

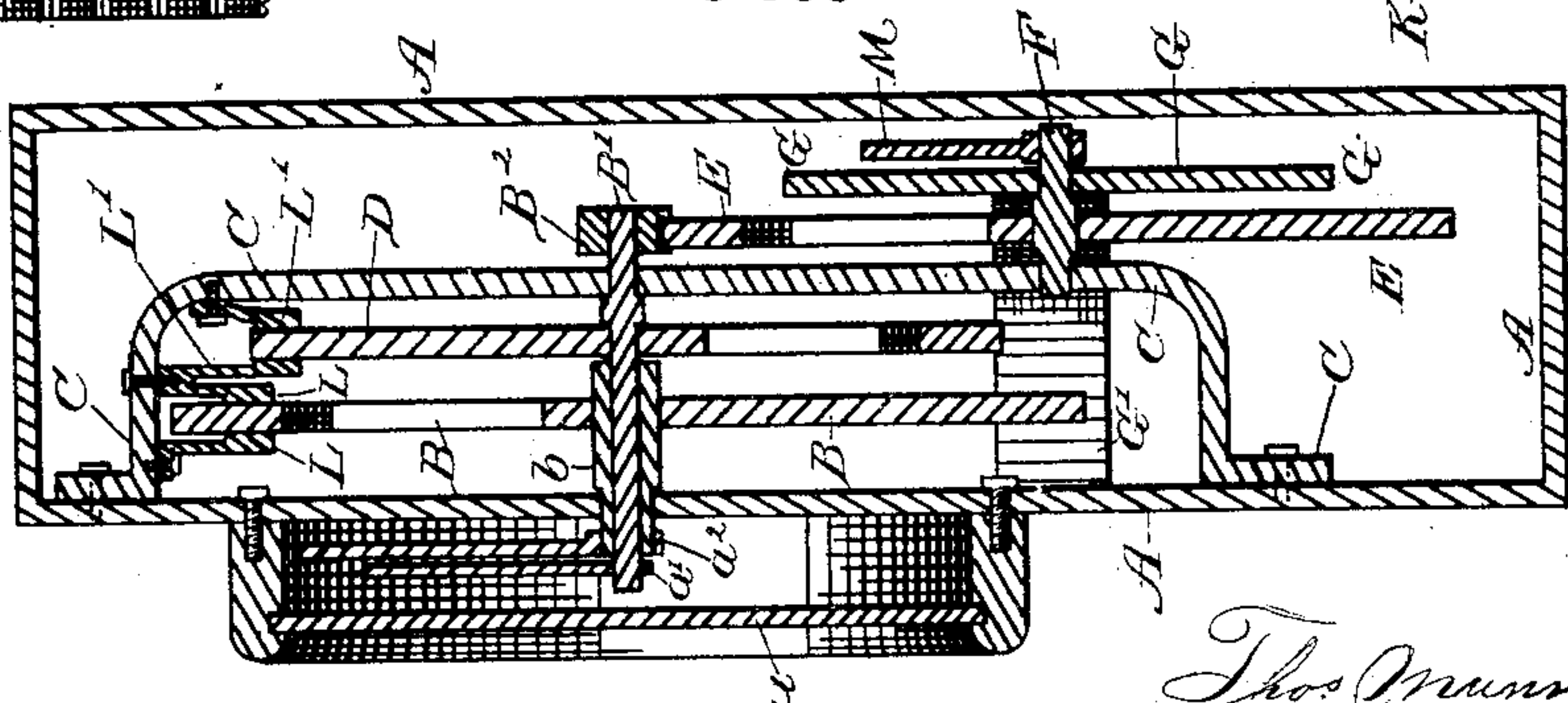
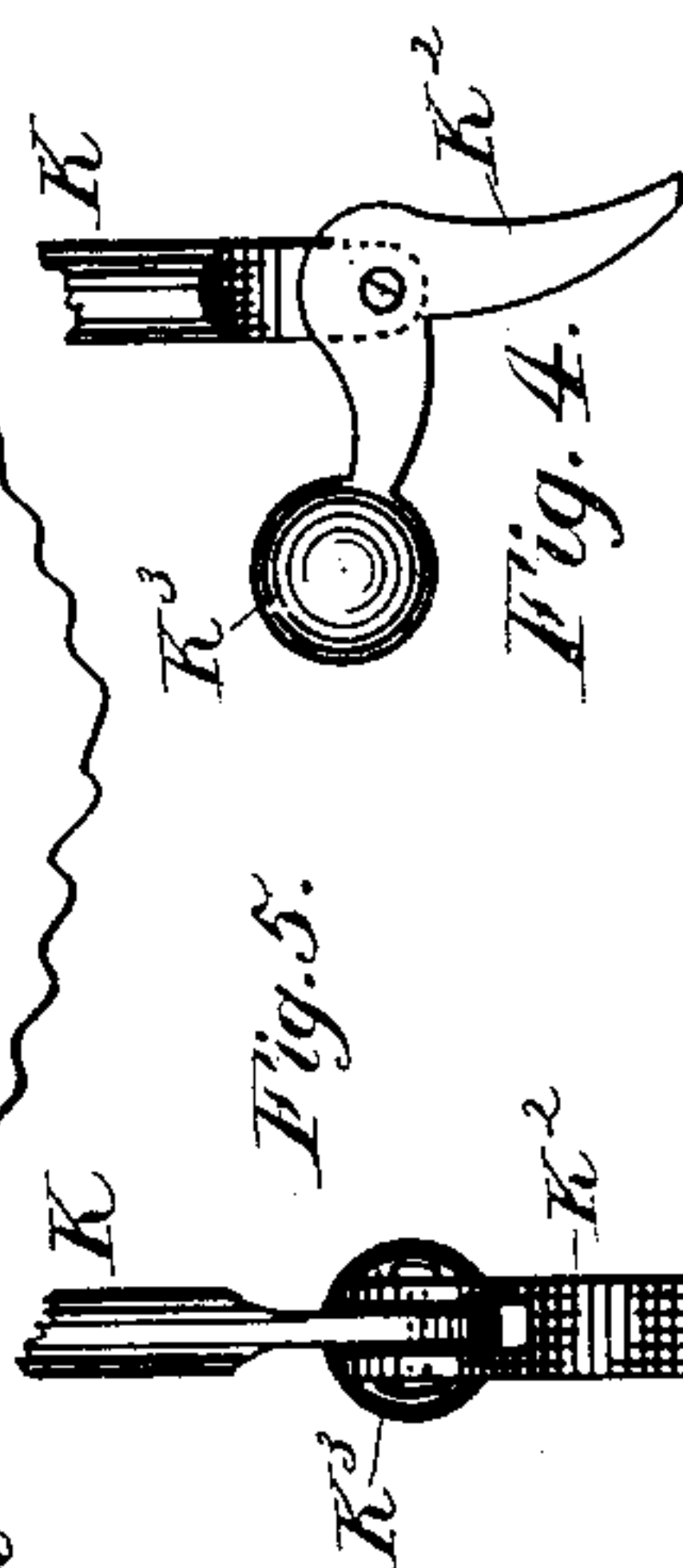
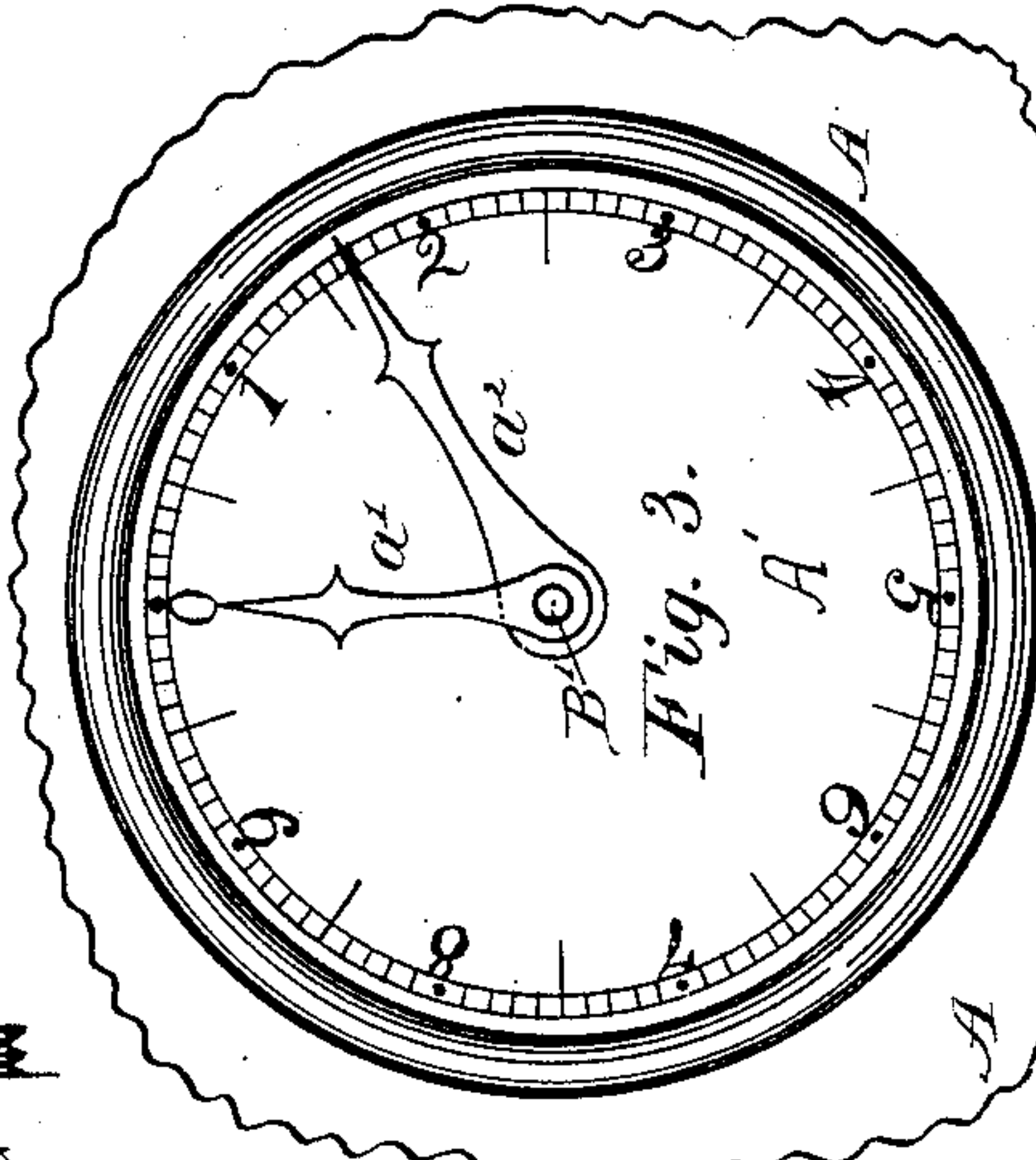
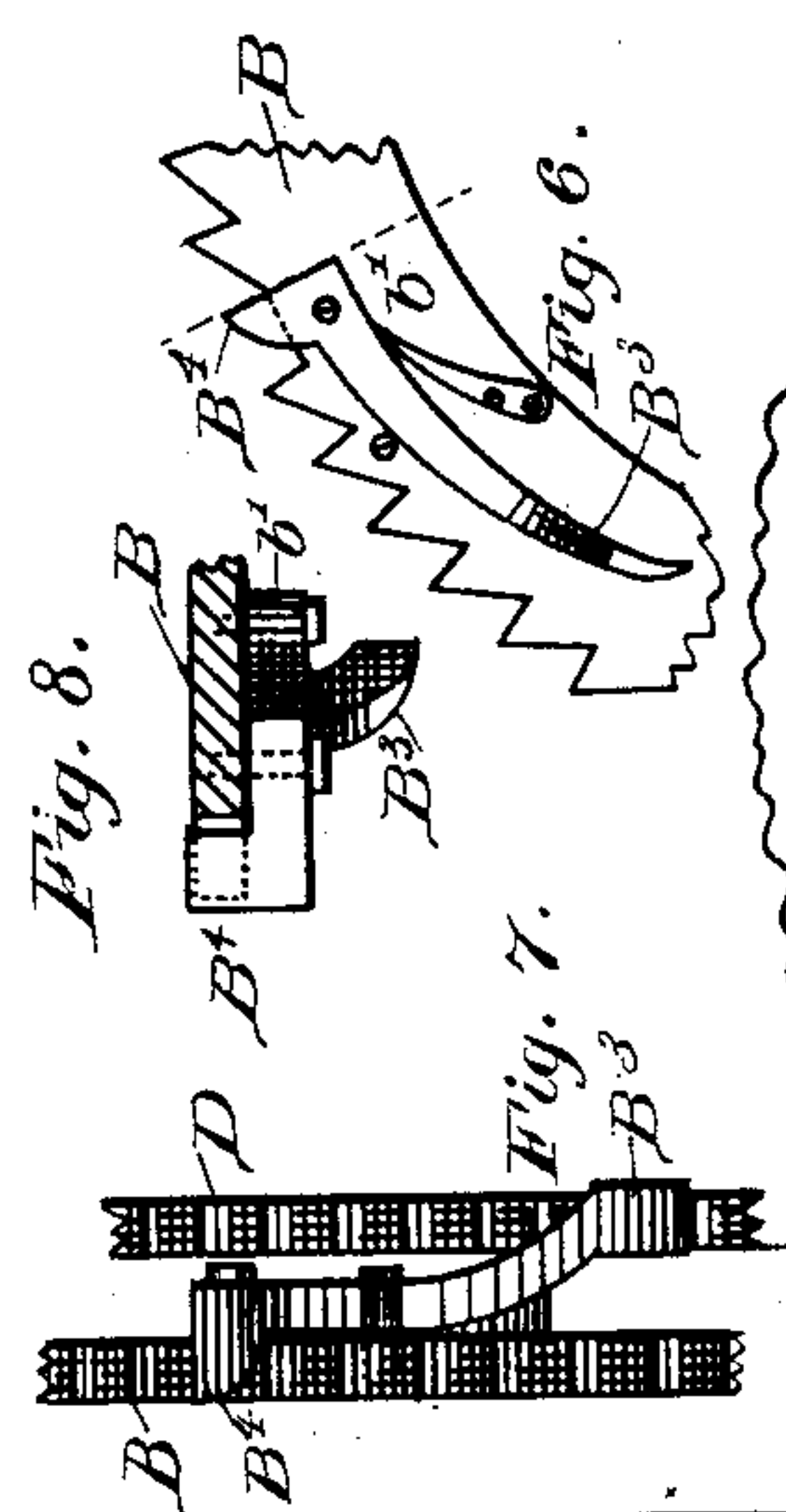
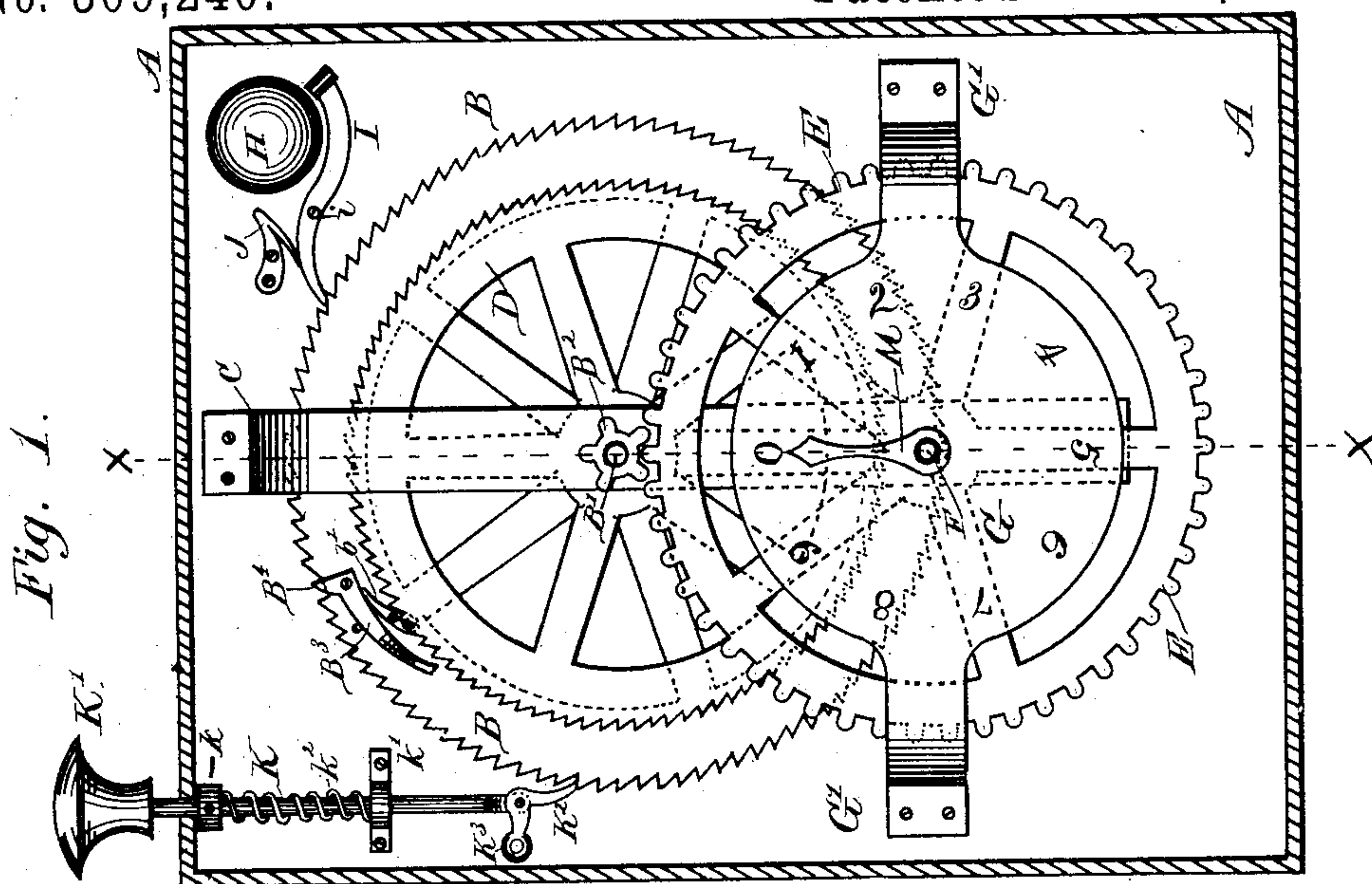
(No Model.)

T. MUNNELL.

CASH REGISTER.

No. 309,240.

Patented Dec. 16, 1884.



Witnesses  
John C. Miller  
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# UNITED STATES PATENT OFFICE.

THOMAS MUNNELL, OF MOUNT STERLING, KENTUCKY.

## CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 309,240, dated December 16, 1884.

Application filed June 4, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS MUNNELL, of Mount Sterling, in the county of Montgomery and State of Kentucky, have invented certain  
5 new and useful Improvements in Cash-Registers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make  
10 and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this improvement is to produce  
15 an apparatus for registering cash payments made at toll-gates, soda-fountains, and such like places of business, to a very high number in a way that cannot be tampered with by the operator. These results are attained by the  
20 mechanism illustrated in the drawings, herewith filed as part hereof, in which the same letters of reference denote the same parts in the different views.

Figure 1 is a rear elevation, partly in section, of a registering apparatus embodying the features of my improvement. Fig. 2 is a vertical transverse section, taken on the line  $x x$  of Fig. 1. Fig. 3 represents a section taken from the front of the apparatus, for the purpose of  
30 giving a more complete view of the dial. Fig. 4 is a section of one of the parts. Fig. 5 is a view of the same as seen from a different direction. Fig. 6 is a sectional view of one of the parts. Fig. 7 is a sectional view of connecting parts. Fig. 8 is a sectional view more fully illustrating the construction and relation of the parts.

A A A is an inclosing-case, to be made preferably of metal, with the parts shown integral  
40 with each other.

B is a ratchet-wheel having a sleeve or hub,  $b$ , integral therewith, by means of which it is loosely secured upon and supported by a shaft,  $B'$ , having bearings in the front of the inclosing-case A, and the frame-piece C, secured  
45 thereto by any suitable means.

D is a ratchet-wheel of less diameter than the wheel B, and rigidly secured to the shaft  $B'$ , which is provided at its rear end with a pinion,  $B^2$ , having five cogs, for a purpose hereinafter set forth. The shaft  $B'$  and the sleeve

or hub  $b$  of the ratchet-wheel B pass through the front of the casing A, which is provided with a registering-dial,  $A'$ , inclosed by the circular part of the case, and having a vision-  
55 glass,  $a$ . The shaft  $B'$  is provided at its front end with an indicator,  $a'$ , and the front end of the sleeve or hub  $b$  is provided with an indicator,  $a^2$ , of greater length than the indicator  $a'$ .  
60

E is a gear-wheel having fifty cogs meshing with the pinion  $B^2$ , and mounted on a shaft,  $F$ , having bearings in the frame-piece C, and registering dial-plate G, having integral therewith curved extensions  $G' G'$ , by means of  
65 which it is secured to the inclosing-case, as fully shown in Fig. 1.

H is a bell suitably secured to the inclosing-case, to which is also secured, by means of a pivot,  $i$ , a hammer, I, in a position to engage  
70 with the bell H, the ratchet-wheel B, and a tension-spring, J.

$B^3$  is a pawl affixed to the side of the ratchet-wheel B. The pawl  $B^3$  has an extension,  $B^4$ , which occupies the position of a serration of  
75 the ratchet-wheel, which is deprived of a serration in order to make room for said pawl-extension  $B^4$ .

K is a rod provided with a knob,  $K'$ , a collar,  $k$ , and a spiral-spring,  $k^2$ , which supports  
80 the roll K by pressure against the collar  $k$  and eye  $k'$ .

Pivoted to the lower end of the rod K is a pawl,  $K^2$ , having a weighted extension,  $K^3$ , and arranged to engage with the ratchet-wheel  
85 B. The pawl  $B^3$  is arranged to engage with the ratchet-wheel D once only to each revolution of the ratchet-wheel B, as will be hereinafter more fully explained, during the revolution of which wheel the pawl is held clear  
90 of the serrations of the wheel D by means of the spring  $b'$ , as shown in Figs. 1, 6, and 8.

L L and  $L' L'$  are rubbers or brakes arranged to bear upon the ratchet-wheels B and D and prevent them from moving more than  
95 one serration at a time.

The mechanism is operated by means of the pawl  $K^2 K^3$ , through pressure on the rod K, which, because of the knob  $K'$ , can move only  
100 far enough to turn the wheel B the distance of one serration, after which the spiral spring  $k^2$  will raise the rod to the position shown.



With each payment received the employé is required to press down the rod K and move the ratchet-wheel B one serration, which will allow the inner end of the hammer I to drop over the point of the serration, when the spring J will force the outer end against the bell H and cause it to ring. Failure of the employé to register each payment by said ringing is to be considered as evidence of fraud. With each revolution of the wheel B the pawl K<sup>2</sup> will come in contact with the extension B<sup>4</sup> of the pawl B<sup>3</sup> and cause the said pawl to engage with and move the ratchet-wheel D the distance of one serration, the shaft of which is provided with a pinion, B<sup>2</sup>, which engages with and moves the cog-wheel E, to the outer end of which is affixed an indicator, M, and a dial or index register, G. Because of the ratchet-wheel B having one hundred serrations, each revolution made by it will register one hundred receipts. As there are one hundred serrations in the ratchet-wheel D, and as it moves but one serration to each revolution of the wheel B, it will require one hundred revolutions of the latter to produce one revolution of the wheel D, which for that reason will register one thousand payments. As the five-cog pinion B<sup>2</sup> which engages with the gear-wheel E, having fifty cogs, is secured to the same shaft as the ratchet-wheel D, it will take ten revolutions of the latter to produce one revolution of the wheel E, and each single revolution of the wheel D and pinion B<sup>2</sup> will move the indicator M one space or number on the index-register G, or a propor-

tional distance of the space between the numbers thereon, according to the circumstances.

The apparatus should be started with both the indicator-hands  $a'$   $a^2$  at zero, and when the long hand makes one revolution the short hand will move up one space, and so on throughout.

The rear of the apparatus is to be closed, and the dial G is not to be accessible, except to the employer, who, by examining the rear dial, can ascertain at any time the exact number of receipts registered, and may call for an account corresponding thereto.

Any suitable door and lock may be used for securing the inclosure of the dial G.

Having explained the construction and operation of my improvement, what I claim as new, and desire to secure by Letters Patent, is—

The ratchet-wheels B D, in combination with the pawl mechanism K K' K<sup>2</sup> K<sup>3</sup>, and the pawl mechanism B<sup>3</sup> B<sup>4</sup>, secured to the wheel B, sleeve b, dial A', indicators  $a'$   $a^2$ , shaft B', pinion B<sup>2</sup>, shaft F, gear-wheel E, mounted on shaft F, the dial G, and indicator M, all constructed and arranged to operate substantially as specified, for the purpose set forth.

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

THOMAS MUNNELL.

Witnesses:

TOM. CORNELISON,  
LESSIE CORNELISON.