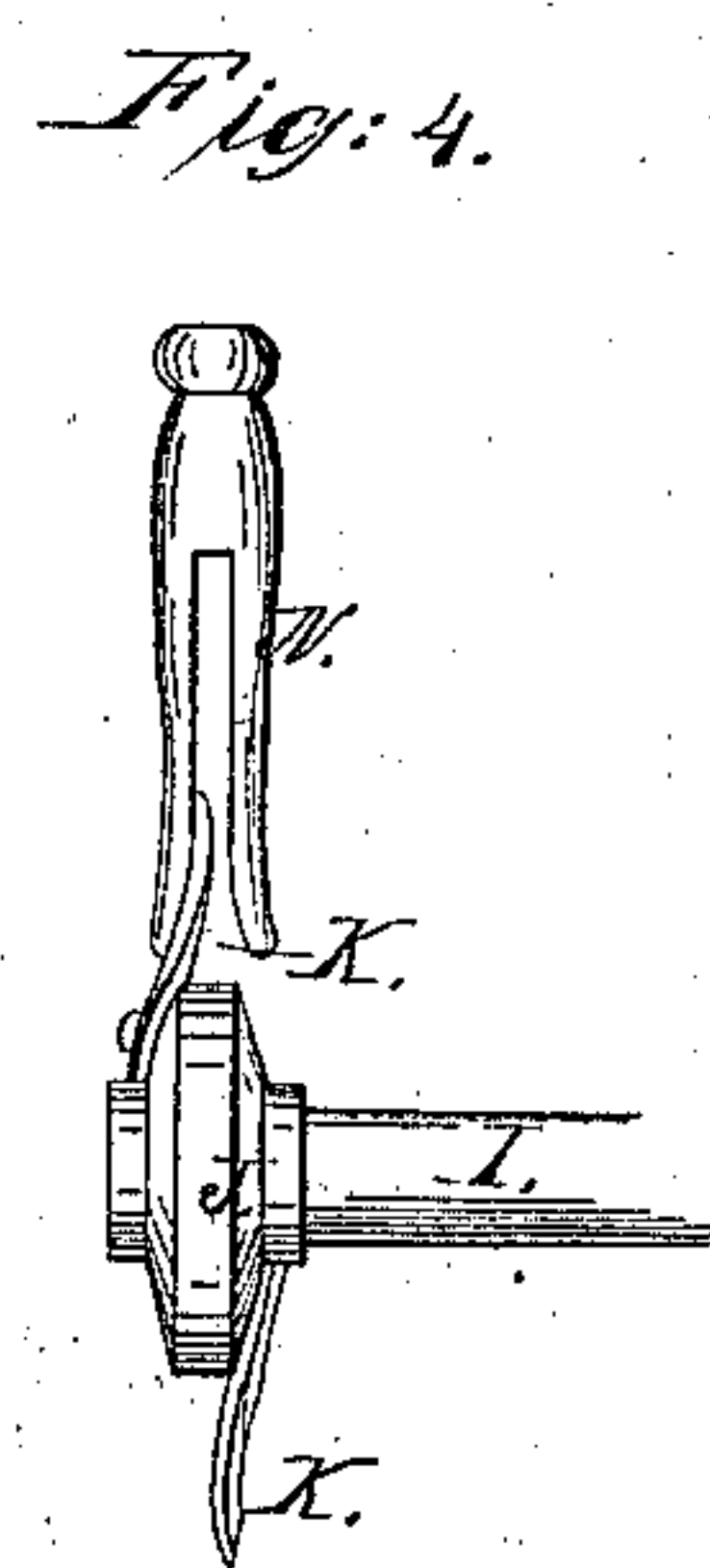
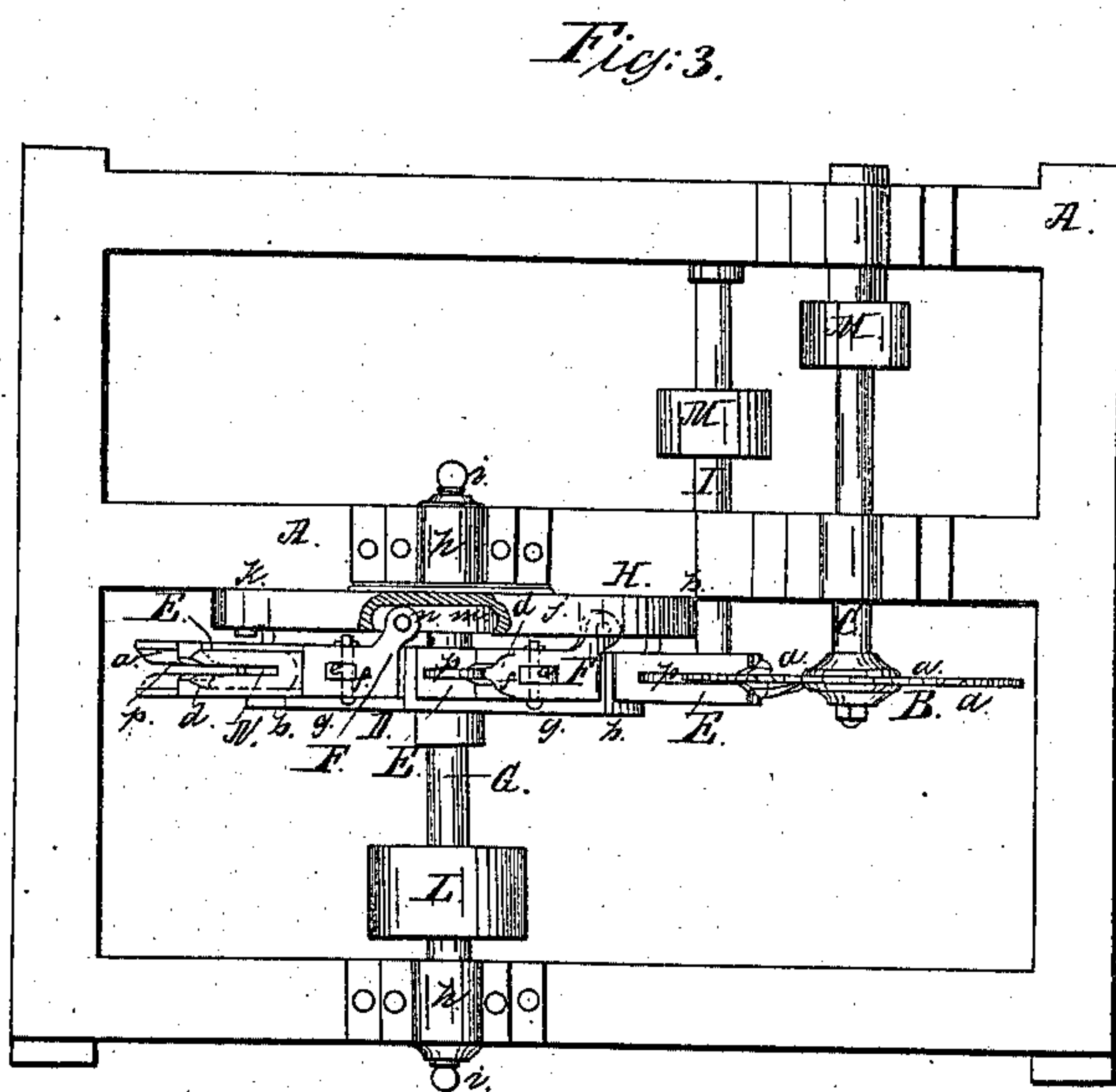
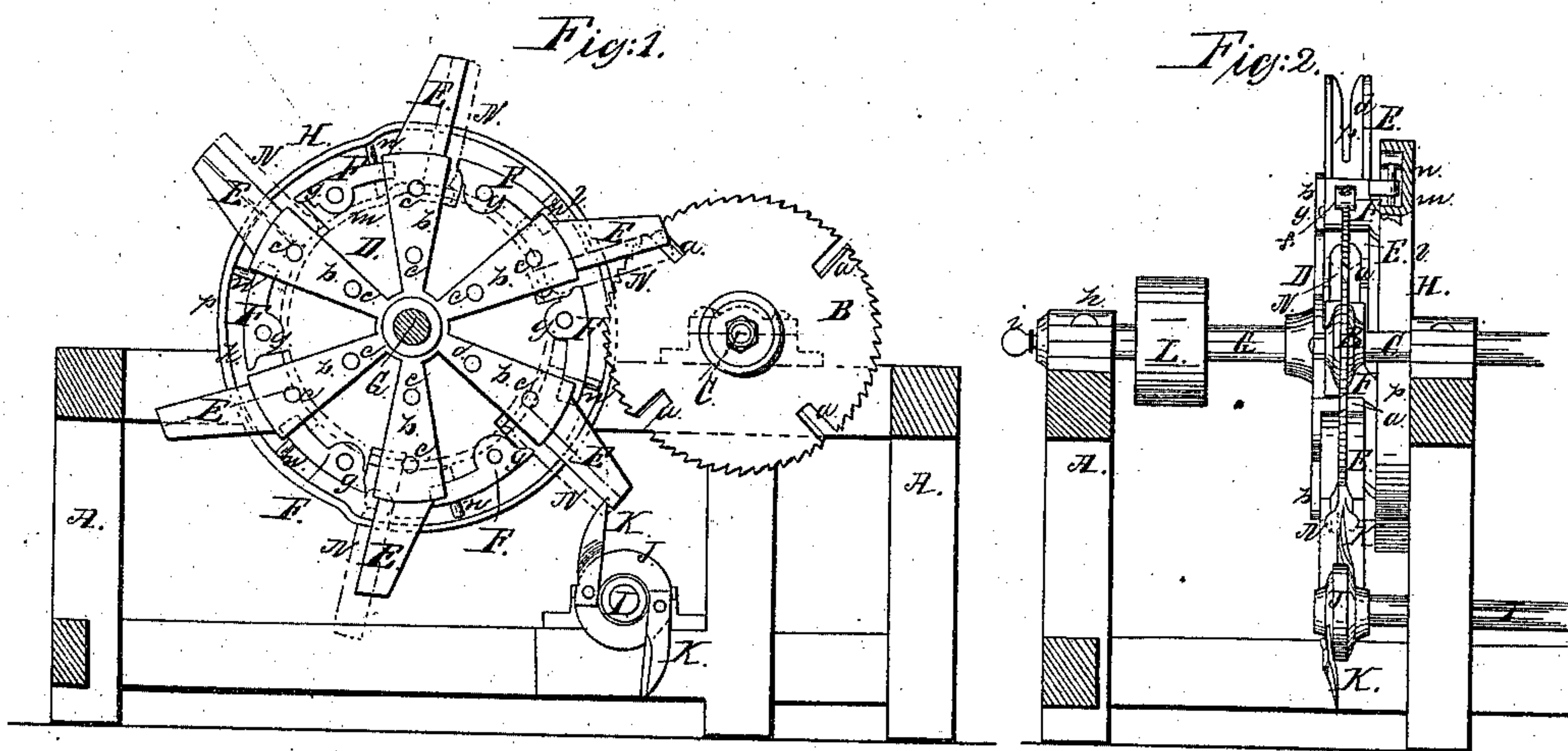


H. & M. Blake,
Clothes Pin Machine,
Nº 12,775, *Patented May 1, 1855.*



UNITED STATES PATENT OFFICE.

H. BLAKE AND M. BLAKE, OF HARTLAND, VERMONT.

CLOTHES-PIN MACHINE.

Specification of Letters Patent No. 12,775, dated May 1, 1855.

To all whom it may concern:

Be it known that we, H. BLAKE, and M. BLAKE, of Hartland, in the county of Windsor and State of Vermont, have invented a new and Improved Machine for Sawing and Beveling Grooves or Slots in Clothes-Pins; and we 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 our improved machine, the side of the frame nearest the eye being removed. Fig. 2 is a front view of the same, the front part of the frame being removed. Fig. 3 is a plan or top view of the same. Fig. 4 is a detached view of the cutters, which cut the bevels, at the lower end of the grooves or slots in the clothes-pins.

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

The nature of our invention consists, 1st, in the employment or use of a holding cylinder, and circular saw, arranged and operating conjointly, as will be hereafter shown, for the purpose of forming the grooves or slots in the clothes-pins.

2d. Our invention consists in the peculiar device or means employed for holding the clothes-pins in the cylinder, as will be hereafter fully shown and described.

3d. Our invention consists in the combination of the holding cylinder, circular saw, and bevel cutters, arranged and operating as will be hereafter shown and described, whereby the clothes-pins are grooved or slotted and the lower edge of the grooves or slots, beveled at one operation.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A, Figs. 1, 2 and 3, represents a rectangular frame, constructed in any proper manner, to support the working parts of the machine.

B, is a circular saw hung on one end of a shaft, C, said shaft running in suitable bearings on the upper part of the frame, A. The saw, B, has a suitable number of radial slots cut in it; one edge of each slot, being beveled and brought to a cutting edge, so as to form side cutters, (a) the edges of the slots being beveled alternately in reverse directions, so as to form cutters at each side of the saw, see Figs. 2 and 3.

D, represents a cylinder or wheel, which may be constructed of metal, and provided with radial sockets (b) in which wooden holders, E, are secured by screws, (c) see Fig. 1. The front surfaces of these holders are grooved, or made concave, as clearly shown at (d), Figs. 2 and 3. On the periphery of the cylinder, or wheel, D, and between the radial sockets (b) there are secured clamps, F. The clamps are secured to the cylinder, D, in this way—The periphery of the cylinder is provided with projections (e) which fit in slots (f) in the clamps, and pins (g) pass through the clamps and projections, shown clearly in Fig. 3, the clamps being allowed to move or turn on the pins, (g).

The cylinder or wheel, D, is hung upon a shaft, G, which runs in suitable bearings (h) on the upper part of the frame, A. The outer ends of the bearings (h) have screw centers (i, i) which bear or fit into the ends of the shaft, G, for the purpose of allowing the cylinder or wheel, D, to be shifted or moved laterally, so that it may always be kept in line with the saw.

H, is a disk or plate provided with a flange or rim (j). This disk or plate is permanently secured to the frame, A, and by the side of the cylinder or wheel, D. The disk or plate, H, is not perfectly circular, as nearly one-half of it is somewhat smaller in diameter, than the other half, see Fig. 1, (k) representing the smaller, and (l) the larger portion of the disk or plate. On the inner side of the disk or plate, H, there is secured a rim or ledge (m) shown by dotted lines in Figs. 1, 2 and 3, through a break in the flange (j). This rim or ledge corresponds in form to the periphery of the disk or plate H, one portion of it being larger than the other.

Through the outer ends of the clamps F, screws (n) pass; the inner ends of which rest upon the outer surface of the rim or ledge (m) as shown in Figs. 1 and 2; the outer ends of the screws, bearing against the inner surface of the flange or rim (j) which projects at a right angle from the disk or plate.

The wooden holders, E, have slots (p) cut in them, see Figs. 2 and 3, in order to allow the saw, B, to pass through.

On the lower part of the frame, A, there is a shaft, I, having at one end a hub or boss, J, to which cutters, K, K, are attached.

These cutters are placed tangentially with the hub or boss, J, and are somewhat curved, as shown in Fig. 4.

The three shafts, G, I, C, are parallel with each other, and they are placed at such distances apart, that the slots (*p*) in the wooden holders, E, will as the cylinder, D, rotates, pass over the saw, the saw reaching nearly to the inner or lower ends of said slots; the cutters K, K, passing a certain distance into the slots (*p*).

The cylinder, D, is rotated by means of a belt passing over a driving pulley, L, on the shaft G; and the shafts, I, C, are rotated by belts passing over pulleys M, M, on said shafts.

The cylinder or wheel is rotated with rather a slow motion, compared with the saw, B, and cutters, K, K. The clothes-pins designated by, N, and shown in red in Figs. 1, 2, and 3, are placed by hand in the wooden holders, E, as the cylinders or wheel rotates, and during the time, the inner ends of the screws (*n*) of the clamps F, are upon the smaller portion of the rim or ledge (*m*). Now when the inner ends of the screws (*n*) pass upon the larger portion of the rim or ledge (*m*) the inner ends of the clamps E, bind upon the clothes-pins, N, and secure them firmly in the holders, E; and the clothes-pins thus firmly secured in the holders are forced over or against the saw, B, which cuts a slot or groove in them of the requisite length, the side cutters, (*a*) smoothing the sides of the groove or slot; the clothes-pins then passing downward and the cutters, K, K, beveling the lower edges of the groove or slot, cut by the saw, as clearly shown in Fig. 4. Just after the clothes-pins have passed the cutters, K, K, the inner ends of the screws, (*n*) pass on the smaller portion of the rim or ledge (*m*) and the inner ends of the clamps, F, are relieved from the pins, N, which then fall from the holders, E, by their own gravity.

By the above invention the clothes-pins

are grooved or slotted, and the grooves or slots, beveled, at one operation, none of the parts of the machine are stopped, nor is the adjustment of any part required during its operation, as in other machines for the same purpose.

The invention is extremely simple, not liable to get out of repair, and works rapidly and well.

We do not claim the holding cylinder, D, irrespective of its construction and arrangement, and the manner in which it operates in connection with the saw, B, as herein shown, neither do we claim the saw, B, separately, nor the cutters, K, K, for they have been used for analagous purposes; but

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

1. The employment, or use of the holding cylinder, D, and circular saw, B, when both are hung on permanent shafts and operating as herein shown, so that the cylinder rotates with a comparatively slow motion, compared with the saw, and conveys by a continuous rotary motion, the clothes-pins over or against the saw for the purpose of forming the grooves or slots therein.

2. We claim securing the clothes-pins in the holders, E, of the cylinder, D, by means of the clamps, F, secured to the periphery of the cylinder, D, as herein shown, and operated by the rim or ledge (*m*) and flange, (*j*) as herein shown, so that the clothes-pins will be firmly clutched in the holders, E, while being operated upon by the saw, B, and cutters, K, K, and allowed to fall therefrom when the grooves or slots are finished.

3. We claim the combination of the cylinder, D, saw, B, and cutters, K, K, constructed, arranged, and operating, as herein shown and described.

H. BLAKE.
M. BLAKE.

Witnesses:

WARREN CUNIER,
COMFORT SEARL.