

(No Model.)

2 Sheets—Sheet 1.

A. J. MILLER.

CANCELING AND REGISTERING DEVICE.

No. 407,543.

Patented July 23, 1889.

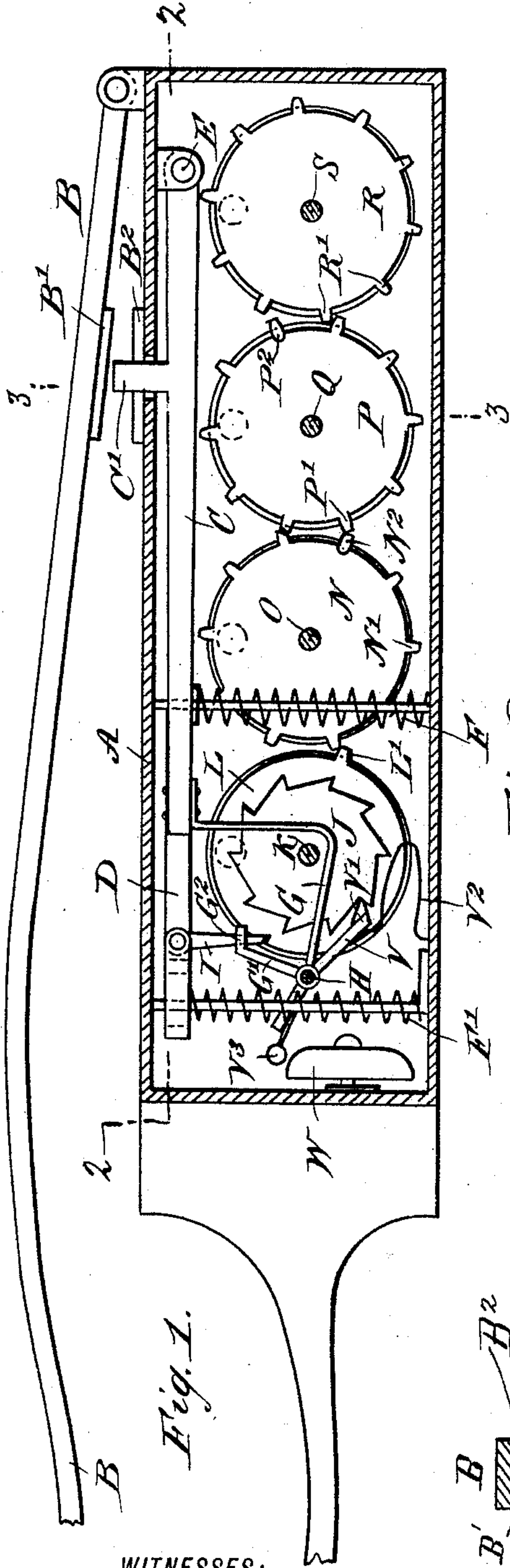


Fig. 1.

WITNESSES:

Don Twitchell  
C. Sedgwick

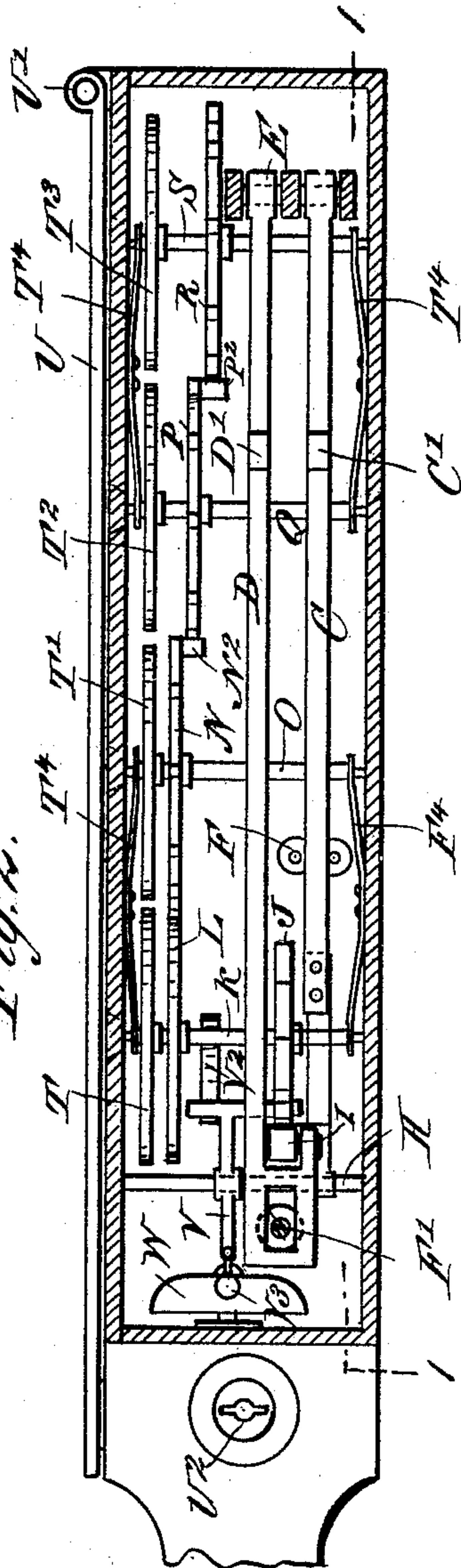


Fig. 2.

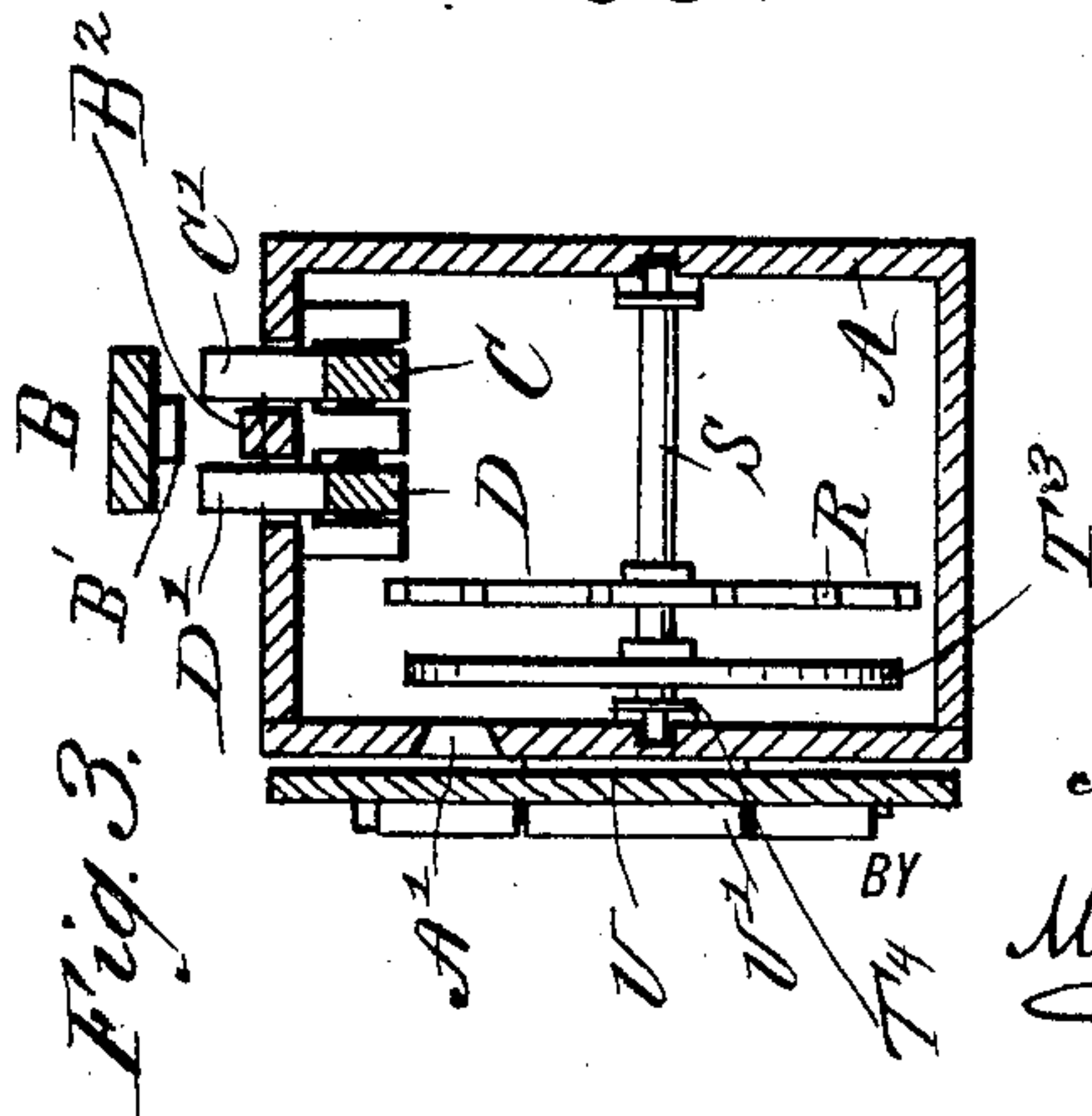


Fig. 3.

INVENTOR:

A. J. Miller  
Munn & Co

ATTORNEYS.

(No Model.)

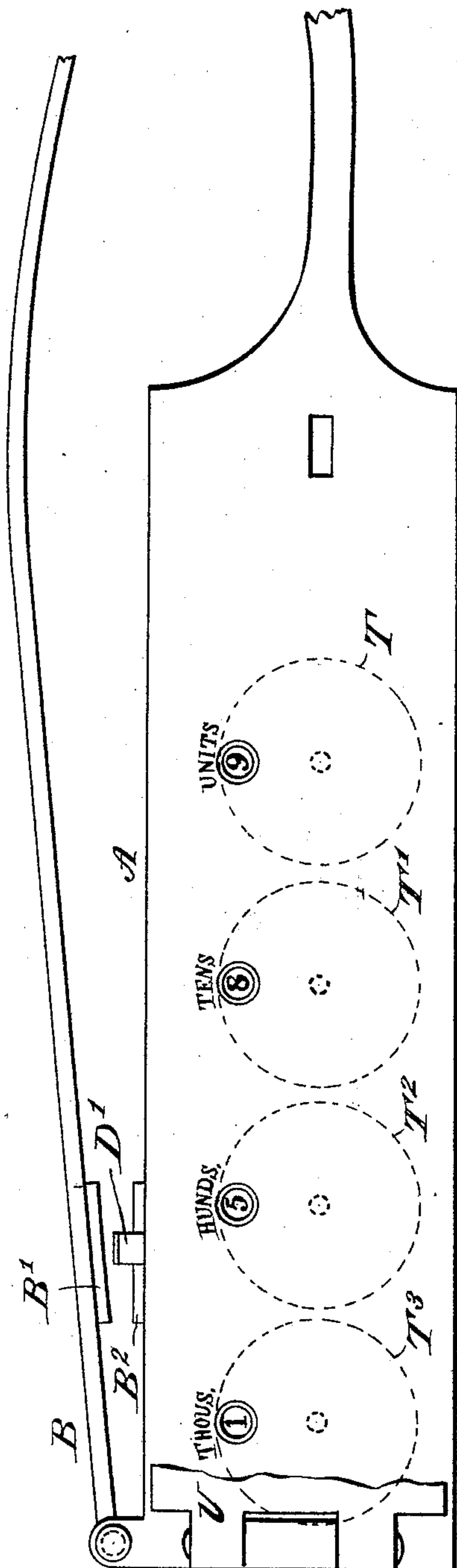
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Fig. 4.



WITNESSES:

*Donn Smithell*  
*W. Sedgwick*

INVENTOR:

*A. J. Miller*  
BY *Munn & Co.*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ARTHUR J. MILLER, OF SWEDEN, PENNSYLVANIA.

## CANCELING AND REGISTERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 407,543, dated July 23, 1889.

Application filed September 25, 1888. Serial No. 286,308. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR J. MILLER, of Sweden, in the county of Potter and State of Pennsylvania, have invented a new and Improved Canceling and Registering Device, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved canceling and registering device which is simple and durable in construction, very effective in operation, and specially intended for conductors' use in canceling tickets and registering the same, at the same time ringing a bell at each cancellation.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement on the line 1 1 of Fig. 2. Fig. 2 is a plan view of the same on the line 2 2 of Fig. 1, and Fig. 3 is a vertical cross-section of the same on the line 3 3 of Fig. 1. Fig. 4 is a side elevation of the same, the hasp being broken away to allow the numerals of the wheels to be seen through the openings.

The improved canceling and registering device is provided with a box A, on top of which is fulcrumed a lever B, adapted to press on the lugs C' and D', projecting upward through suitable slots in the top of the box A, said lugs being fastened to the levers C and D, fulcrumed at E to the interior of the box A below the top. The levers C and D are held in an uppermost horizontal position by springs F and F', respectively, pressing against the under sides of the said levers, being held in the box A.

The lever C is somewhat shorter than the lever D, and is provided at its outer end with a spring G, fulcrumed at its outer end to the rod H, secured transversely in the sides of the box A. From the end of the spring-lever G projects upward an arm G', having a loop G<sup>2</sup>, through which passes loosely a pawl I, pivoted near the outer end of the lever D. The pawl I is adapted to engage a ratchet-wheel

J, fastened on a shaft K, mounted to turn in suitable bearings in the box A, and carrying a disk L, provided in its periphery with a tooth L', adapted to engage one of the ten teeth N' of the disk N, secured on a transverse shaft O, also mounted in suitable bearings in the box A. On the face of the disk N is formed a tooth N<sup>2</sup>, adapted to engage at every revolution one of the ten teeth P' of a disk P, secured on a shaft Q, mounted to rotate in suitable bearings in the box A.

On the face of the disk P is secured a tooth P<sup>2</sup>, adapted to engage at every revolution one of the ten teeth R' of the disk R, secured on the transverse shaft S, mounted to rotate in suitable bearings in the box A.

On the shafts K, O, Q, and S are also secured, respectively, the units-wheel T, the tens-wheel T', the hundreds-wheel T<sup>2</sup>, and the thousands-wheel T<sup>3</sup>. Each of the said wheels T, T', T<sup>2</sup>, and T<sup>3</sup> is provided on its face with the numerals 0 to 9, adapted to appear successively in openings A', formed in one side of the box A. Said openings A' are, however, covered by a hasp U, fulcrumed at U' to the outside of the said side of the box A, and the free end of the hasp U is locked on the box A by a suitable lock U<sup>2</sup> of any approved construction. Thus when the hasp U is locked in place the numerals of the wheels T, T', T<sup>2</sup>, and T<sup>3</sup> are not visible from the outside; but when the lock U<sup>2</sup> is unlocked and the hasp U is swung open the said numerals are visible, indicating the number of tickets registered.

On the shafts K, O, Q, and S press the springs T<sup>4</sup>, so as to prevent said shafts from rotating too far. On the rod H is mounted to turn the arm V, provided on its lower end with a tooth V', pressed in contact with the teeth of the ratchet-wheel J by means of a spring V<sup>2</sup>, secured in the box A, its free end pressing against the lower end of the said arm V. On the upper end of the latter is secured a striker V<sup>3</sup>, adapted to sound the bell W, located on the inside of the box A.

Between the lugs C' and D' of the levers C and D is placed the projection B<sup>2</sup>, secured to the outside of the top of the box A and adapted to be engaged by a similar projection B', fastened on the under side of the lever B.



The operation is as follows: When the operator desires to cancel and register a ticket, he places the lever B in the position shown in Fig. 1, and then inserts the ticket below the projection B', so that it reaches from one projection C' to the other projection D' of the levers C and D. When the operator now presses the lever B downward, the ticket resting on the lugs C' and D' causes the latter and their levers C and D to swing downward against the tension of the springs F and F'. The downward motion of the lever C causes a swinging motion of the arm G', by means of the spring-lever G, so that the pawl I is moved toward the periphery of the ratchet-wheel J. As the lever D moves downward, at the same time it moves the pawl I likewise, so that the latter is thrown in contact with the periphery of the ratchet-wheel J. Further downward motion of the lever D causes the said pawl I to turn the ratchet-wheel J the distance of one tooth, whereby the units-wheel T is also turned a certain distance, so as to bring the next following numeral before the opening A' in the side of the box A. A ticket placed between the lever B and the lugs C' and D' is canceled as soon as the lever B is in its lowermost position, so that the ticket rests on top of the projection B<sup>2</sup> and is pressed against the same by the projection B'. As the said projections B' and B<sup>2</sup> are provided with raised letters, figures, or other devices, the ticket is stamped and thus canceled. When the pawl I turns the ratchet-wheel J the distance of one tooth, the tooth V' on the arm V drops over its respective tooth of the ratchet-wheel J by the action of the spring V<sup>2</sup>, so that the striker V<sup>3</sup> sounds the bell W, which indicates that one ticket has been canceled. As soon as the operator releases the pressure on the lever B the latter is moved upward by the springs F and F' pressing against the levers C and D, which, by their lugs C' and D', raise said lever B and the canceled ticket, which may then be removed.

The above-described operation is repeated for every ticket, and when ten tickets have been stamped and canceled the ratchet-wheel J and the disk L have made one revolution, and the tooth L' has shifted the disk N the distance between two teeth N', whereby the tens-wheel T' is turned sufficiently to have the succeeding numeral appear in the respective aperture A' in the side of the box A. When the tens-wheel T' has made ten revolutions, the tooth N<sup>2</sup> shifts the disk P the distance between two teeth P', whereby the hundreds-wheel T<sup>2</sup> brings the next following numeral to its aperture A' in the side of the box A. In a like manner the thousands-wheel T<sup>3</sup> is shifted after ten revolutions of the hundreds-wheel T<sup>2</sup> by the tooth P<sup>2</sup> turning the disk R the distance between two teeth R'.

The apertures A' are covered up by the hasp U, so that the operator cannot find out how many tickets have been stamped and

canceled, being thus prevented from tampering with the action of the lever B or the other parts in the box A. The lock U<sup>2</sup> is opened in the general office and the hasp U is swung out, so that the number in units, tens, hundreds, and thousands can be read through the openings A' in the side of the box A. When the operator fails to move the ticket across both lugs C' and D', the registering will not take place when the lever B is depressed. When the ticket does not touch the lug C', the latter and the lever C are not moved downward, and only the lever D swings downward, and the pawl I is consequently not moved toward the periphery of the ratchet-wheel J, as the lever C is inactive, so that the said pawl I only swings downward without engaging a tooth of the ratchet-wheel J. When the ticket does not touch the lug D', then the lever D remains inactive, and consequently the pawl I is not swung downward to engage the ratchet-wheel J. Thus it follows that a ticket must be placed across both lugs C' and D' before the lever B is pressed downward.

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

1. In a canceling and registering device, the combination, with a box having slots, of a main lever pivoted and held on the outside of the said box, two spring-levers held on the inside of the box and provided with lugs projecting through the slots in the said box, to be engaged by the said main lever, a pawl held on the end of one of the said spring-levers, the ratchet-wheel operated thereby, and a spring-lever secured on the other lever and provided with an arm having a loop inclosing said pawl to guide the same and the register, substantially as shown and described.

2. In a canceling and registering device, the combination, with a box having slots, of a main lever pivoted and held on the outside of the said box, two spring-levers held on the inside of the box and provided with lugs projecting through the slots in the said box, to be engaged by the said main lever, a pawl held on the end of one of the said two levers, a spring-lever secured on the other lever and provided with an arm having a loop inclosing said pawl to guide the same, and a ratchet-wheel adapted to be engaged by the said pawl and carrying a units-wheel, substantially as shown and described.

3. In a canceling and registering device, the combination, with a box having slots, of a main lever pivoted and held on the outside of the said box, two spring-levers held on the inside of the box and provided with lugs projecting through the slots in the said box, to be engaged by the said main lever, a pawl held on the end of one of the said two levers, a spring-lever secured on the other lever and provided with an arm having a loop inclosing said pawl to guide the same, a ratchet-wheel adapted to be engaged by the said pawl and



carrying units, tens, hundreds, and thousands wheels, and mechanism, substantially as described, for imparting motion to said tens, hundreds, and thousands wheels from the said units-wheel, as set forth.

4. In a canceling and registering device, the combination, with a box provided with slots and a projection on its top, of a main lever pivoted and fulcrumed on the outside of the said box and provided on its under side with a projection similar to the projection on the said box, two spring-levers held on the inside of the said box and provided with lugs projecting through the slots in the said box at each side of the said projections, the pawl-and-ratchet mechanism, and a register, substantially as shown and described.

5. In a canceling and registering device, the combination, with a box, of a main lever pivoted and held on the outside of the said box, two spring-levers pivoted and held on the

inside of the said box and provided with upwardly-projecting lugs passing through the said box under the said main lever, a pawl held on the end of one of the said two levers, a spring-lever secured on the other of the said two levers and fulcrumed on the said box, an arm projecting upward from the said spring-lever and provided with a loop engaging the said pawl, a ratchet-wheel mounted to turn in the said box and adapted to be engaged by the said pawl, a spring-arm fulcrumed in the said box and held in contact with the said ratchet-wheel, a striker held on the said spring-arm, a bell held in the said box and sounded by the said striker at every revolution of the said ratchet-wheel, and a register, substantially as shown and described.

ARTHUR J. MILLER.

Witnesses:

JOSEPH MENECHÉL,  
ARTHUR B. MANN.