

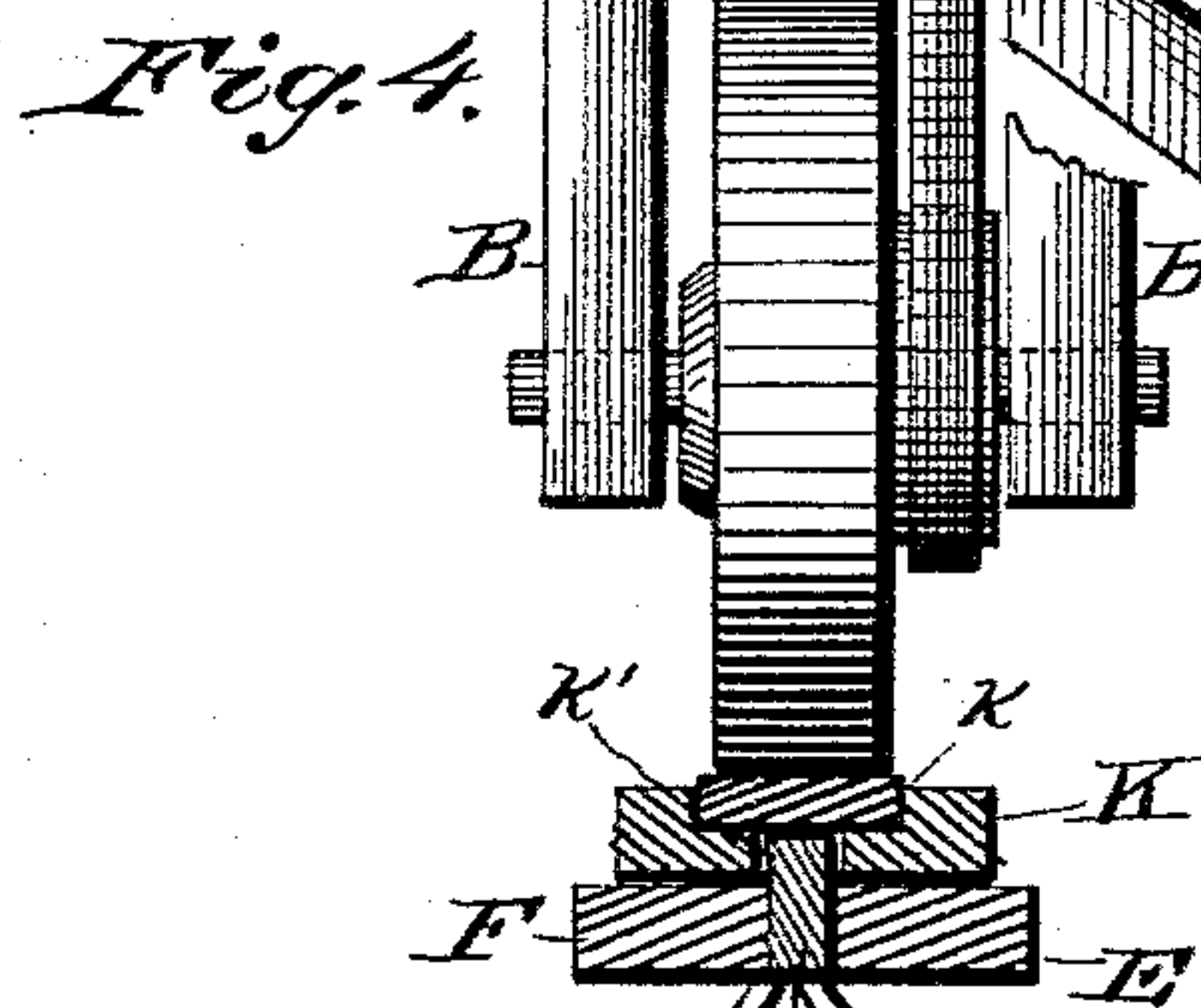
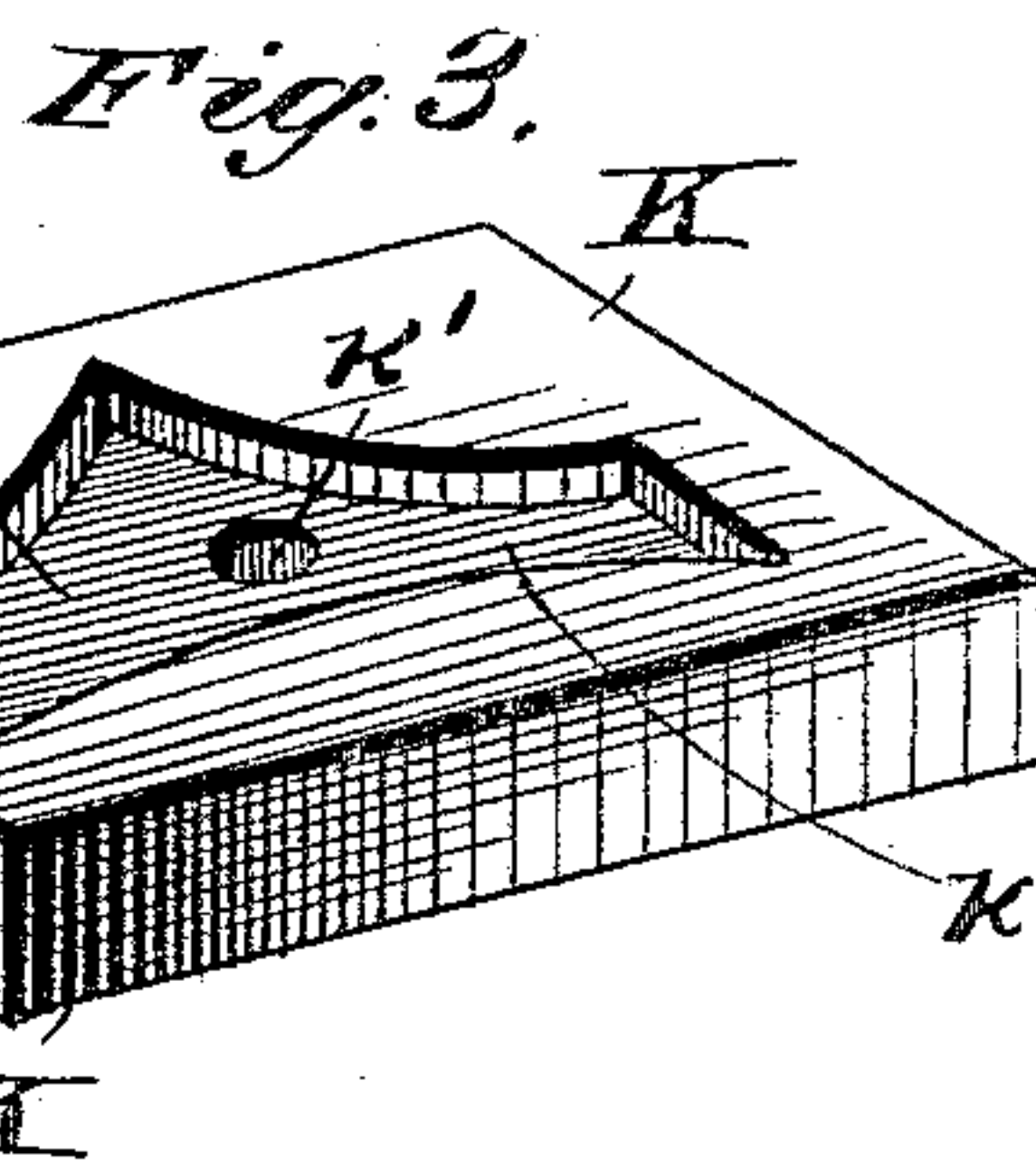
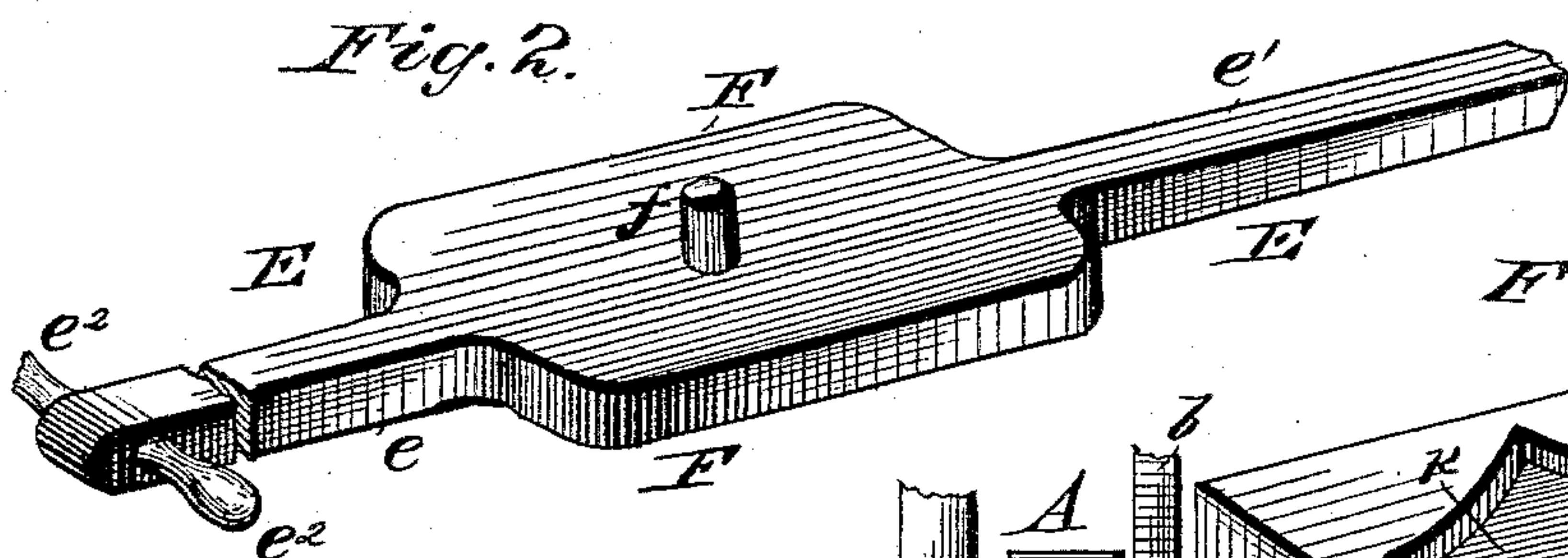
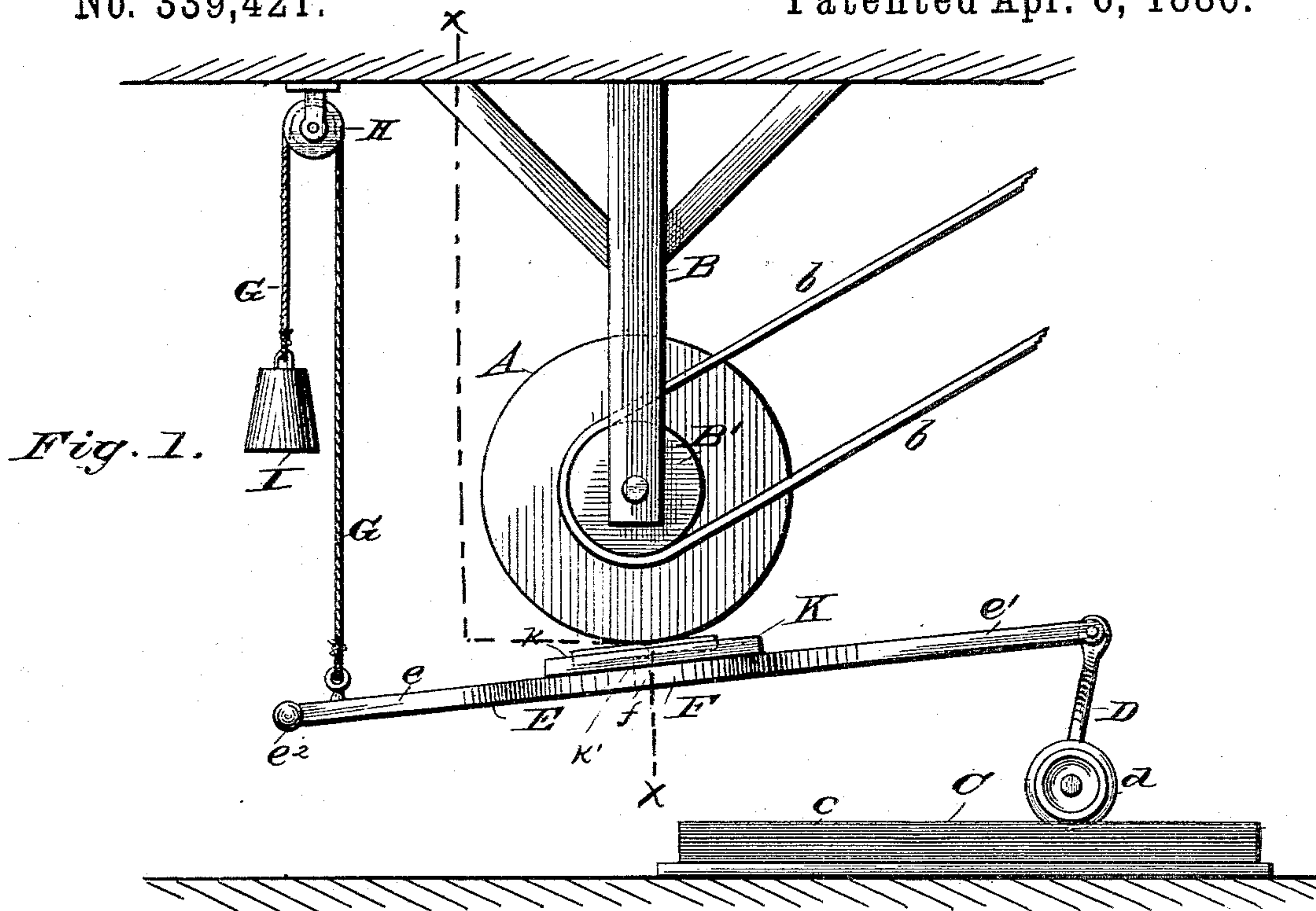
(No Model.)

J. B. HUBER.

MACHINE FOR GRINDING PLOW POINTS.

No. 339,421.

Patented Apr. 6, 1886.



WITNESSES

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JOHN B. HUBER, OF SOUTH BEND, INDIANA.

MACHINE FOR GRINDING PLOW-POINTS.

SPECIFICATION forming part of Letters Patent No. 339,421, dated April 6, 1886.

Application filed June 16, 1885. Serial No. 168,845. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. HUBER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Machines for Grinding Plow-Points; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to mechanism for grinding plow-points, particularly those of chilled metal, its object being to devise means whereby the said grinding may be accomplished much more rapidly and at less cost than by mechanism of the usual construction.

The invention consists, essentially, in securing the point to be ground in a matrix or bed so shaped that the point lies and is held in the hollow thereof, and pivoting the said matrix on a frame, which the workman moves in the necessary manner under the grindstone. The flat surfaces of the block and bed make the matrix adhere with sufficient force to the bed on the frame on which it is pivoted to prevent its turning under the action of the stone, but not to prevent its being turned by hand.

In the drawings, Figure 1 is a side elevation. Fig. 2 is a perspective view of the lever. Fig. 3 is a perspective view of the matrix; and Fig. 4 is a sectional view on line $x x$, Fig. 1.

Referring to the accompanying drawings by letter, A designates a grindstone of proper size, journaled in a frame, B, of suitable construction, the lowest part of the periphery of the stone being the point at which the grinding takes place. The axle on which the stone is fixed, and with which it turns, has secured upon it a pulley, B', driven by the belt b from an engine or machine supplying sufficient power.

C is a railway running below the grindstone and parallel with the sides thereof.

D is a truck of suitable construction, provided with the wheels d , which travel on the rails $c c$ of the railway C.

E is a lever having an arm, e' , pivoted to the center of the truck D, so as to be capable of vibration up and down thereon. The opposite arm of the said lever is provided with a suit-

able handle, e^2 , by means of which the lever and truck can be moved back and forth on the railway C. The central portion of the lever E is formed into a bed-piece, F, having its upper surface flat, and provided centrally with a vertical pin, f , as shown.

G is a cord or rope, one end of which is secured to the arm e of the lever E near the handle e^2 , and ascending from the lever passes over a pulley, H, and has secured to its depending end a weight, I, which is heavy enough to pull the lever E and bed F up against the grindstone with sufficient force.

K is the bed or matrix in which the plow-point to be ground is placed. The matrix has a recess, k , made in its upper surface, conforming to the shape of the plow-point, which is placed therein, the shape of the recess keeping it well in place. The under surface of the matrix K is flat and lies upon the bed F of the lever E.

k' is a vertical opening running from the under surface of the matrix, into which opening the pin f of the bed F enters, so as to pivot the matrix on the bed, the pin being short enough not to protrude into the recess k of the matrix.

The plow-point, being placed in the recess of the matrix, is brought up against the edge of the rotating grindstone by the weight I, which lifts the arm e of the lever E. The workman can then by means of the handles e^2 move the plow-point under the grindstone, so that different parts thereof may be ground as needed. The water and sand or grit descending from the stone pass through the opening k' , and, spreading between the adjacent surfaces of the matrix and bed-piece F, aid in causing them to adhere sufficiently to prevent the action of the stone from turning the matrix on the bed; but their adhesion is not strong enough to prevent the matrix being turned by hand to any position required to grind the plow-point in the proper way. Thus by the friction between the surfaces the plow-point does not need to be secured by bolts or pins to the matrix, nor does the matrix need to be similarly secured to the bed of the lever.

The matrix-blocks are by this mechanism made interchangeable, so that one recessed to accommodate any size or shape of plow-point

can be readily affixed to the bed-piece on the lever.

Having described my invention, I claim—

1. In mechanism to grind plow-points, the
5 combination of a vertically-rotating grind-
stone, and a lever arranged to reciprocate ver-
tically below the same in the plane of its rota-
tion, with a rope or cord secured to said lever,
and having a weight attached and adapted to
10 draw the lever up toward the grindstone, a
bed-piece made on the said lever, and a matrix-
block recessed on its upper surface to receive
and hold the plow-point to be ground, and
pivoted on the bed-piece in such manner that
15 friction between the surfaces makes it adhere
to the bed-piece with sufficient force to pre-
vent its being turned thereon by the action of
the grindstone, substantially as specified.

2. The combination of the rotating grind-
20 stone A, the lever E, pivoted on the bed-plate

F, the rope or cord G, passing over the pulley
H, and having the weight I attached to its de-
scending end, sufficiently heavy to pull the at-
tached end of the lever E upward, the matrix
K, pivoted on the bed-piece F, and recessed on 25
its upper surface to receive the plow-point to
be ground, the handle e^2 , by means of which the
lever E is reciprocated, the truck D, pivoted
to the ends of the lever E opposite the handle,
and the rails $c\ c$, upon which the wheels of the 30
truck travel, all constructed and arranged sub-
stantially as set forth.

In testimony that I claim the foregoing as
my own I affix my signature in presence of two
witnesses.

JOHN B. HUBER.

Witnesses:

JAMES DU SHANE,
WILLIS A. BUGBEE.