

Minor & Nesmith.

Still Register.

N^o 87,698.

Patented Mar. 9, 1869.

Fig. 1.

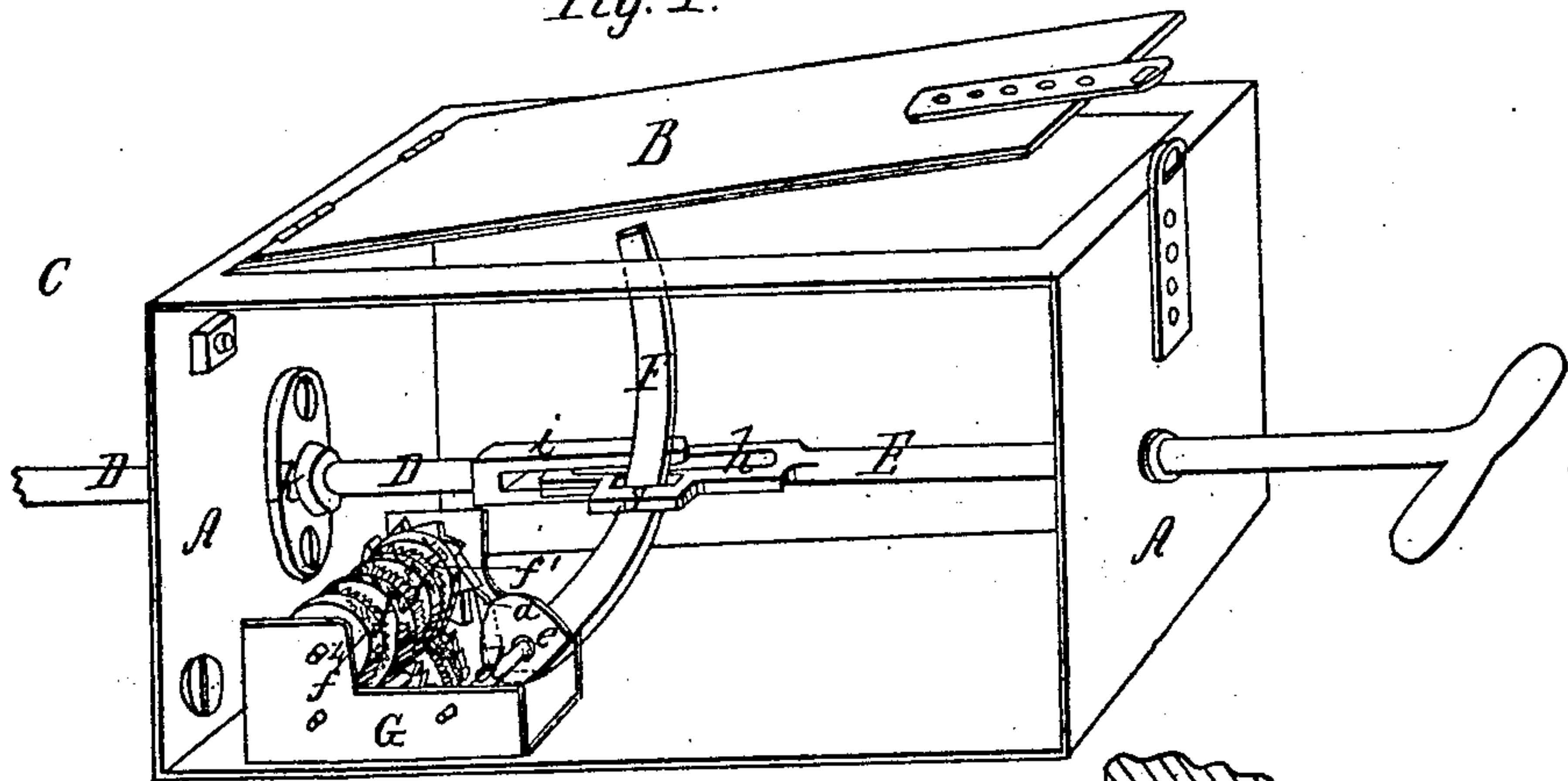


Fig. 2.

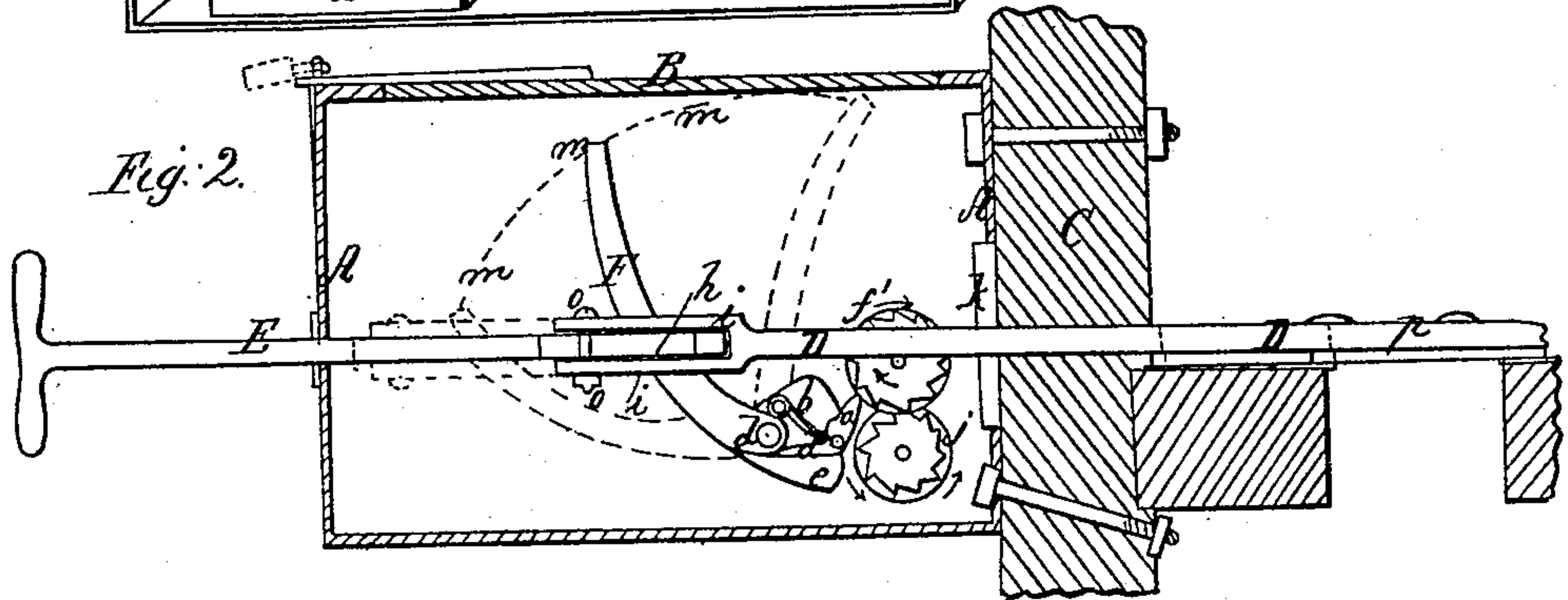


Fig. 3.

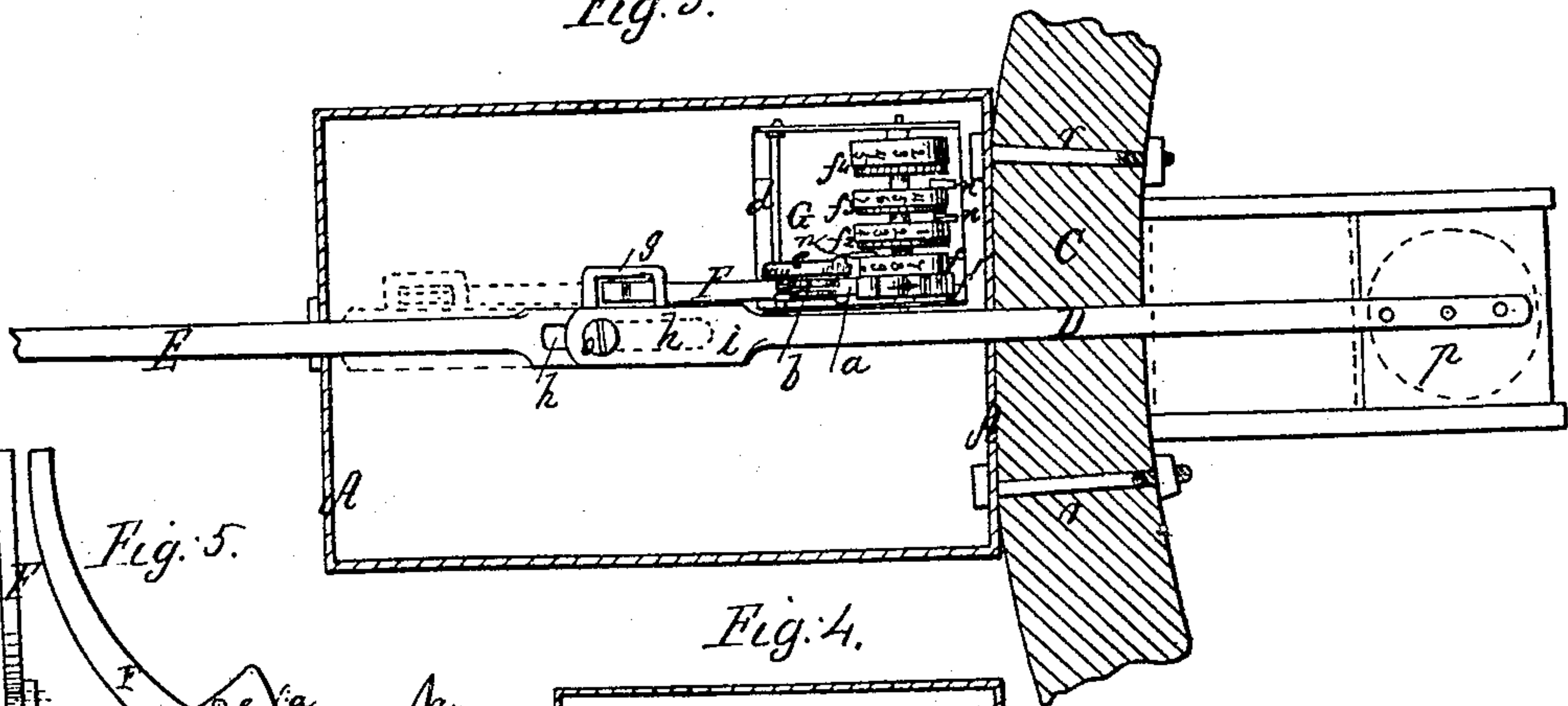


Fig. 5.

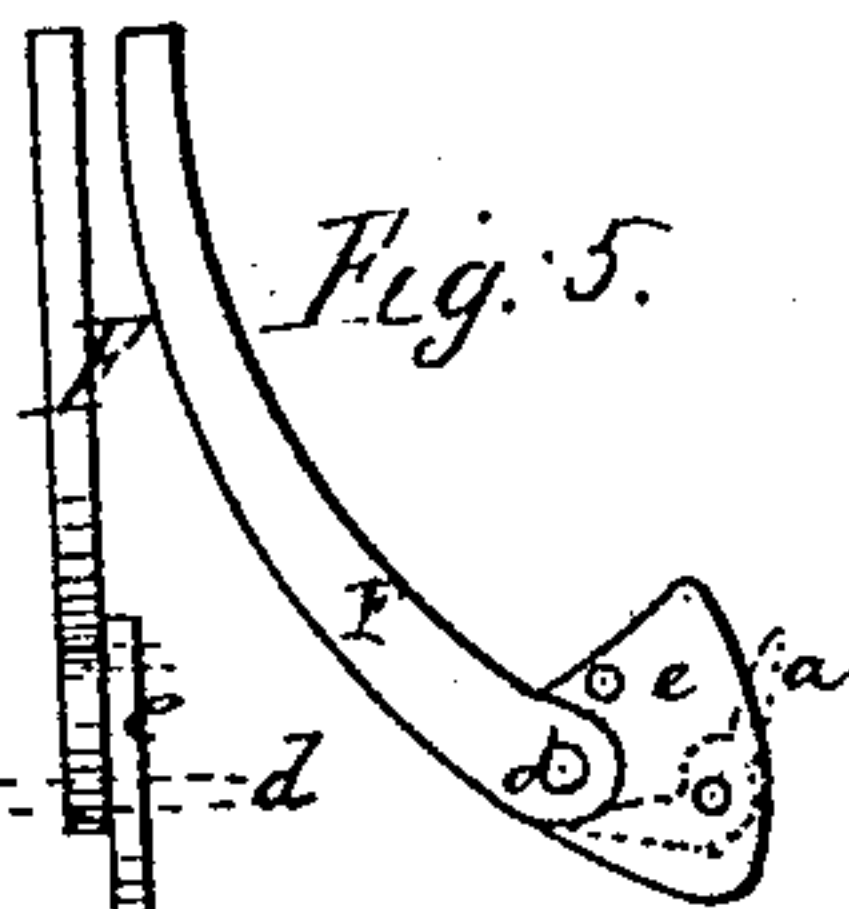
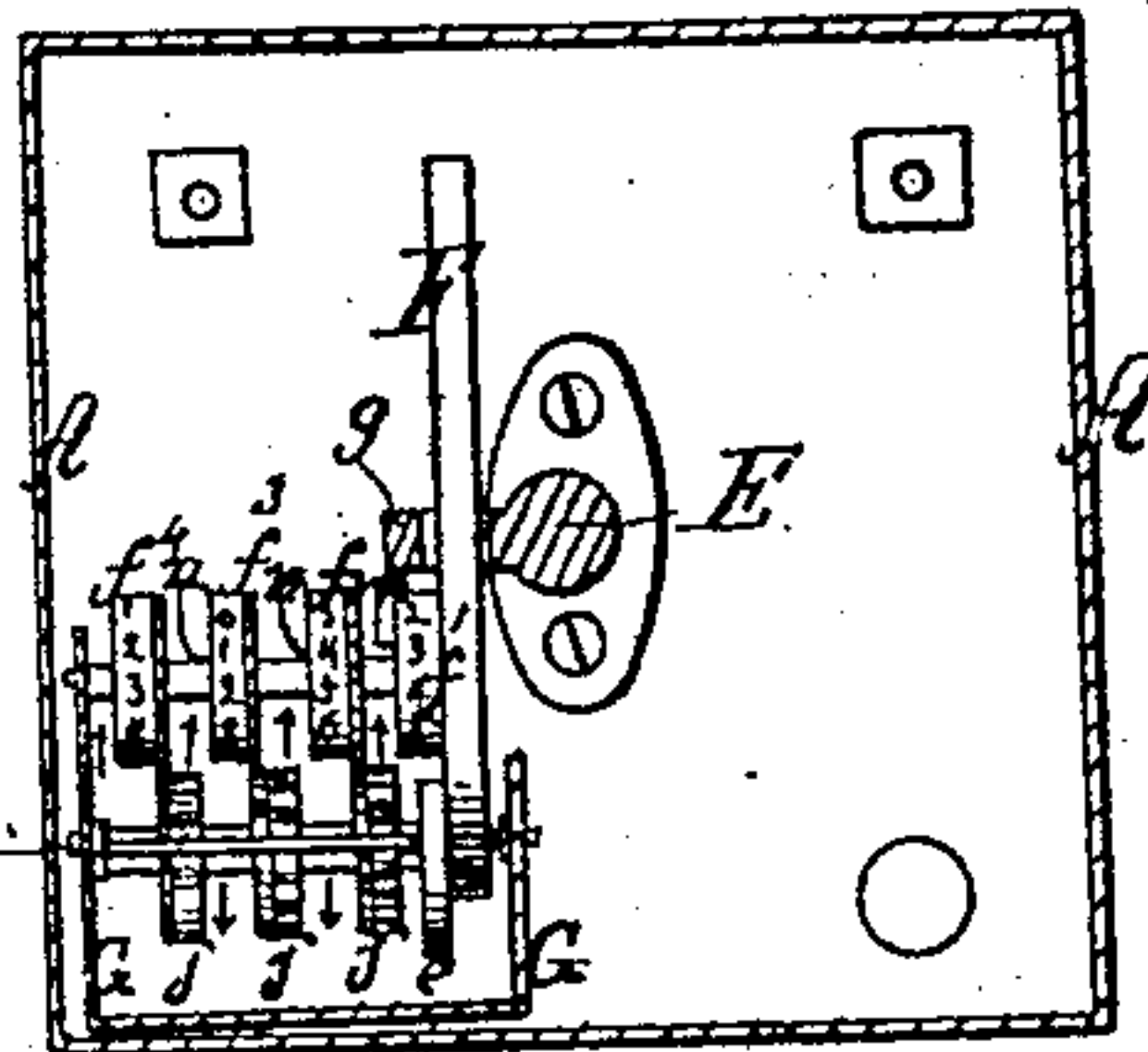


Fig. 6.

Fig. 7.



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JOHN MINOR, OF PEORIA, AND MILTON W. NESMITH AND GEORGE W. NESMITH, OF METAMORA, ILLINOIS.

Letters Patent No. 87,698, dated March 9, 1869.

IMPROVEMENT IN REGISTERING-APPARATUS FOR STILLs.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN MINOR, of the city of Peoria, and State of Illinois, and MILTON W. NESMITH and GEORGE W. NESMITH, both of Metamora, in the county of Woodford, and said State, have invented a Still-Register, for indicating the number of charges passed through the chamber or chambers of a still; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts.

Figure 1 is a perspective view, one side of the enclosing-box being removed to exhibit the "register."

Figure 2, side elevation of register, and attachment to the still.

Figure 3, superficial view.

Figure 4, end view.

Figure 5, profile of register-lever.

Figure 6, rear view of same.

Figure 7, profile of pawl *a* of the register-lever.

This register is designed to chronicle the number of charges passed out of any chamber of a still or other receptacle.

In attaching this apparatus to a still, the ordinary T-handle of the discharge-valve *p*, of the still-chamber, is cut off near the outside surface of the still, and thread cut on the projecting end of the stem, on to which is screwed a slotted head, *i*.

In this latter is inserted a similar slotted head, *h*, of a new handle, *E*, the stem of which is continued horizontally to the outside of the enclosing-box *A*, which protects the registering-apparatus.

The slotted head *k*, of the added handle, is secured in the slot of the valve-stem *D*, by a bolt, or its equivalent, through the forward ends of the slotted head *i*.

From the side of the added handle *E*, or its stem, or from the slot *h*, in its head, projects a staple and slot, *g*, which embraces a lever, *F*, which moves the registering-wheels *f f f*, &c. This lever is curved, to allow of its easy motion in the slot *g* of the new handle.

The lower end of the same lever is carried on a horizontal axle, *d*, within the wheel-box *G*.

A cheek or plate, *e*, forms an extension of the lower end of the lever, on which, between the end or point of the lever and the register-wheel *f*¹, is pivoted the pawl *a*, which engages with the ratchet on the register-wheel *f*¹ only when the lever *F* is depressed.

The pawl *a* consists of two arms, meeting at an obtuse angle, and pivoted to the cheek of the lever, one arm projecting beyond the cheek-plate, and engaging with the ratchet before mentioned, the other arm being confined by the lower end of the lever.

A spring, *b*, acting on a lug in the retiring angle of the pawl, and, confined on a pin to the cheek-plate,

brings the point of the pawl to an engagement with the ratchet-wheel *f*¹ of the register.

The numeral wheels, *f*¹ *f*² *f*³ *f*⁴, are set loose, but so as to turn, with a slight impulse, one figure forward on an axle, to which they are partially held by a small spring.

This axle is set at right angles to the lever *F*, and in such manner that the pawl *a* of the lever engages, when lifted, with the ratchet on the first or unit-wheel *f*¹ on that end of the axle. The latter is supported, at either end, in the ends of the register-box *G*.

The numeral-wheels on this axle each carry the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, on their circumferences, the three wheels farthest from the lever having a spur-pinion on one of their sides, which engage with similar pinions on a parallel axle alongside of them.

Dogs *n n n*, on the numeral-wheels, transfer the "tens" along the line of numeral-wheels, by striking, after each wheel of the series has made ten revolutions in turn, the opposite ratchet-wheel *j*, which is the medium of the transfer.

The whole apparatus, thus described, is enclosed within an iron box, *A*, bolted to the side of the still, around the discharge-valve stem, leaving the T-handle projecting from the box.

A cover, *B*, with hinge and staple, and safety-lock, secures the whole apparatus inviolate.

The operation of this register is as follows:

On pulling the T-handle of the valve, the lever *F* of the register being then upright, with the point of the pawl *a* beneath the ratchet numeral-wheel *f*¹, the slot *g*, on the valve-stem *E*, depresses the lever, and engages its pawl *a* with the ratchet numeral wheel *f*¹, which is thus turned one-tenth of its circuit registering one discharge.

A similar pulling of the valve-handle registers two discharges; so, continuously, until ten discharges have been registered. As the tenth figure, or 0, appears uppermost on the unit-wheel *f*¹, the dog *n*, on its side, transfers, by the medium of the ratchet-wheel *j*, on the adjoining axle, the "ten" counts registered to the "tens," which now exhibits the figure "1," the unit-wheel showing "0;" so, continuously, with the other wheels, until, if a sufficient number of wheels be engaged, millions may be registered. And as the register can be thus made to chronicle all discharges, even beyond a million, an inspection of the register would be unnecessary until months had elapsed.

By the union of the two slots *h* and *i*, in the respective heads of the stems *D* and *E*, the slot on the added stem *E* operates on the register-lever *F*, which effects the registry of the discharge before the slotted head *h* of the added stem *E* begins to act on the valve-stem *D* in withdrawing the valve.

What we claim as our invention, and desire to secure by Letters Patent, is—

In a liquid-registering apparatus, the combination and arrangement of the tripping pawl-lever F, for moving the counting-register wheels *fff*, operated by the sliding handle E, having a slotted connection with the valve-rod D, so that the said counting-register shall be actuated before the delivery-valve is opened, substantially as and for the purposes specified.

In testimony that we claim the above, we have hereunto subscribed our names, in the presence of two witnesses.

JOHN MINOR.
MILTON W. NESMITH.
GEORGE W. NESMITH.

Witnesses:

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