(No Model.) 3 Sheets—Sheet 1.

H. ZIMMER.

APPARATUS FOR REGISTERING VOTES.

No. 272,011. Patented Feb. 6, 1883.

Fig. 1.

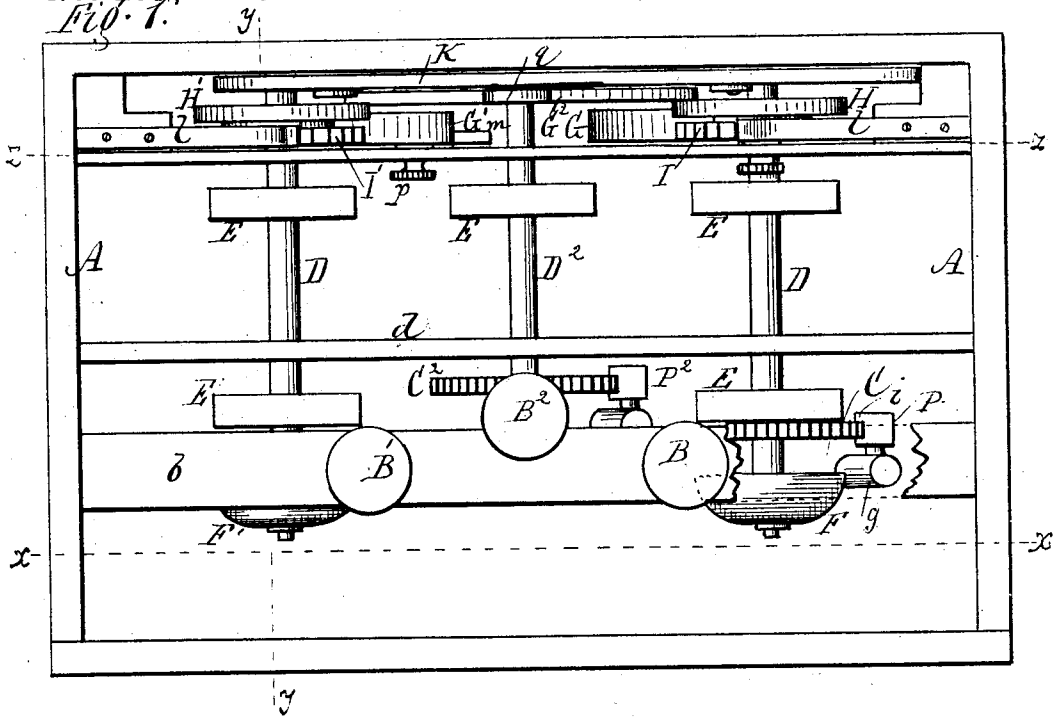

Fig. 2.

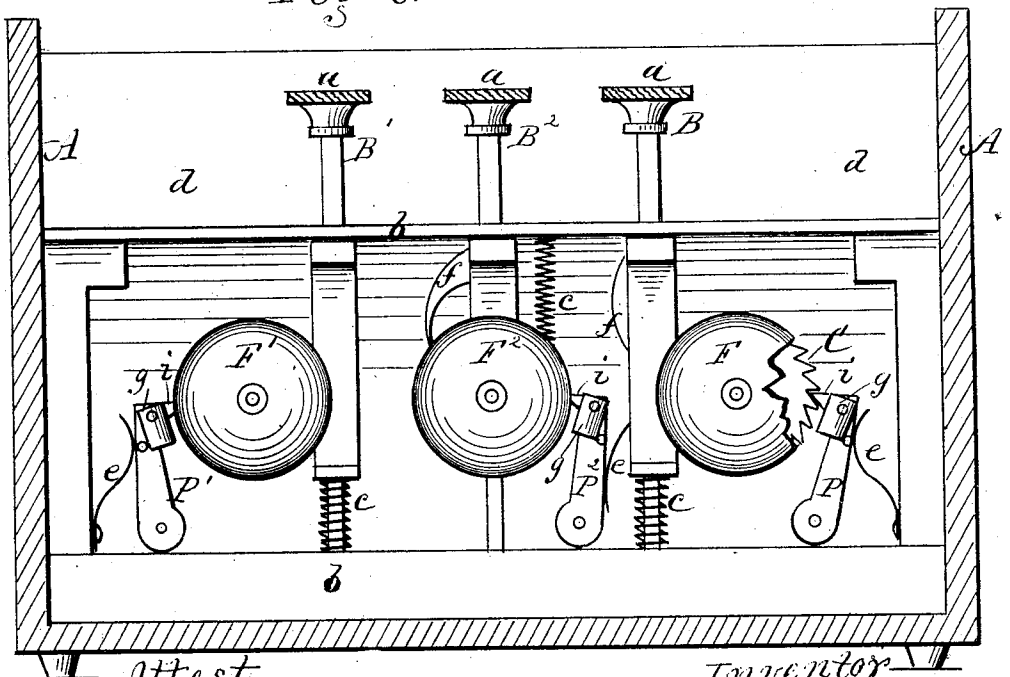

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Fig. 3.

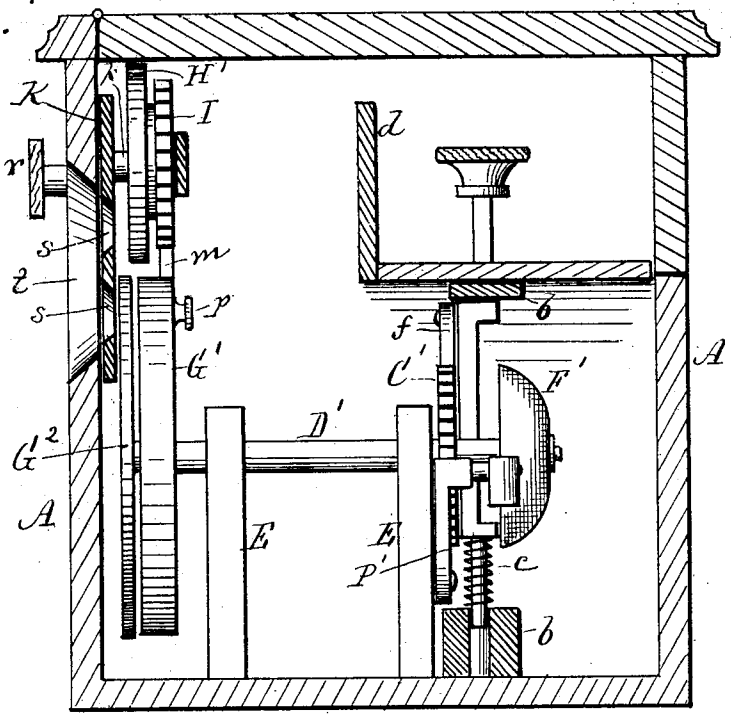
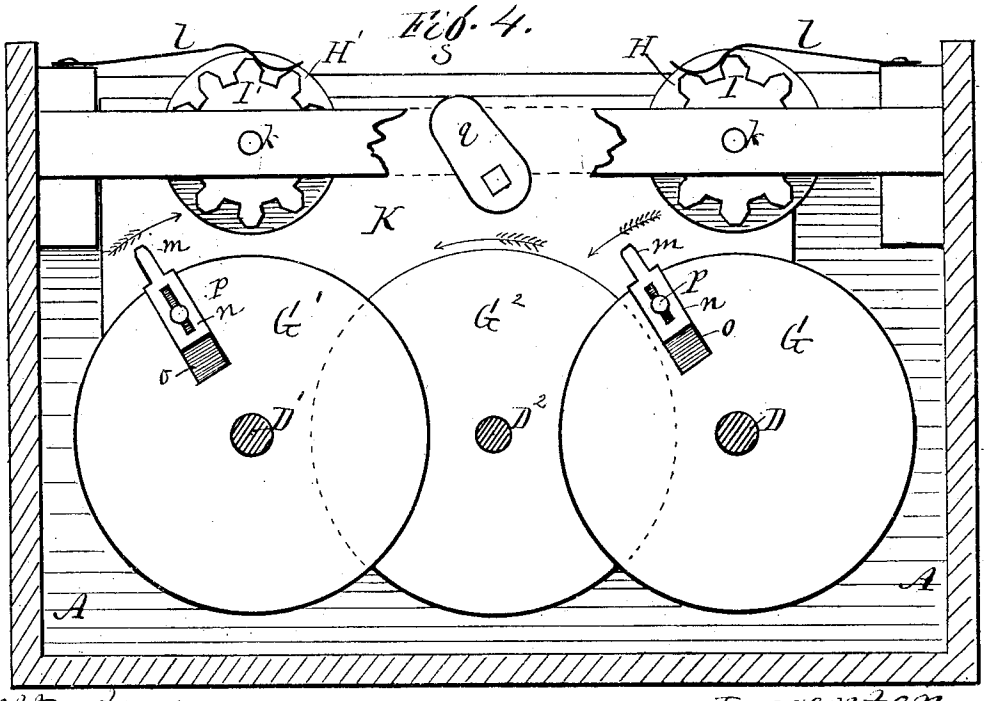


Fig. 4.



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(No Model.) 3 Sheets—Sheet 3.

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APPARATUS FOR REGISTERING VOTES.

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Fig. 5.

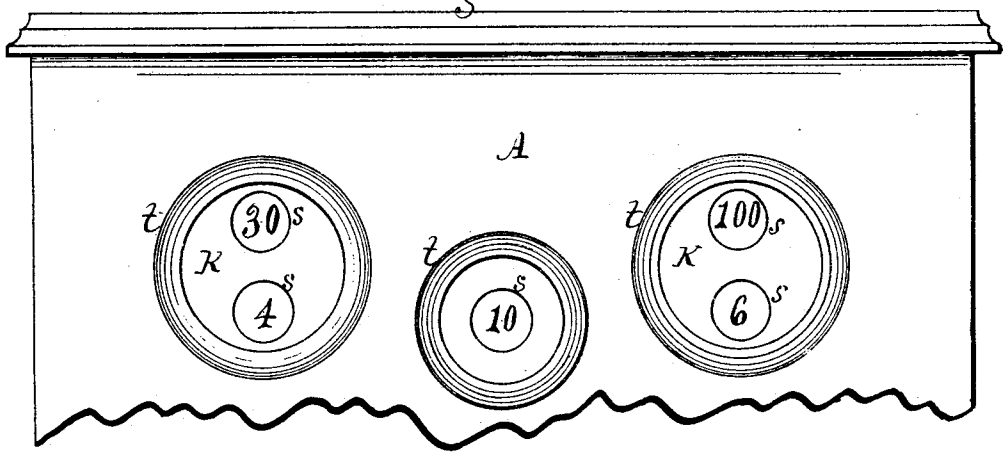


Fig. 6.

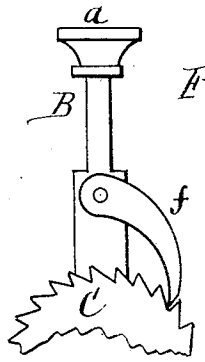


Fig. 7.

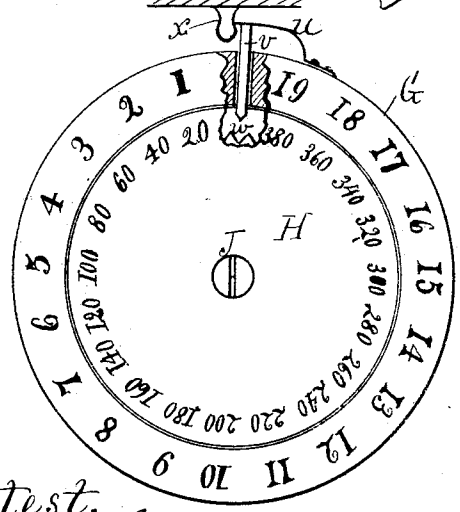
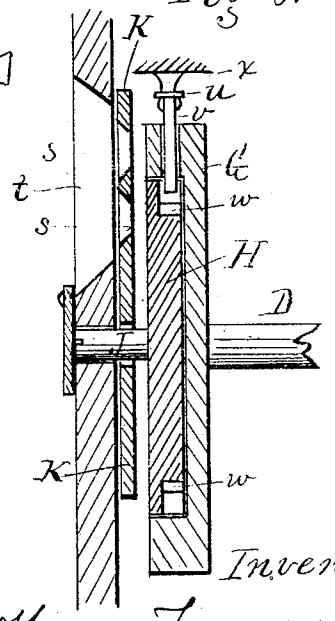


Fig. 8.



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Jno. Dennis, Jr.

Inventor:
Henry Zimmer
R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

HENRY ZIMMER, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO MOSES HAYS, OF SAME PLACE.

APPARATUS FOR REGISTERING VOTES.

SPECIFICATION forming part of Letters Patent No. 272,011, dated February 6, 1883.

Application filed November 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY ZIMMER, of Rochester, Monroe county, New York, have invented a certain new and useful Improvement in Apparatus for Registering Votes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan of the apparatus with the cover removed. Fig. 2 is a longitudinal vertical section in line *x x* of Fig. 1. Fig. 3 is a vertical cross-section in line *y y* of Fig. 1. Fig. 4 is a longitudinal vertical section in line *z z* of Fig. 1. Fig. 5 is a rear elevation of the upper portion of the case, showing more particularly the register-openings. Fig. 6 is an elevation of the ratchet arrangement for operating the wheels. Figs. 7 and 8 are modifications of the registering-wheels.

My improvement relates to apparatus for registering votes, in which a system of registering-wheels is employed, operated by levers and ratchet-wheels, and bells are employed to indicate each vote when given.

The invention consists in the construction and arrangement of parts, hereinafter more fully described and definitely claimed.

In the drawings, A indicates the case, which may be of any suitable form.

B B′ B^2 are three vertical keys or levers, having thumb-pieces *a a a* at the top, said keys sliding up and down freely in bearings *b b*, and being held in the elevated position by spiral springs *c c c*. The shaft B indicates the affirmative votes, the shaft B′ the negative, and the shaft B^2 the neutral. The words "Yes," "No," and "Neutral" are printed on a tablet, *d*, behind the keys, where they can be readily seen.

C C′ C^2 are ratchet-wheels, and *f f f* are pawls pivoted to the keys engaging with the teeth of the ratchets. At every down movement of the keys the ratchets are moved one notch.

D D′ D^2 are shafts to which the ratchets are permanently attached, said shafts resting and turning in bearings E E.

F F′ F^2 are small bells attached on the outer ends of the shafts.

P P′ P^2 are detents pivoted at their lower ends to the frame, and having small hammers *g g g* pivoted at their upper ends in such position that when the detent is pressed back and released again a spring, *e*, on the back will throw it forward again and cause the pivoted hammer to strike and sound the bell. The upper end of the detent has a tooth, *i*, which enters the teeth of the ratchet, and by this means, as the ratchet is revolved, the detent will be thrown out and in, thus sounding the alarm at each movement of the key. As the ratchet is revolved the detent P will ride over the teeth, and in reacting the swinging hammer *g* will be thrown forward by the momentum and strike the bell. The detent serves to prevent back action of the ratchet, and also to sound the bell, and obviates the use of two separate devices for the purpose, such as are now used.

G G′ G^2 are register-wheels permanently attached on the inner ends of the shafts D D′ D^2 and resting inside the case. On the outer face of each of these wheels are a series of numbers in consecutive order from one upward, extending around the whole circumference, except between the first and last number a blank equal to one space is left. These numbers indicate a given number of units. Any desired number may be used, but usually about nineteen. H H′ are other register-wheels, located above the wheels G G′, and having also on their outer faces a series of numbers, the first of which is the largest of all the numbers on the wheel below plus one, and the others of which are regularly increased by the addition of the first number. Thus, if the largest number on wheel G is 19, the first number on wheel H will be 20, the second number will be 40, and so on in regularly-increasing ratio. A blank equal to one space is also left between the first and last numbers of the upper wheels. On the shafts *k k* of the wheels H H′ are toothed wheels I I′, there being the same number of teeth on each of the last-named wheels as there are numbers on the first-named ones.

l l are flat springs, which have curved ends that rest between the teeth on top, as shown in Fig. 4, and hold the wheels in fixed position, but allow movement to be made at the proper time.

m m are spurs projecting outward from the periphery of the lower wheels, G G′, and engaging with the teeth of the wheels I I′, and moving them a single notch at one revolution of the wheels G G′. These spurs are attached to or form part of slotted plates *n n*, which slide up and down in grooves *o o* of the wheels, and are fixed in any position by set-screws *p p*. By this means, whenever it is desired, the spurs may be withdrawn, so that they will not come in contact with the toothed wheels, and in that case the lower wheels may be used alone to register a limited number of votes where the number of voters do not exceed the aggregate numbers marked on the wheels G G′.

K is a slide in the back part of the case, covering the upper part of the lower wheels, and the lower part of the upper ones. This slide is thrown endwise a limited extent by a crank-arm, *q*, and finger-knob *r*. In the slide are made two openings, *s s*, opposite each upper and lower wheel, through which a single number may be seen on each wheel when the slide is thrown in one direction, but which are thrown back away from the wheels when the slide is thrown in the other direction. Large openings *t t* are made in the back of the case, of sufficient size to exhibit both of the holes *s s* when in coincidence. By this means the figures may be seen through the back of the case. During the progress of the voting the slide is thrown back, covering the figures so that they cannot be seen, so that the condition of the voting as it progresses is unknown, and each individual vote is secret; but when the full vote is registered the slide is thrown forward, uncovering the figures, and the result is exposed to view. If holes were simply made in the case opposite to the wheels, the progress of the voting as it goes on and the record of each individual vote would be apparent to any one looking therein.

The operation is as follows: Each voter presses down the key which represents the side upon which he votes, either affirmative or negative; or if he votes neither he presses down the key which represents neutral. This action moves the lower wheel, G or G′ or G², one notch forward, and the corresponding number on the face of the wheel is brought opposite to the opening *s* in slide K. The bell is sounded at the same time, which shows that the vote has been registered. At each full revolution of the wheels G G′ the wheels H H′ are moved forward one notch, and the full aggregate of the votes registered on G G′ are indicated by the numbers on wheels H H′ which come opposite the openings *s s*. The wheels G G′ then commence a new revolution and a new registration.

In Figs. 7 and 8 is shown another form of the registering-wheels, in which the wheel H is set into a cavity or depression of the wheel G, so that the faces of the two wheels are flush. The wheel G is attached to the shaft D, and the wheel H to a short shaft, J, at the back of the machine, each wheel having an independent movement, and the numbers being marked on each wheel. Attached to wheel G is a spring, *u*, with a pin, *v*, projecting down through the rim of the wheel and engaging with teeth *w* on the edge of the inner wheel, H, when the spring is depressed. The spring once in a revolution strikes under a stud, *x*, of the case, which depresses the pin, causing it to engage with the teeth, and thus draw the inner wheel along with the outer one till the spring has passed the stud, when the parts disengage again. The length of the spring is equal to the distance between the numbers on the inner wheel, by which means the numbers will be always drawn up to the opening. The shaft J has a screw-slot in its end, in which may be inserted a screw-driver for readjusting the wheel to position.

The apparatus above described is applicable to general uses where voting is required, but is specially applicable to societies and associations where affirmative, negative, and neutral votes are made. The provision of the adjustable slides *m m* on the lower wheels adapts the machine to use for small or large memberships.

Having thus described my invention, I claim—

1. In an apparatus for registering votes, the pivoted detent P and the pivoted swinging hammer *g*, attached thereto, in combination with the ratchet C, bell F, the pawl *f*, and sliding key B, as shown and described, and for the purpose specified.

2. In an apparatus for registering votes, the combination, with the registering-wheels G H, arranged one above another, of the slide K, located between the registering-wheels and the back of the case, the case having a single large opening, *t*, and the slide having two openings, *s s*, which come opposite the respective wheels, whereby during the progress of voting the slide may be made to obscure the wheels, and when the voting is completed the slide may be made to uncover the wheels, as herein shown and described.

3. In an apparatus for registering votes, the combination of the registering-wheels G, the spur-wheels I, the registering-wheels H, above the wheels G and on the same shaft with I, and the tooth *m*, fitted into the wheel G, made adjustable in and out by a set-screw, and engaging with the spur-wheel when projected, but disengaging therefrom when drawn back, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY ZIMMER.

Witnesses:
R. F. OSGOOD,
CHAS. F. SPENCER.