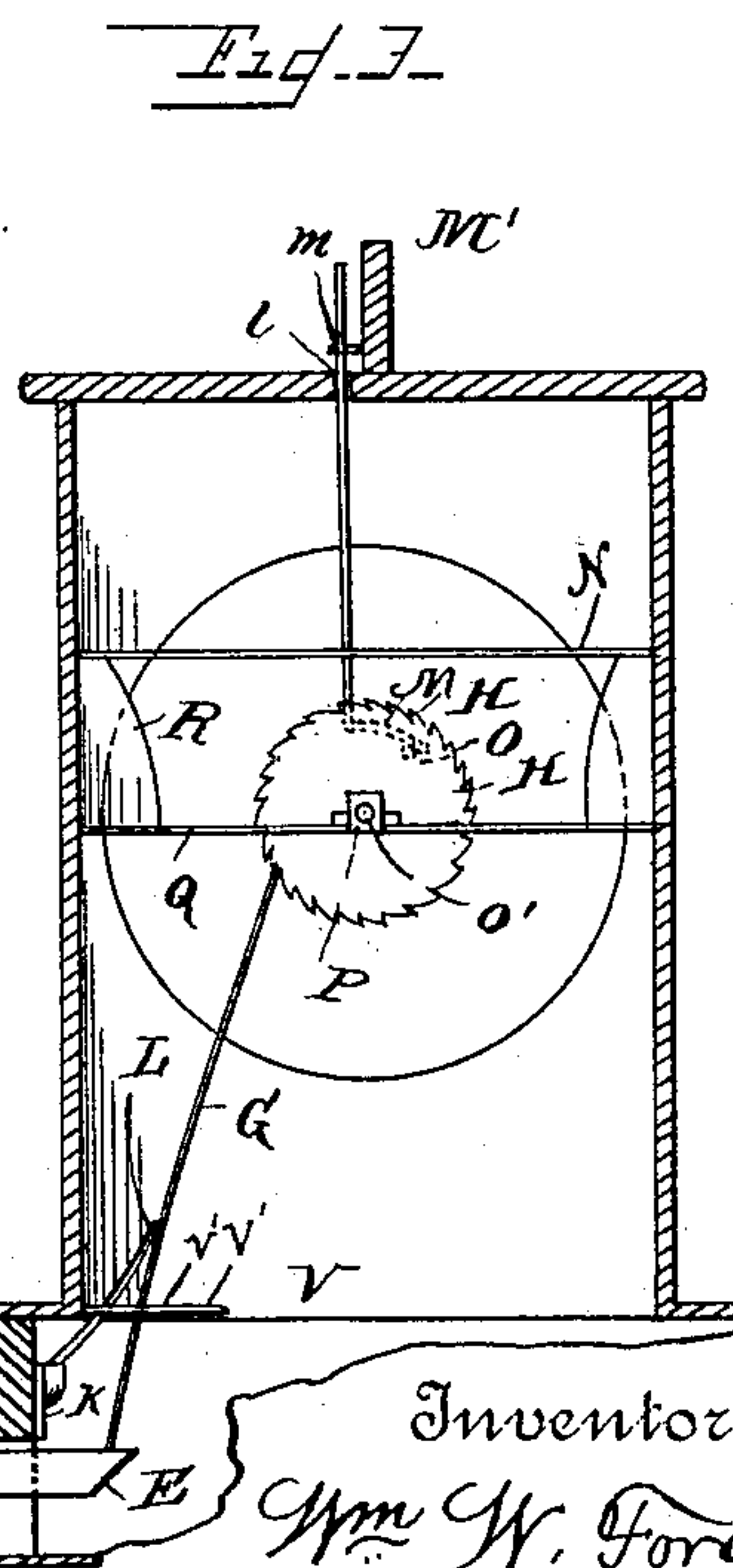
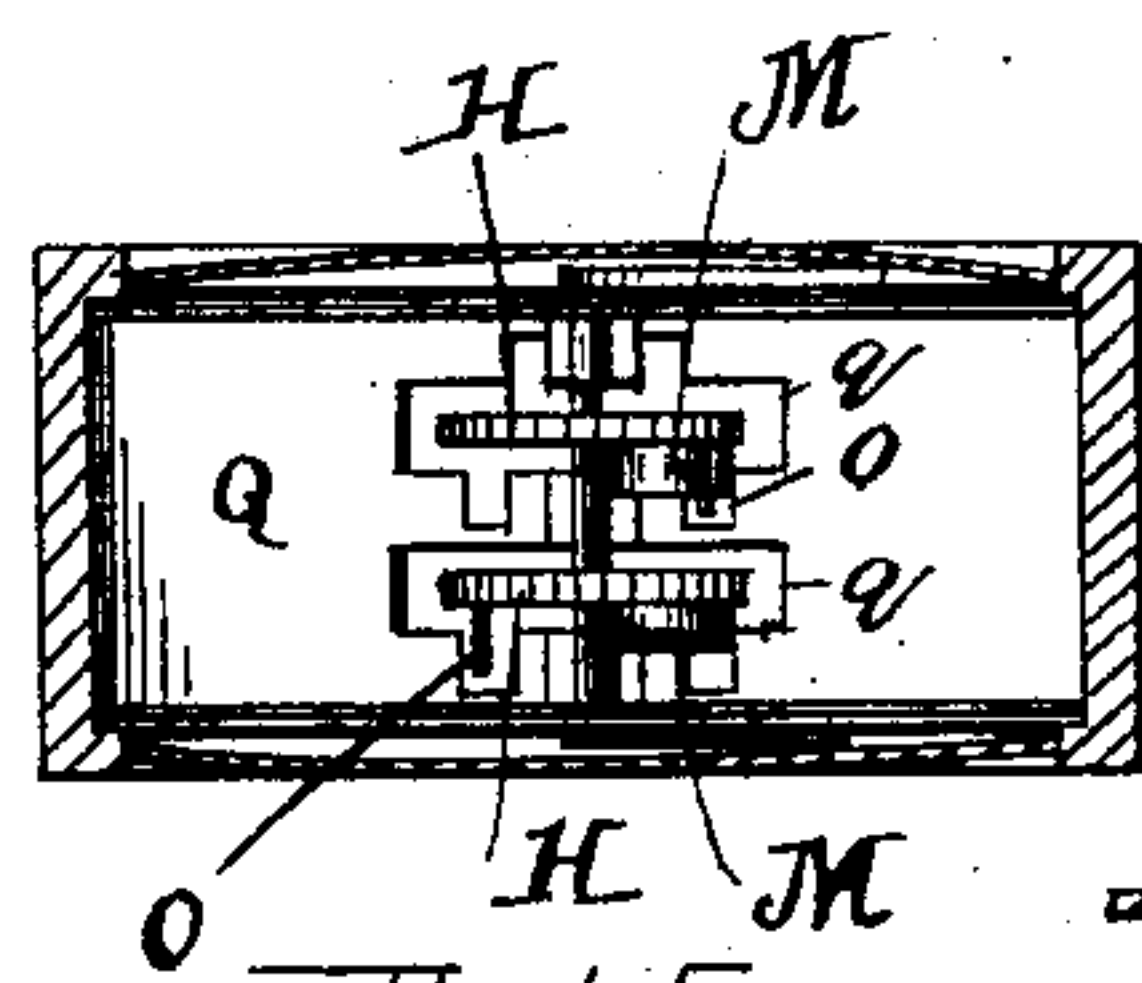
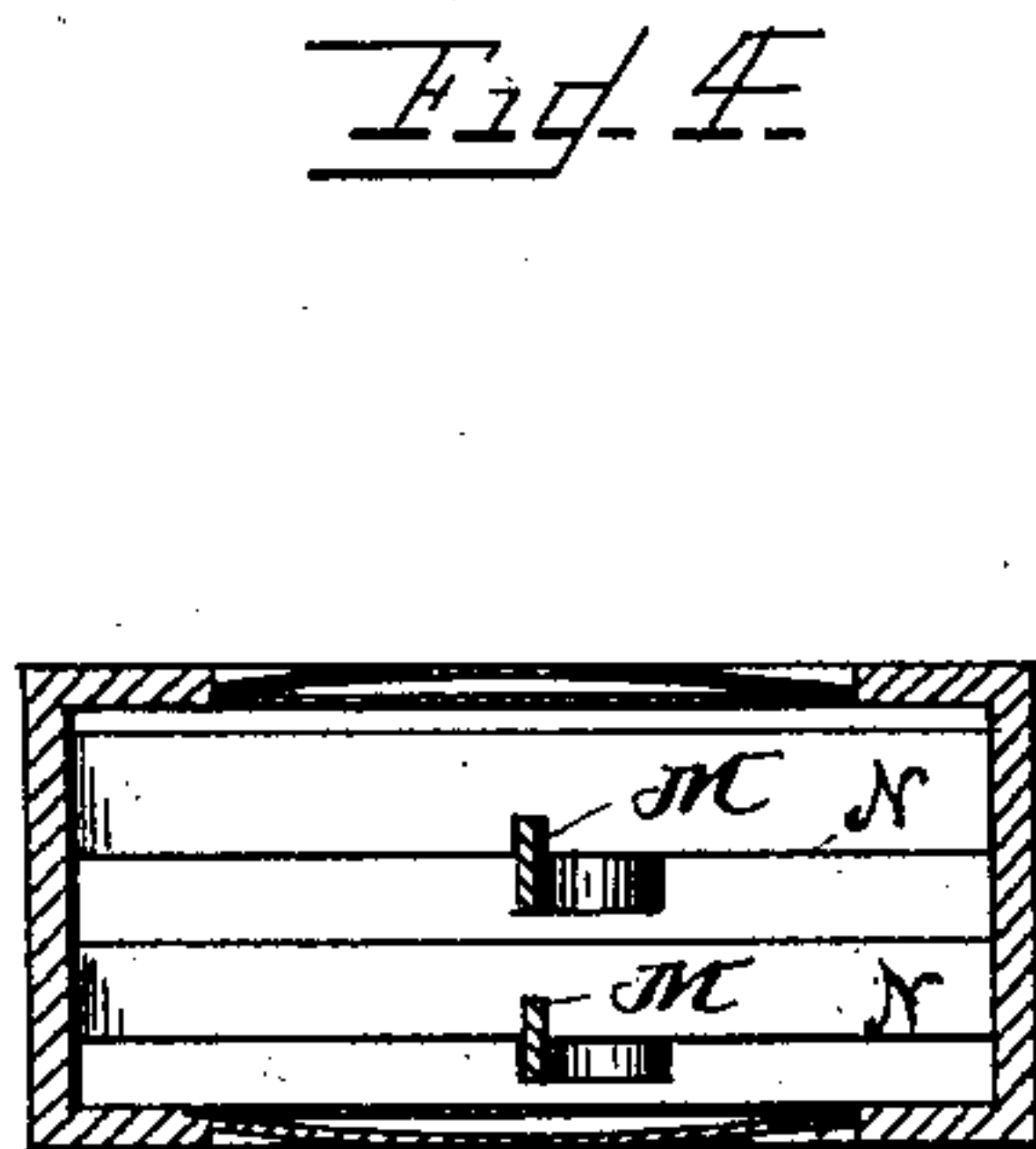
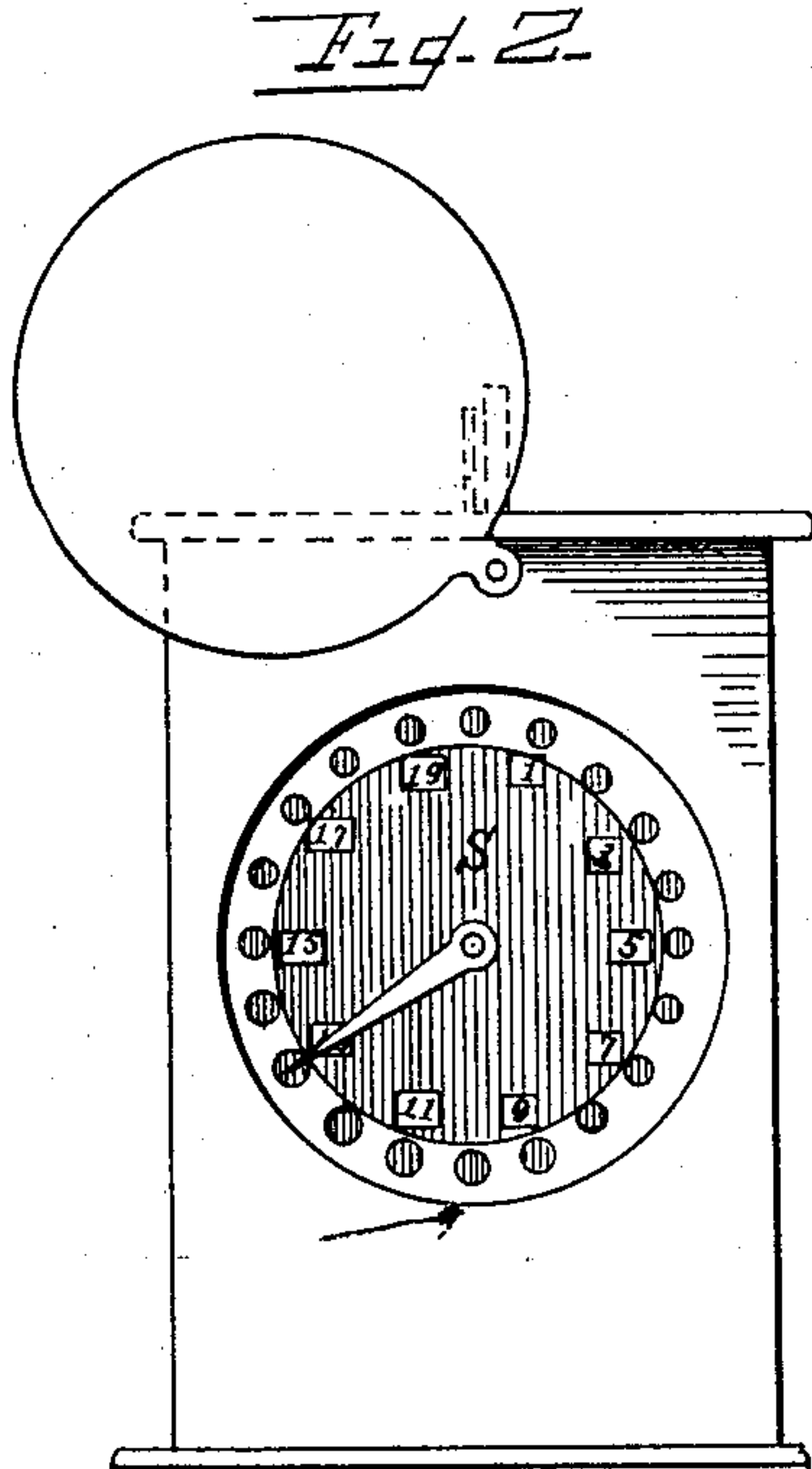
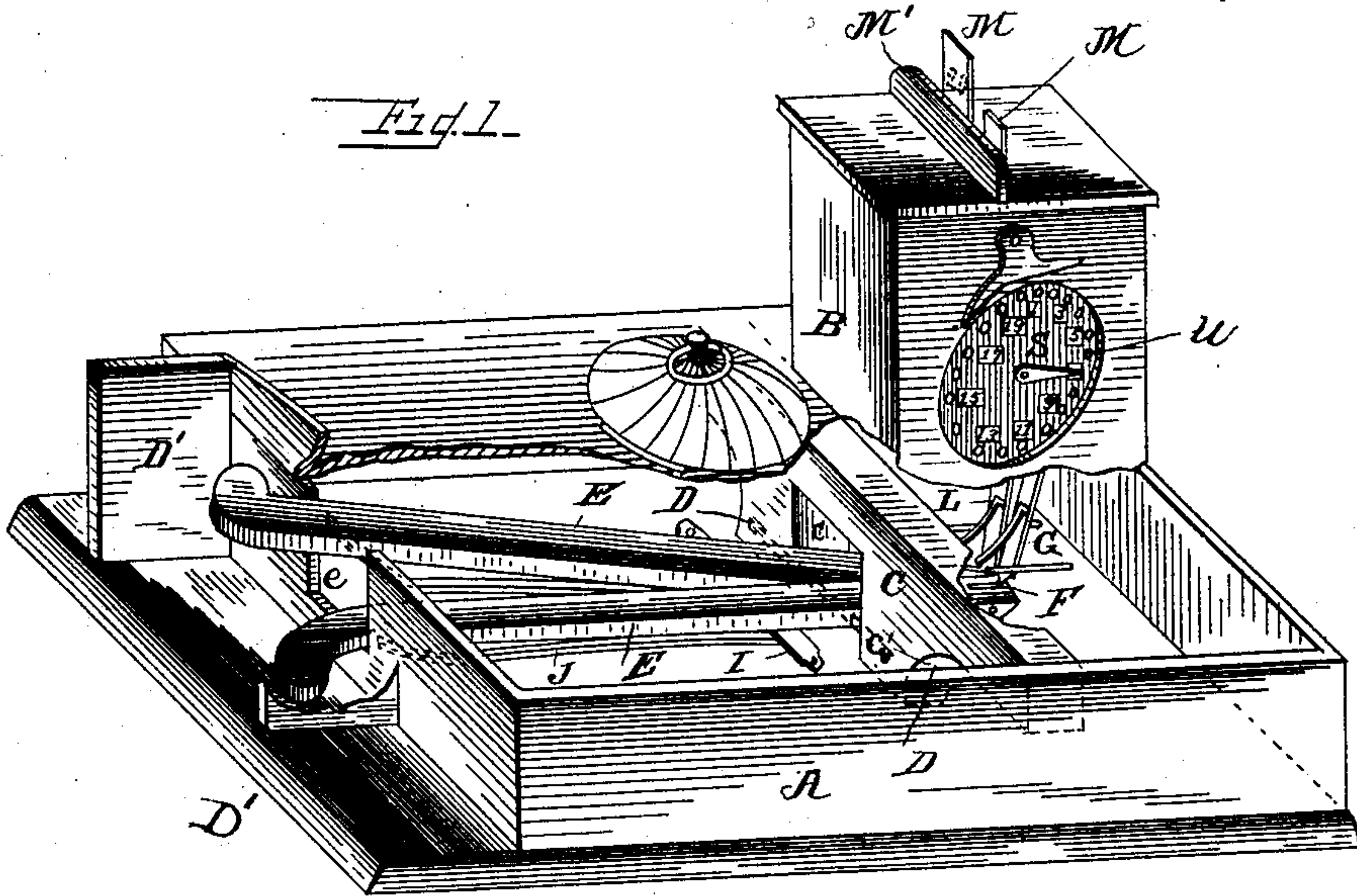


(No Model.)

W. W. FORD.  
VOTING MACHINE.

No. 376,980.

Patented Jan. 24, 1888.



Witnesses  
William Bates jr  
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# UNITED STATES PATENT OFFICE.

WILLIAM W. FORD, OF LONGVIEW, TEXAS.

## VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 376,980, dated January 24, 1888.

Application filed November 15, 1887. Serial No. 255,209. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. FORD, a citizen of the United States, residing at Longview, in the county of Gregg, State of Texas, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in voting-machines; and it has for its object to preserve the necessary secrecy of the voting until the proper time for the disclosure of the result of the voting.

To this end the invention consists in the novel construction and combination of parts, as will be hereinafter more fully described, and specifically pointed out in the claims.

In the accompanying drawings, to which reference is had, and which fully illustrate my invention, Figure 1 is a perspective view of my invention, and Figs. 2, 3, 4, and 5 are details of the same.

Similar letters of reference indicate similar parts throughout the several figures.

Referring to the drawings, A indicates a rectangular box, and secured rigidly upon its top and near one end is a smaller vertical rectangular box or casing, B, within which is also inclosed suitable mechanism operating in conjunction with the operating mechanism inclosed in the larger or main box A, which will be hereinafter more fully explained in detail.

Within the box A, and located transversely to its length, is rigidly secured the ends of a bridge or strip of wood, C, having cut out in the center and lower part a square opening, *c*, and upon the under side and near the ends of this strip are cut out pieces of wood, which form curved openings *c'* *c'* between the box and bridge each side of the opening *c*. Fulcrumed in this opening *c* near their inclosed ends, by means of a pin, D, are two operating-keys, E E, one of which is white and the other black, a square opening, *e*, being cut in the end of the box A to allow the operating ends of the keys, which are projected from the box, to be operated upon. These keys E E, where they project from the box A, are hidden from view to all but the voters by two upright pieces, D' D', having their lower ends secured to the bottom of the box A. The fulcrumed

or inclosed ends of the keys have cut therein slots or kerfs F F, within which are pivoted one end each of two pawls, G G, the opposite or free ends of said pawls engaging with teeth in two parallel ratchet-wheels, H H, inclosed in the vertical rectangular casing B, hereinbefore mentioned.

Secured to the center and within the main box A by means of a short transverse bar or clamp, I, are one end each of two longitudinal parallel flat springs, J J, their free ends being bent upwardly at an angle, which serve as supports for the keys and keep them pressed in an upwardly or in their normal position.

That side of the bridge C which lies nearer to or adjacent to the vertical rectangular casing B has secured to it by means of a socketed metallic plate, K, or in any suitable manner, the ends of two upwardly-projecting short springs, L L, having their free ends bent at right angles in the same plane. These springs lie directly over the pawls pivoted to the ends of the keys, and serve to keep the free ends of the pawls in engagement with the teeth of the ratchet-wheels H H, inclosed in the box or casing B, during the operation of indicating the vote.

Within the top of the vertical rectangular casing B is cut a narrow transverse slot or opening, *l*, through which is passed two vertical slides, M M, those portions of which projecting up through the opening *l* being wider than their lower portions inclosed in the casing B, and upon their outer faces, at the top, are affixed figures or scores, (in this example are shown to be twenty upon each slide,) one score being upon a white background and the other upon a black, their functions being to score twenty votes at each revolution of the ratchet-wheels. These numbers are only visible to the "secretary," being hid by a shield, M', secured to the top of the casing in front of the slides.

To prevent the slides from interfering with each other by any lateral displacement, a pin, *m*, is secured to the top of the casing across the opening between the two slides. The lower ends of these slides M M, which project down into the casing or box B, are passed loosely through aligned kerfs cut in the inner sides of the casing near the top, and also through



aligned kerfs cut in the center of two horizontal narrow plates, N N, having their ends secured in kerfs cut in the inner side of the vertical ends of the casing. The lower or inclosed ends of the slides M M are bent at right angles to the main portion of the slides, and are also bent so as to form curves or the arcs of a circle, and depend over or rest upon eccentrics or pins O O, secured to the faces of two parallel ratchet-wheels, H H, secured upon a shaft. O', journaled in suitable bearings, P P, formed integrally with a horizontal metallic slotted plate, Q, having a piece of its metal "struck up" from the sides and in the center or equidistant from the ends of said plate, the ends of the plate Q being secured to the inner sides of the vertical ends of the casing similarly to those ends of the narrow horizontal plates N N. This plate Q has therein two peculiarly-formed slots, q q, being mainly rectangular in their configuration and terminating in L-shaped portions or ends. Through these slots are projected and revolve within their journals ratchet-wheels H H, the eccentrics or pins upon the faces of the ratchet-wheels passing through the L-shaped portions of the slots and projecting the upper portions of the slides to which the scores are affixed out of the slot or opening in the top of the casing B as the eccentrics or pins move around within the curves or bent lower ends of the slides in the revolution of the ratchet-wheels. After the bent ends or curves in the slides have been passed by the eccentrics or pins, the slides will then resume their normal positions in the box or casing. The slides being thus alternately raised and lowered exhibits the scores at the top of the slides when they are raised or projected through the slot in the top of the box or casing B, as desired.

One or more strengthening and supporting brackets, R, are secured to the inner sides of the vertical ends of the casing and between the upper and lower horizontal plates N N and Q.

Communication between the mechanism inclosed in the main box or case A and that in the vertical rectangular case B, secured to it, is had by means of an opening, V, formed in the top of the box or main case A and in the bottom of the rectangular casing B.

Secured in the top of the box A, and projecting a short distance into the opening V, are two guide-pins, v' v', which serve to inclose and keep from lateral displacement the short upwardly-projecting springs L L, which bear upon the pawls operating the ratchet-wheels.

Secured to each side of the vertical rectangular casing B are two dials, S S, made of paper or of any suitable material, one of which has a background of white and the other black. Arranged in a circle, and equidistant apart upon each of these backgrounds, are a number of disks, the white disks upon the black background representing white balls, and the black disks upon the white background representing black balls, making twenty designa-

tions included in the series upon each dial. Arranged adjoining to each alternate disk or ball upon both dials are a series of numerals or designations from 1 to 20, corresponding with the totals of 20 upon the slides in the casing B.

Pointers or index-hands are secured upon the ends of the ratchet-wheel shaft journaled in the casing, by means of which the votes are indicated by means of the indices or numerals upon the dials. Circular openings U are formed in the sides of the casing B, having secured therein circular glasses to see when necessary how many votes are registered upon the dials, two covers being pivotally secured to the sides and near the top of the casing B to screen the dials from view when the voting is in progress. Upon the top of the main box A is secured an annunciator.

The operation of my device will be obvious when taken in connection with the foregoing description and accompanying drawings; but it may be briefly stated as follows:

The operator, upon pressing either of the keys down in the opening formed in the end of the main box, forces the pawls upwardly by means of the fulcrumed ends of the keys to which they are attached, when the free ends of the pawls, meshing in the teeth of the ratchet-wheels, revolve the shaft within its journals, revolving the ratchet-wheels with it within the rectangular and L-shaped slots in the lower horizontal plate of the casing, and as the wheels are revolved the eccentrics or pins upon the faces of the wheels, contacting with the curves in the lower ends of the vertical slides, force them up and out at the top of the opening in the rectangular vertical casing, each slide thus scoring twenty votes at each revolution of the wheels. Simultaneous with this movement of the ratchet-wheels and their shaft, the hands upon the ends of the shaft will be turned to point to the indices or disks upon each one of the dials. When there have been twenty votes registered, the slide is up and number 20 is visible. This is immediately taken notice of by the proper officer. Then if there are any more votes registered and the slide does not rise out of the rectangular casing again, then the covers on the dials are raised in order to see how many more votes are registered on the face of the dial—*e. g.*, you have a score of twenty; now raise the cover or shield, and the hand points to five more; hence you have twenty-five votes, and so on until the voting ceases.

What I claim is—

1. In a voting-machine, the combination, with the transverse bridge, through the opening of which are fulcrumed by means of a pin two parallel keys, said keys having pivotally connected to their fulcrumed ends two parallel pawls, the free ends of which mesh with teeth in two ratchet-wheels carrying hands indicating on a dial and having eccentrics upon their faces, two parallel narrow plates moved by such eccentrics to indicate the complete revolution of the hands, and a shield upon the top



of the casing inclosing the pawl-and-ratchet mechanism, substantially as described, and for the purposes set forth.

2. The combination, with the main box A and bridge C, of two parallel keys, E E, pin D, parallel pawls G G, parallel ratchet-wheels H H, having eccentrics or pins thereon and having their shaft journaled in bearings formed integral with a struck-up portion of the horizontal metallic plate Q, two narrow parallel plates, N N, two parallel vertical slides, M M, for displaying scores or figures, and a screen or shield, M', upon the top of the vertical casing B, substantially as described.

3. The combination of the horizontal box A and vertical box or casing B, each provided with a communicating opening between the two, by means of which the mechanism in box

B is enabled to be operated by that in box A, the mechanism consisting, essentially, of the keys E E, bridge C, pin D, pawls G G, flat springs J J, clamp I, springs L L, guide-pins v' v', ratchet-wheels H H, metallic plates Q N N, slides M M, shield M', dials S S, constructed as described, and index-hands, and pivotally- swinging covers or shields arranged to swing over the circular openings in the sides of the vertical casing B, all arranged and operated as set forth.

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

WILLIAM W. FORD.

Witnesses:

R. B. LEVY, Jr.,

J. N. HUDGINS.