

(No Model.)

F. W. WICHT.
NUMBERING HEAD.

No. 414,664.

Patented Nov. 5, 1889.

Fig. 1.

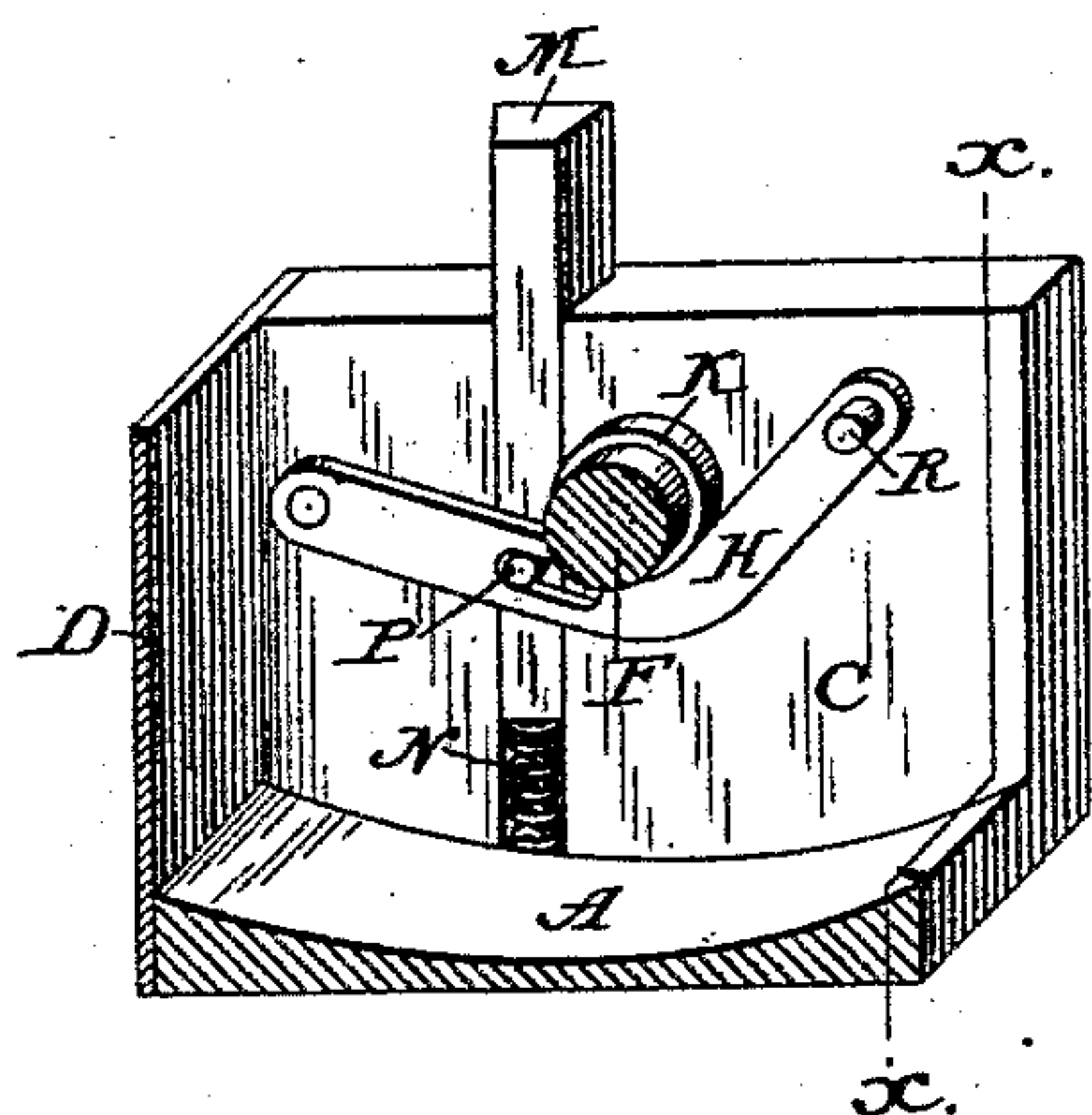


Fig. 2.

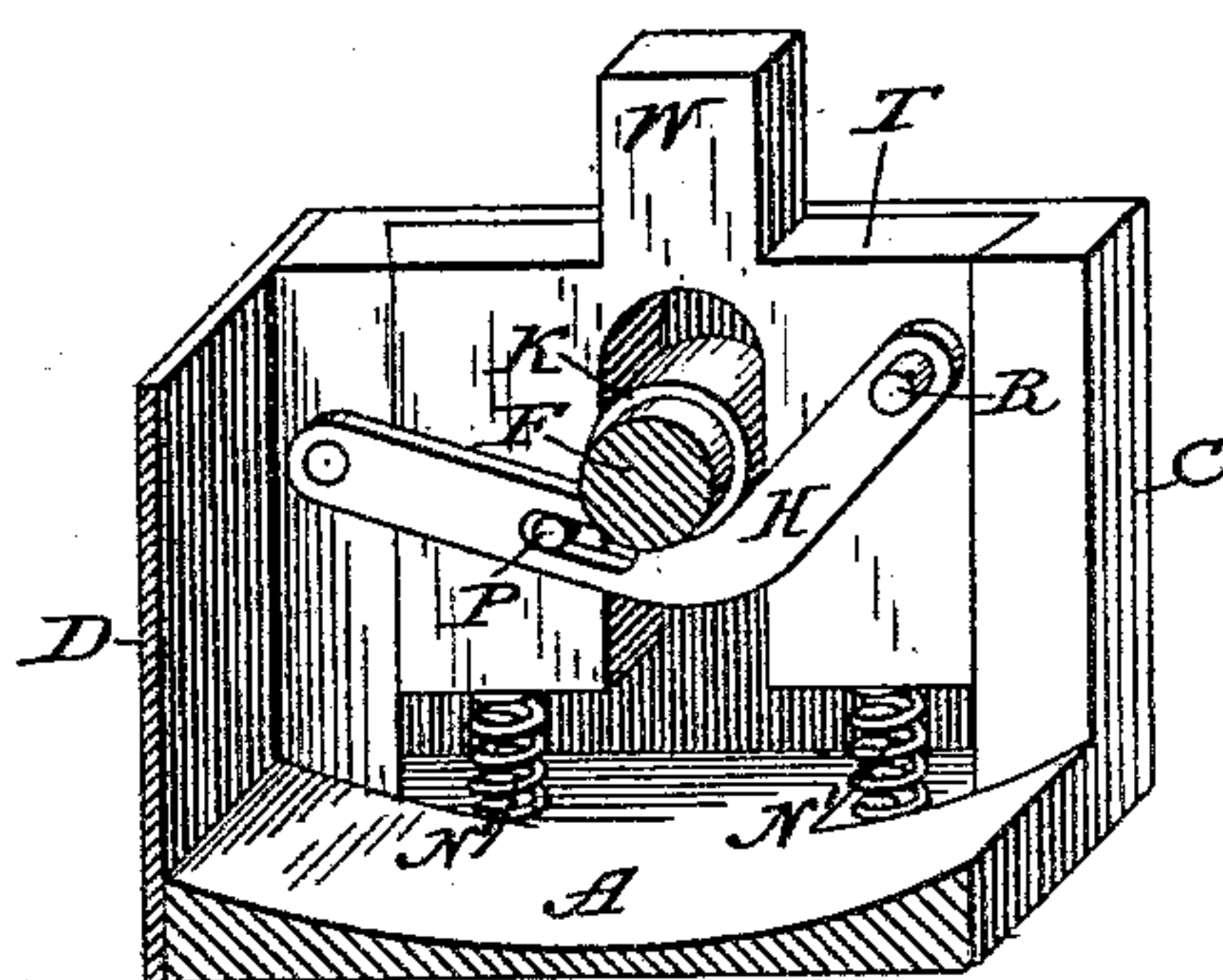


Fig. 3.

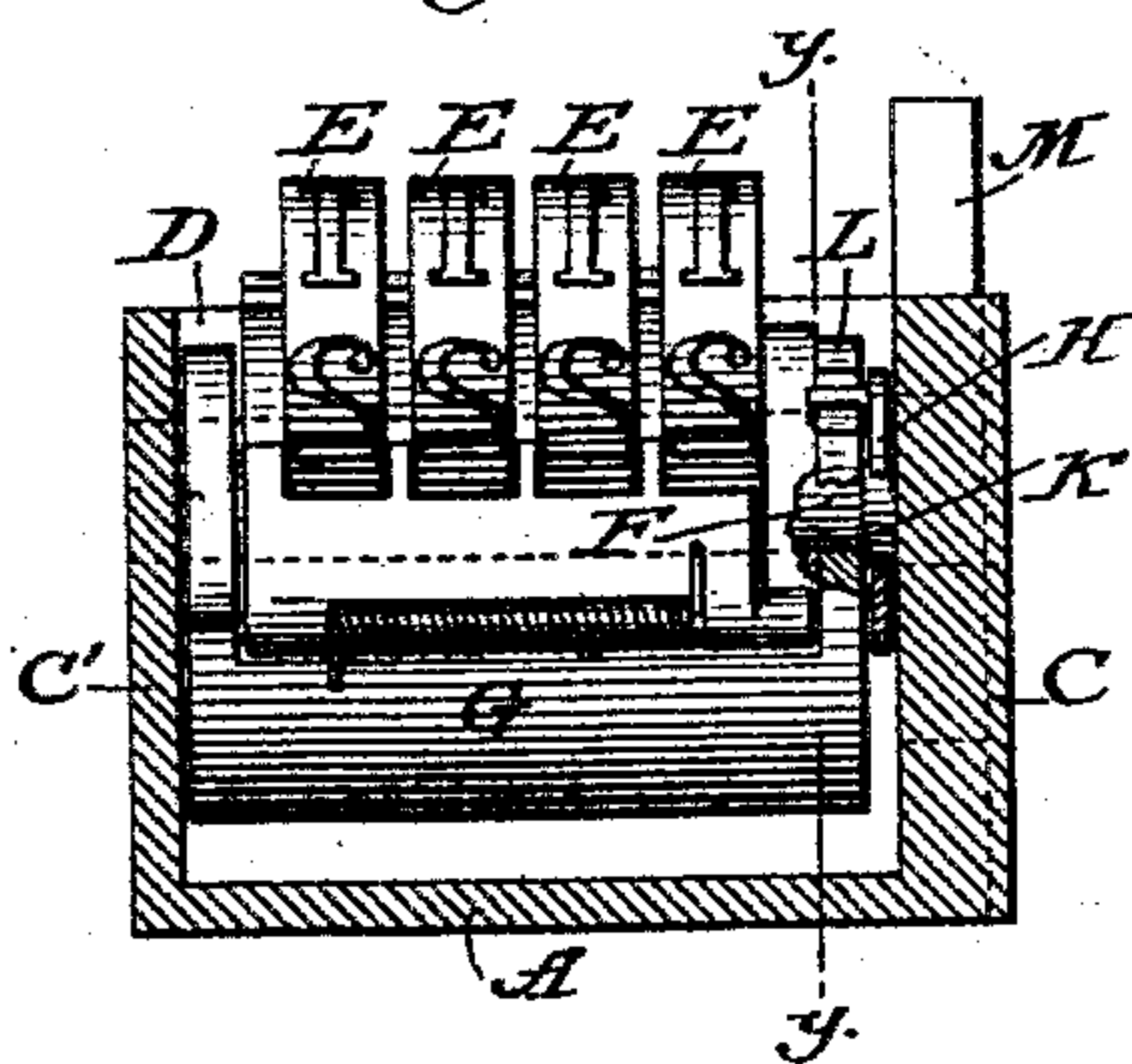
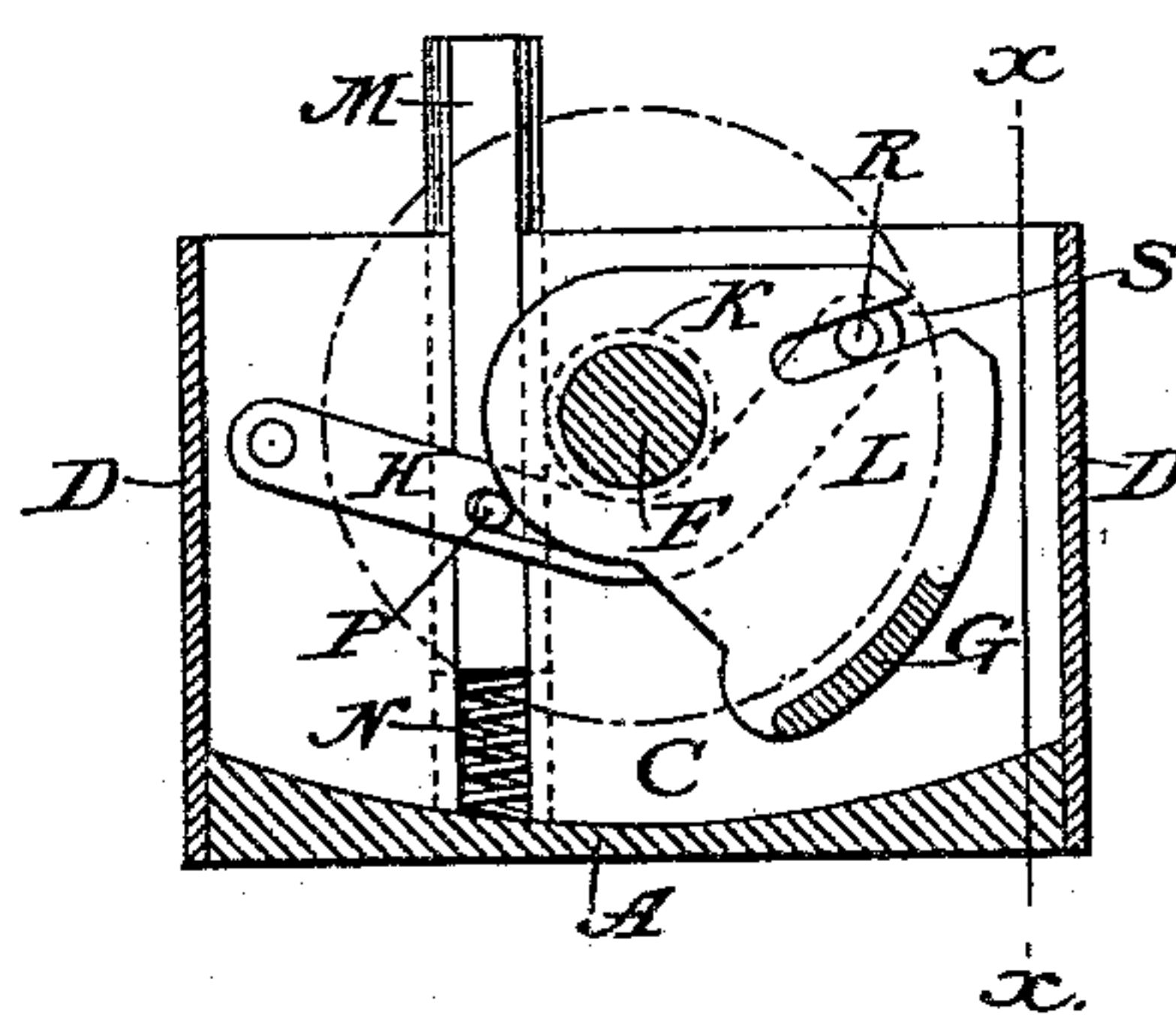


Fig. 4.



Attest:

A. N. Jespersen

E. M. Watson,

Inventor:

Frank W. Wicht

By David A. Burr

Atty.

UNITED STATES PATENT OFFICE.

FRANK W. WICHT, OF BROOKLYN, NEW YORK.

NUMBERING-HEAD.

SPECIFICATION forming part of Letters Patent No. 414,664, dated November 5, 1889.

Application filed July 16, 1888. Serial No. 280,080. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. WICHT, residing in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Consecutive-Numbering Heads; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is an interior view, in perspective, of one end of the case or frame of a consecutive-numbering head, the numbering-wheels and the swinging pawl-frame actuating the same being removed and the shaft broken away. Fig. 2 is a similar view illustrating a modification of my invention. Fig. 3 is a vertical longitudinal section of the numbering-head complete, in line *x x* of Figs. 1 and 4; and Fig. 4, a vertical transverse section in line *y y* of Fig. 3.

The object of my invention is to simplify the machine, reduce its length, and adapt it the more perfectly for use in combination with a form of type, and this I accomplish in manner as hereinafter described and claimed, by extending the axial shaft from end to end of the casing and fitting the plunger to reciprocate in the end of the casing at one side of the shaft, and by interposing the lever by which the swinging pawl-frame is actuated immediately between said frame and plunger and extending it transversely under the shaft to be engaged by the plunger on one side thereof and to engage the frame on the opposite side thereof, whereby the need of a separate compartment for the plunger and of a transverse partition-plate in the casing are dispensed with.

In the accompanying drawings, A represents the base, C C' the end plates, and D D the side plates forming the case or frame of the numbering-head.

E E are the numbering-wheels, F the shaft upon which said wheels revolve, and G, Figs. 3 and 4, the swinging frame carrying the pawls by which the numbering-wheels are actuated in the reciprocating movement of the frame. These parts are all of the usual approved construction as found in this class

of numbering-machines, and need not be further described.

H is the vibrating lever by which the pawl-frame G is actuated. This lever is pivoted directly to one end of the end plate C of the case, upon its inner face, to extend transversely over said face nearly to the opposite side of the case, being bent to pass under the shaft F and to extend at its free end up above the level thereof, as shown in the drawings, Figs. 1, 2, and 4. The portion of the shaft F adjacent to the end plate C is enlarged in diameter by means of a collar fitted thereon, or otherwise, so as to form an annular shoulder or offset K about the shaft at a distance from the end plate equal to the thickness of the lever H. The proximate end plate L of the swinging pawl-frame G, which is pivoted on the shaft, is carried against said shoulder, and is thereby prevented from coming into contact with the lever to interfere with its free movement. (See Fig. 3, and dotted lines, Fig. 4.) A pin R, projecting laterally from the free end of the lever H, projects into a slot or notch S, Fig. 4, cut in the front edge of the plate L of the swinging pawl-frame G, whereby, when the lever swings upon its pivot it will produce a corresponding oscillation of said pawl-frame sufficient to produce a revolution of the numbering-wheels E E actuated mediately by said frame. A rod M is fitted to reciprocate in a vertical slot cut in the end plate C, near to the shaft F, on the side thereof adjacent to the pivoted end of the lever H, and said rod is supported upon a spring N, fitted in the lower end of the slot, so that the upper end of the rod shall project above the top of the case to a level above that of the type-wheels E E fitted therein. The lever H is longitudinally slotted at the point where it is intersected by the rod M, and a pin P is fitted in the rod to project therefrom through the slot. The slot is so far extended as to permit of the free play of the rod in its seat and of an oscillation of the lever by means of the bearing of the pin in said slot during the movement of the rod.

In the operation of the device, when the numbering-head is locked in a form of type and placed upon the bed of a printing-press,

the end of the rod M projecting above the level of the type will be struck by the platen of the press as it descends to take an impression and forced down in its seat, thereby compressing its spring N. As the rod M descends, its pin P, engaging the slot in the lever H, will carry said lever down with it, and this movement of the lever will, by reason of the engagement of the pin R in its outer end with the slot in the end plate L of the pivoted pawl-frame G, cause the latter to swing forward far enough to carry its pawls into engagement with a new notch on the ratchet of the appropriate numbering-wheel. When the platen of the press rises, the action of the spring N will cause a return of the lever H and pawl-frame G to their normal positions, the return of the pawl-frame operating in the customary manner to cause the numbering-wheel engaged thereby to turn one step. Where it is desired or required to make the head stronger and more positive in its movements, I substitute for the single rod M a wide block or plate T, (see Fig. 2,) centrally notched to embrace the shaft F and mounted upon two springs N N'. This reciprocating block is fitted to play vertically in the end

plate C of the case, similarly to the rod M, and is in like manner coupled to the lever H by a pin P. It is provided with a central projection W to project above the type. Its operation in use is similar to that of the rod M, as hereinbefore described.

I claim as my invention—

The combination, in a numbering-head, with its numbering-wheels, the swinging pawl-frame actuating said wheels, and an axial shaft extending from end to end of the casing and upon which the wheels and pawl-frame are mounted, of a plunger reciprocating vertically in one end of the casing at one side of the shaft, and a lever pivoted to the casing to extend transversely under the shaft, immediately between the pawl-frame and plunger, in engagement with each, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK W. WICHT.

Witnesses:

A. N. JESBERA,
E. M. WATSON.