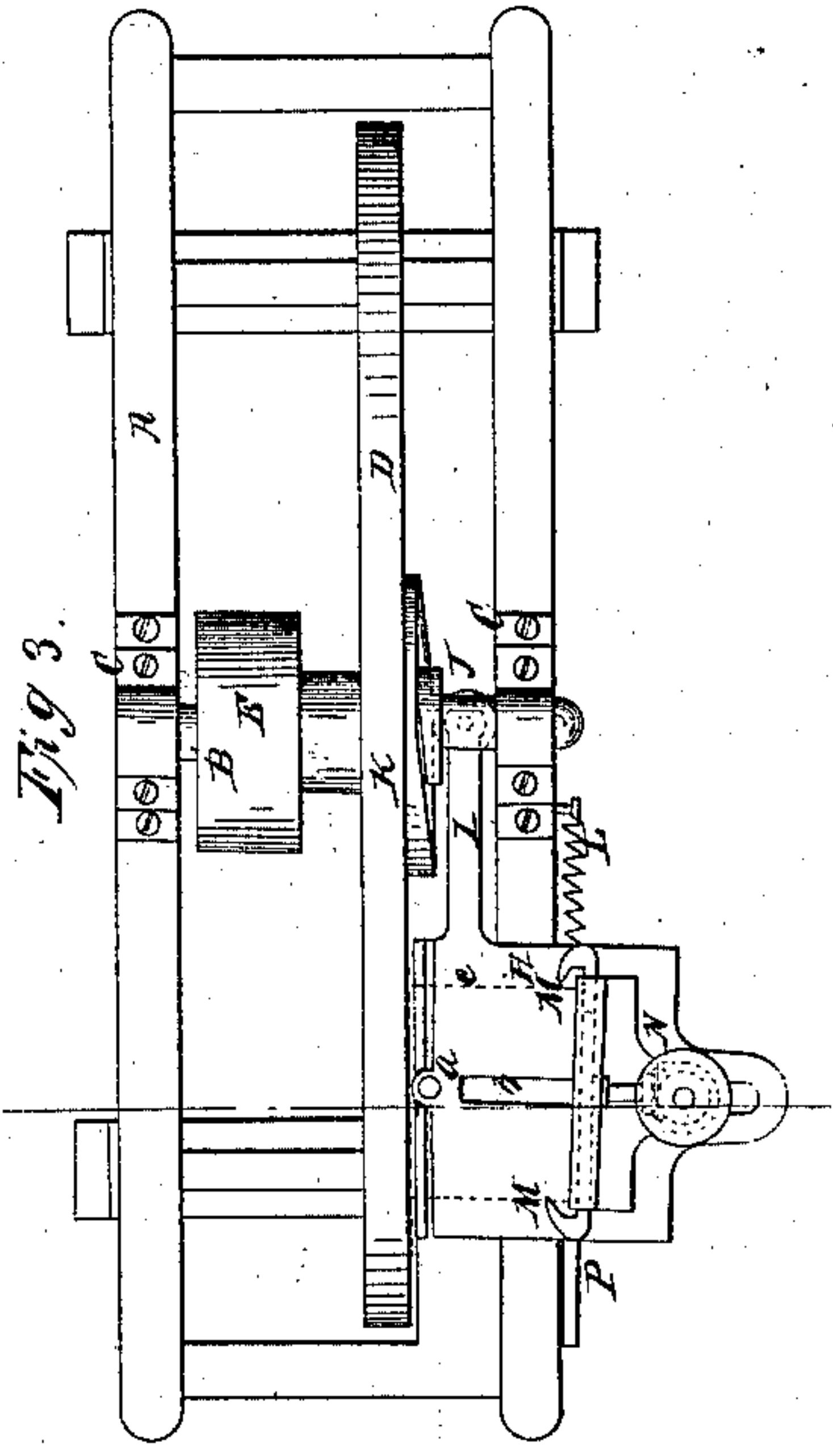
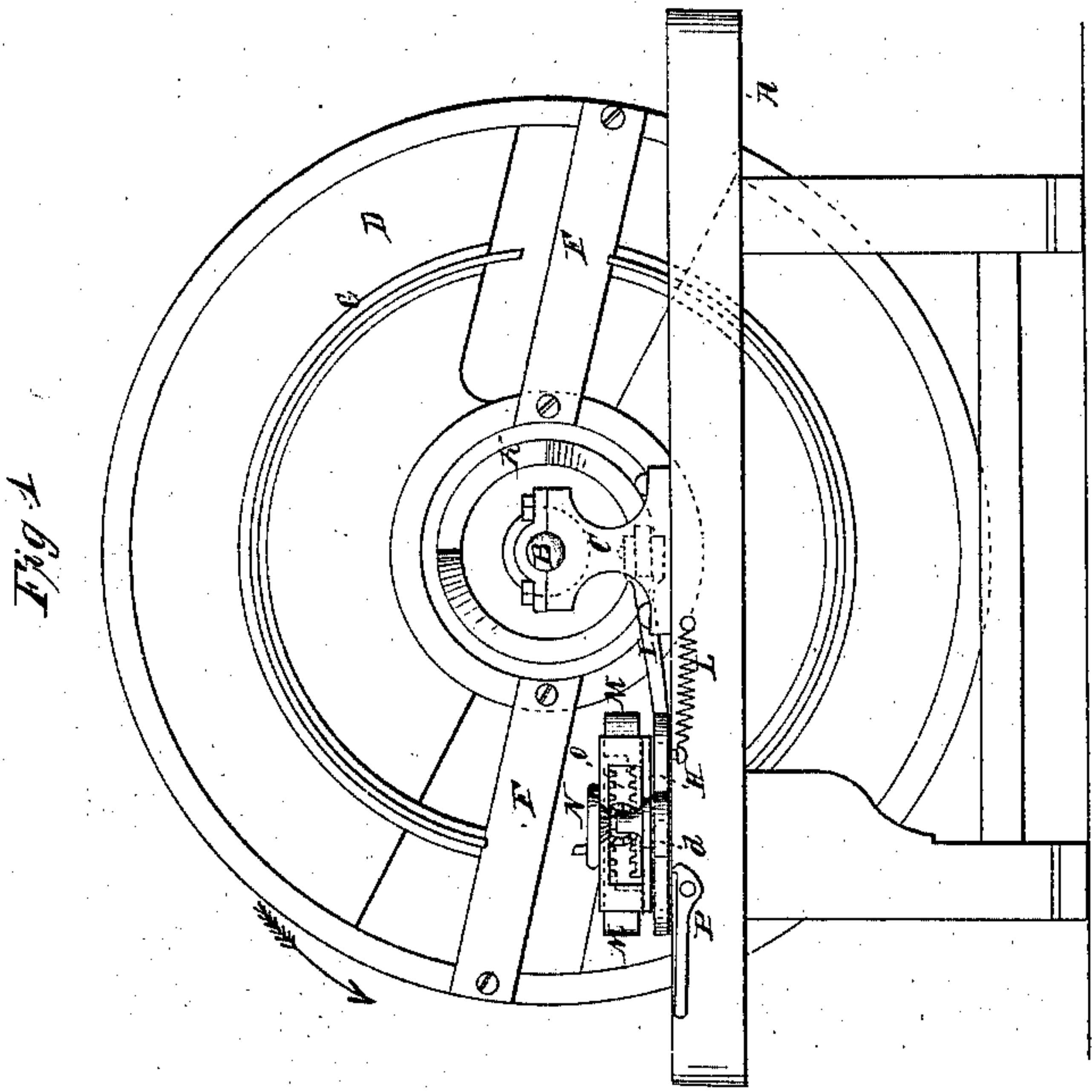
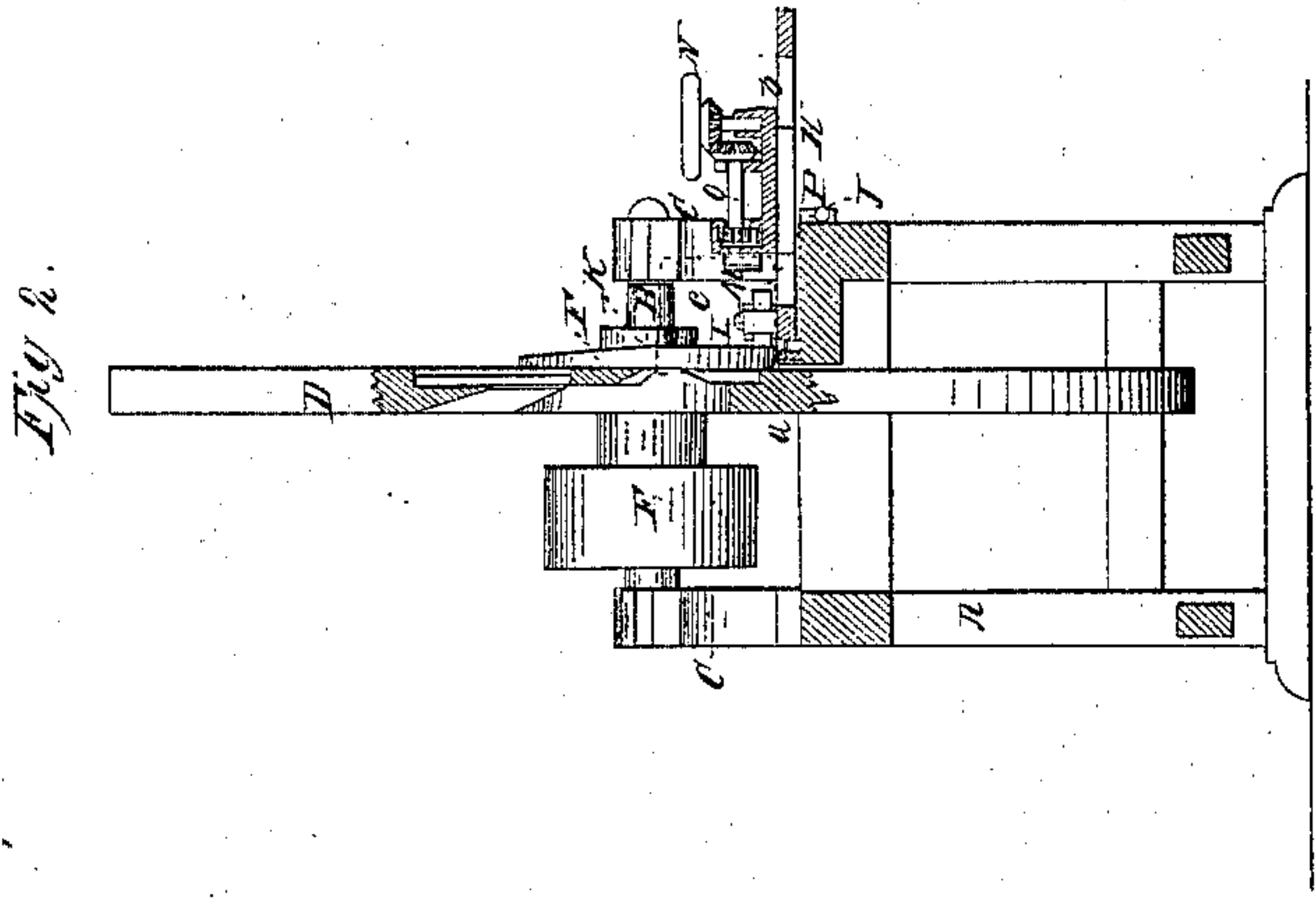


J. Broughton,

Cutting Shingles.

N^o 15,728.

Patented Sep. 16, 1856.



UNITED STATES PATENT OFFICE.

JOHN BROUGHTON, OF CHICAGO, ILLINOIS.

FEED-MOTION FOR SHINGLE-MACHINES.

Specification of Letters Patent No. 15,728, dated September 16, 1856.

To all whom it may concern:

Be it known that I, JOHN BROUGHTON, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Machine for Cutting Shingles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a side view of my improvement. Fig. 2, is an end view of ditto, a portion of the edge of the disk-wheel being removed and the frame bisected transversely. Fig. 3, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in the employment or use of a disk wheel, with knives, face guide and cam attached and used in connection with a vibrating bed, the above parts being arranged and operating as will be hereinafter fully shown and described.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, is a rectangular frame on the upper part of which, a shaft B, is placed having its bearings on plumber blocks C. On said shaft a disk wheel D, is placed, and also a driving pulley E.

The disk wheel D, is fitted within the frame A, and has two knives F, F, attached to it nearly radial, the knives being placed in a somewhat oblique or raking position.

G, is a face guide attached to the side of the disk wheel. This guide is an annular ledge or projection the face of which at the back of the knives is flush with the knives the face gradually decreasing in width or length of projection toward the cutting edges of the cutters and being back of the cutting edges. This face guide may be made adjustable by set screws.

H is a bed which is pivoted to the frame A, at *a*, the bed vibrating on said pivot. This bed has an arm I, attached to it, which arm has a friction roller J, at its end, said roller bearing against a face cam K, on the disk wheel.

L, is a spring attached to the frame A, and to the under side of the vibrating bed H. This spring presses the roller J, against the cam K.

M, M, are dogs that hold the block to be cut. N, is a hand wheel that operates a

rack and pinion movement C, to open or close the dogs.

P, is a spring catch underneath the bed H, to hold it when not required to vibrate.

Operation: Motion being given the disk wheel D, by the driving pulley E, the bed H will be vibrated on the pivot *a*, in consequence of the roller J, on the arm I, bearing against the cam K. This bed has a slot *b*, made through it, in which slot a projection or guide on the underside of the plate which carries the dogs M, and hand wheel N, fits. The slot *b*, while allowing the dogs and block to be moved forward as the shingles are cut, vibrates the dogs and block in the same way as the table underneath it. The holding dogs being drawn back in the slot *b*, and a block *c*, secured between them, as shown in red Figs. 2 and 3, the block is shoved by hand or otherwise toward the disk wheel D, until the block *c* touches the face guide G, the wheel D, rotating in the direction of the arrow. The face guide, as before stated, at the ends where it meets the back of the knives is flush with the faces of the knives and from these points it gradually recedes or falls back until its face at the opposite ends near the cutting edges of the knives stand back from the faces of the knives the distance of the thickness of a shingle at the middle of its length. This, combined with the tilt given the bed H, by the arm I, and cam K, gives the thickness and taper to the shingles, and as each knife passes in its revolution, a shingle is cut from the block C, the bed H, being tilted, first in one direction, and then in the other, so that a taper shingle is cut by each knife two shingles being cut at each revolution of the disk wheel. The block being pressed all the time against the face guide until it is cut up.

The operator, if he wishes to stop the vibration of the bed takes hold of the narrow projecting portion and gives a slight pull toward the left in opposition to the spring L, underneath. This brings away the friction roller J, from the cam K, and the spring catch P, enters a notch *d*, in the under side of the bed and holds it in that position and prevents vibration. The holding dogs M, are drawn back by the hand wheel N, along the slot *b*, another block is introduced, the handle of the spring catch P, pushed down and the bed allowed to vibrate and the cutting goes on as before.

On reference to Fig. 1, it will be seen that the block *c*, is cut below the shaft B. This, with the slightly raking position of the knives gives the drawing cut requisite
5 in a shingle cutting machine.

It will also be seen that the point of vibration of the block and bed, is always at one position, and being close to the face of the knives, there is no lateral or end play
10 to the block, but it simply oscillates on its face with the face guide G, as a fulcrum or bearing.

This machine is designed for cutting shingles from blocks that have been previously steamed. It is very simple both in
15 construction and operation, the only parts requiring any adjustment, are the face

guide G, to give the thickness of the shingle and the face cam K, to give the taper.

I do not claim the disk wheel D, with 20 knives attached, for that device has been previously used, but

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is, 25

The disk wheel D, with knives F, face guide G, and face cam K, attached and used in connection with the vibrating bed H, the whole being arranged and operating as shown for the purpose set forth.

JOHN BROUGHTON.

Witnesses:

CALVIN D. WOLF,
JNO. FRASER.