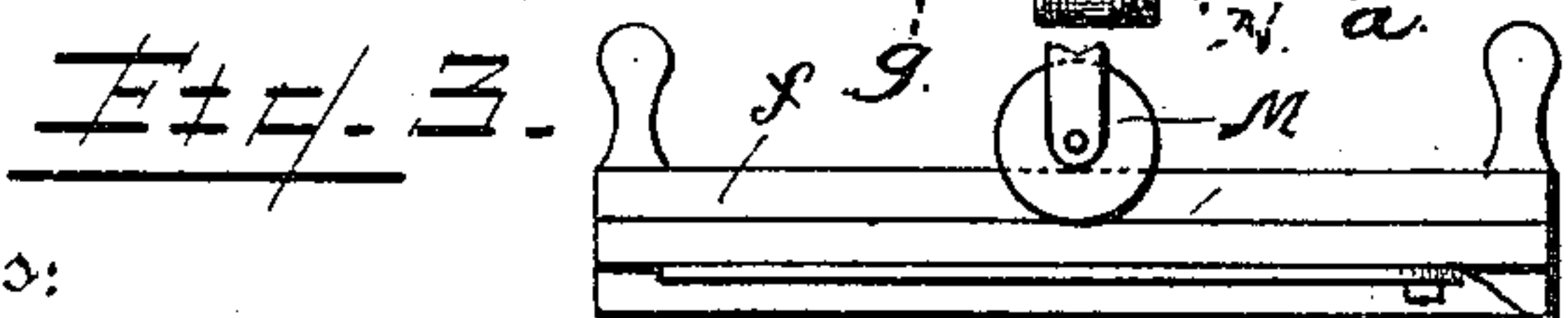
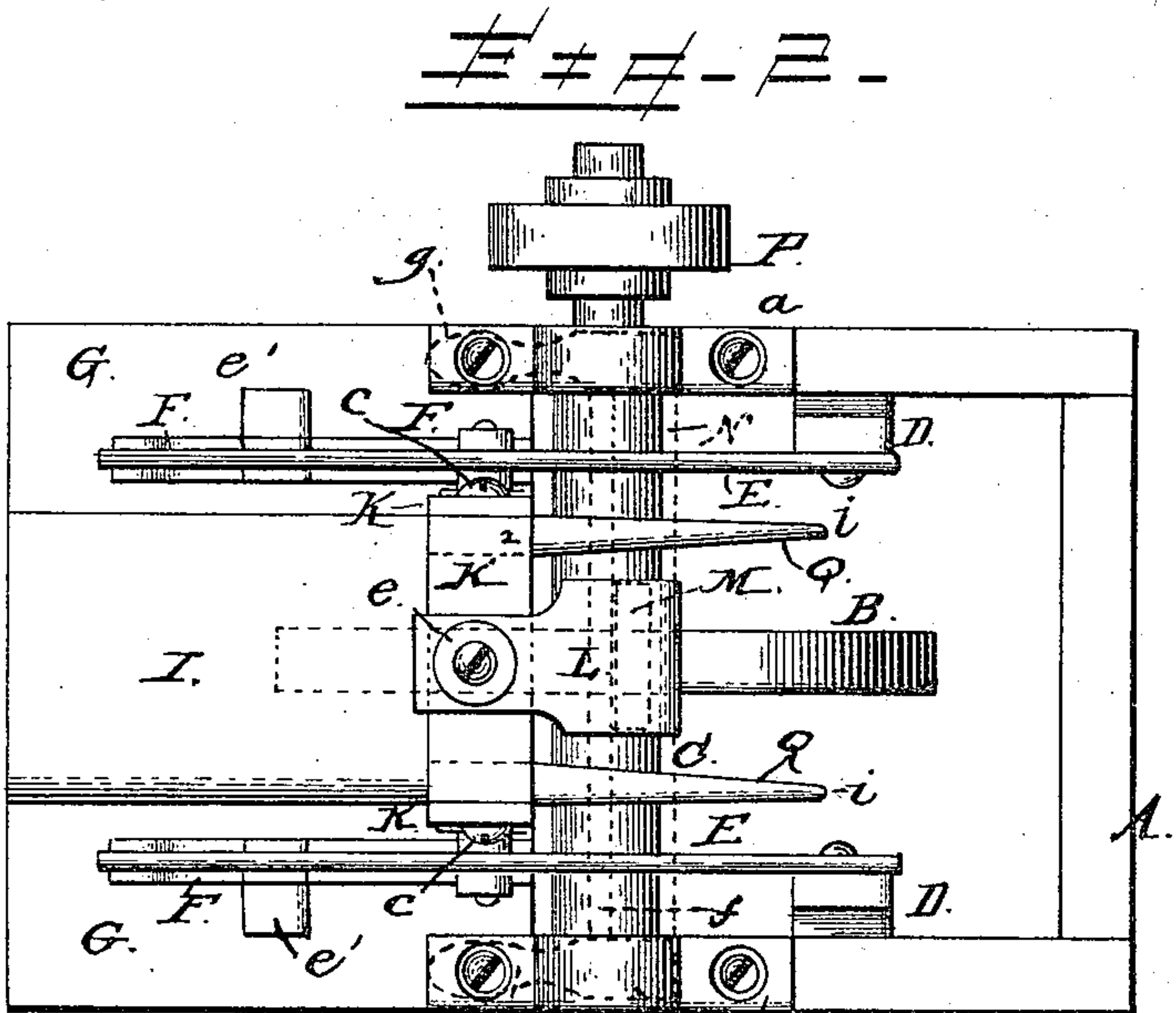
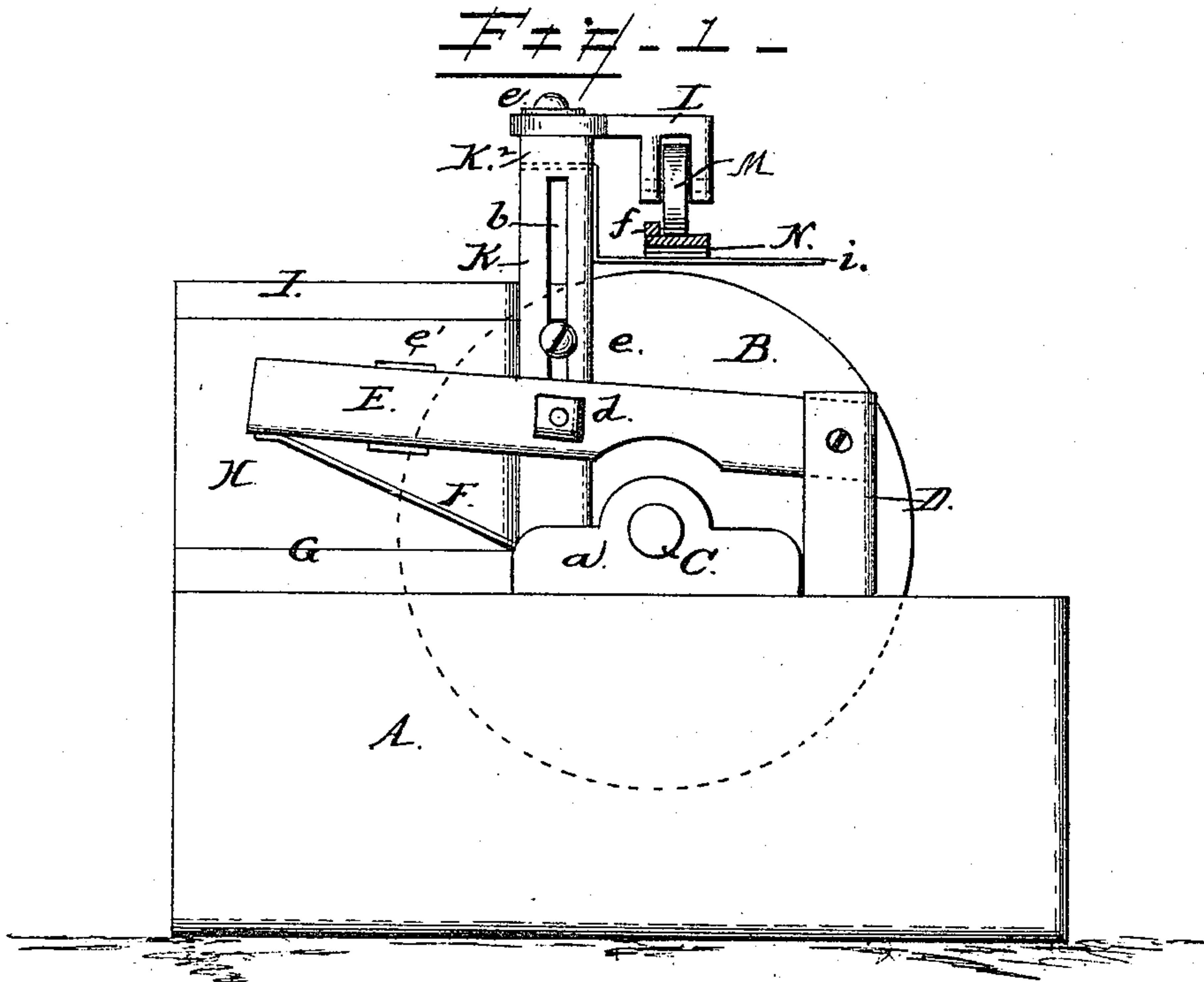


(Model.)

H. A. AXTELL.
MACHINE FOR GRINDING CUTLERY.

No. 451,012.

Patented Apr. 28, 1891.



Witnesses:

Albert B. Blackwood
Jost H. Blackwood

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UNITED STATES PATENT OFFICE.

HENRY A. AXTELL, OF TURNER'S FALLS, MASSACHUSETTS.

MACHINE FOR GRINDING CUTLERY.

SPECIFICATION forming part of Letters Patent No. 451,012, dated April 28, 1891.

Application filed November 6, 1890. Serial No. 370,441. (Model.)

To all whom it may concern:

Be it known that I, HENRY A. AXTELL, a citizen of the United States, residing at Turner's Falls, in the county of Franklin and State of Massachusetts, have invented certain new and useful Improvements in Machines for Grinding Cutlery, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in machinery for grinding and polishing cutlery and other articles; and it relates particularly to the grinding of table-cutlery in the process of manufacture.

My invention has for its object to provide a machine of simple construction and easy operation, whereby an operator of ordinary skill may effect the grinding of such mentioned articles to as high a degree of perfection as an expert may do by hand with the ordinary grinding device.

In my drawings, Figure 1 is a side elevation of the machine. Fig. 2 is a plan or top view of the same. Fig. 3 is a detail showing the knife-holder as applied to the machine.

Similar reference-letters indicate like parts in all figures of the drawings.

In my machine I mount upon a box-like frame A, provided with suitable journal-boxes, as *a*, a grinding-wheel B, fixed upon an arbor C. To the said frame uprights D D are fixed, to which latter pedal-bars E E, having stirrups *e'*, are pivoted. The pedal-bars E are held normally up by strap-springs F F, which are secured each at one end to a part of the frame A, their opposite ends being free and resting under the pedal-bars E.

To the part G of the frame A are secured a base H for a saddle I, upon which the operator sits when at work. A frame provided with uprights K, having slots *b b*, and a connecting-bar K² are held against the saddle-base by screws *c c*. These uprights K are connected to the pedal-bars E E by bolts *d*.

To the connecting-bar K² is adjustably fixed by means of a screw *e* a guide-frame L, having a pivoted wheel M, which stands immediately above the axis of the grindstone.

N is a holder for the plate or piece of cut-

lery to be ground, which consists of a long bar provided with a longitudinal cleat *f* and handles *g*. On the under side of the holder N is the place for the piece of cutlery to be ground, and it is secured to place by some simple means. In the hands of the operator the holder N is held upon the grindstone with the longitudinal cleat *f* bearing against the wheel M. The operator moves the holder with its article to be ground beneath laterally over the face of the stone as the latter revolves under the influence of the applied power through the medium of a pulley P and a connecting-belt or other suitable gear.

In the operation of the device the operator sits upon the saddle with his feet upon the stirrups *e'* of the pedal-bars E. By a proper pressure on said pedal-bars he brings down the frame K, with the wheel M and holder N, to give the proper bearing upon the stone to the article being ground. No effort is required upon the part of the operator to hold the article against the outward movement of the stone, as this is precluded by the cleat *f*, bearing against the inner flat surface of the wheel M. Brackets Q Q, fastened to the frame K², have springy arms *z*, extending outward to serve as rests for the holder N. These arms readily yield to the pressure of the feet of the operator, but materially assist him in managing the article bearing on the stone.

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

1. The combination, with the plate-holder described, of the guide-frame L, the wheel M, journaled in said frame, and the vertically-movable frame formed of uprights and a connecting-bar, to which is attached the said guide-frame, as and for the purpose set forth.

2. The combination, with the plate-holder, as described, and the guide-wheel secured to the vertically-movable frame, of the spring supporting-arms attached to the vertically-movable frame, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY A. AXTELL.

Witnesses:

EDWARD A. SEVERANCE,
LOUIS MARCH.