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W. M. DELAVAN & W. I. T. FOSDICK.
FRICTION DEVICE FOR VOTING LEVER SHAFTS.

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Fig. 1.

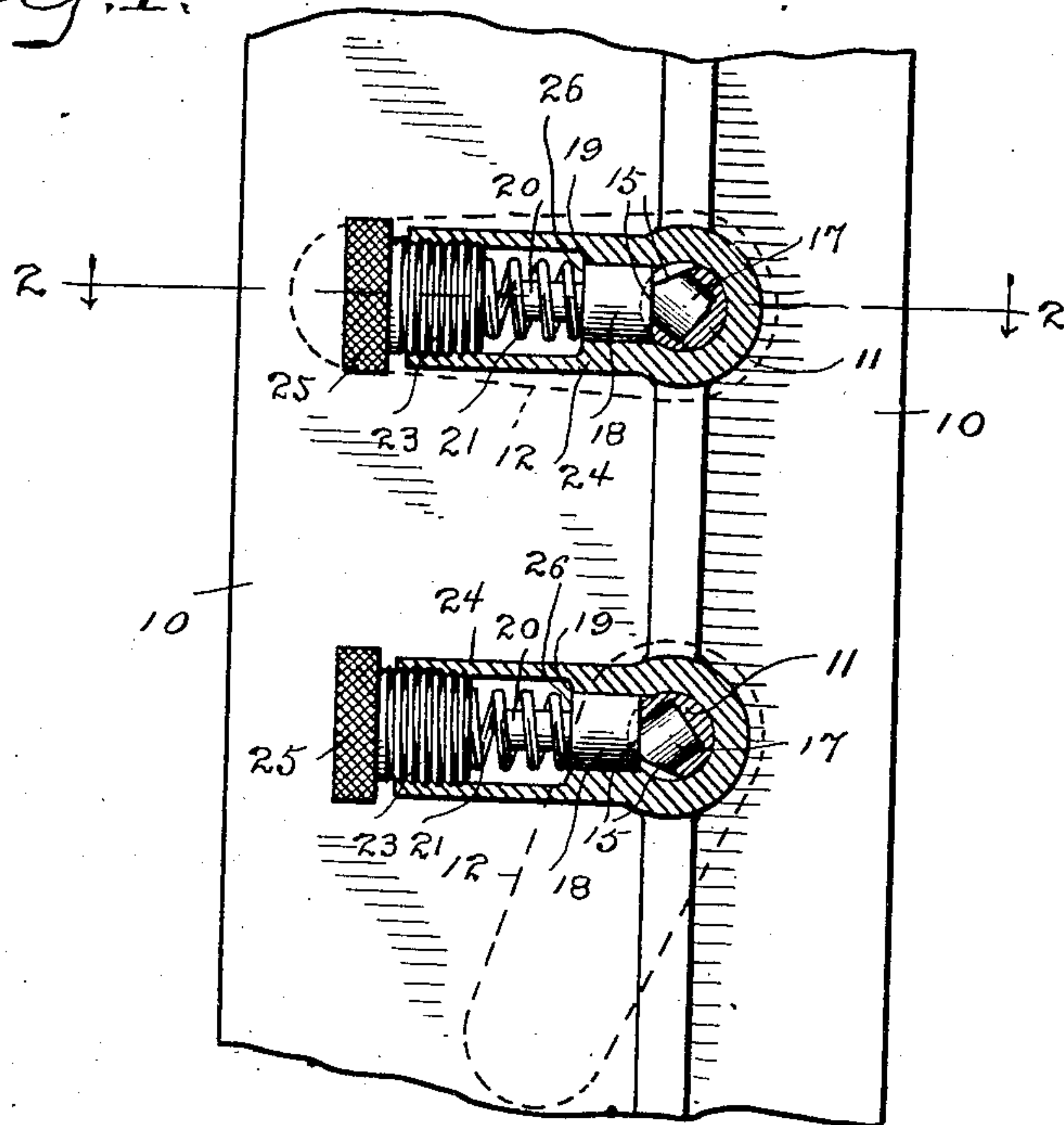


Fig. 2.

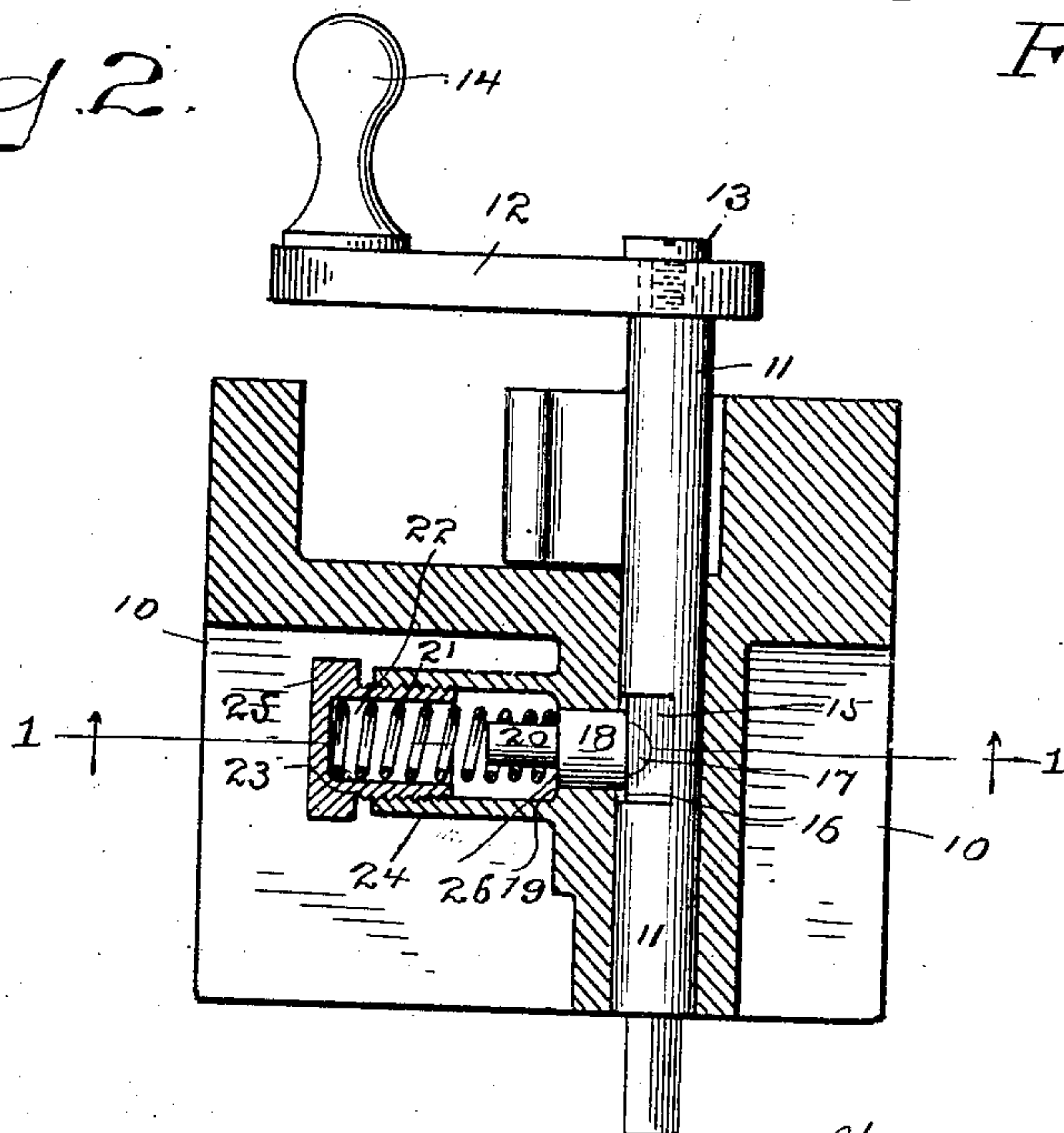
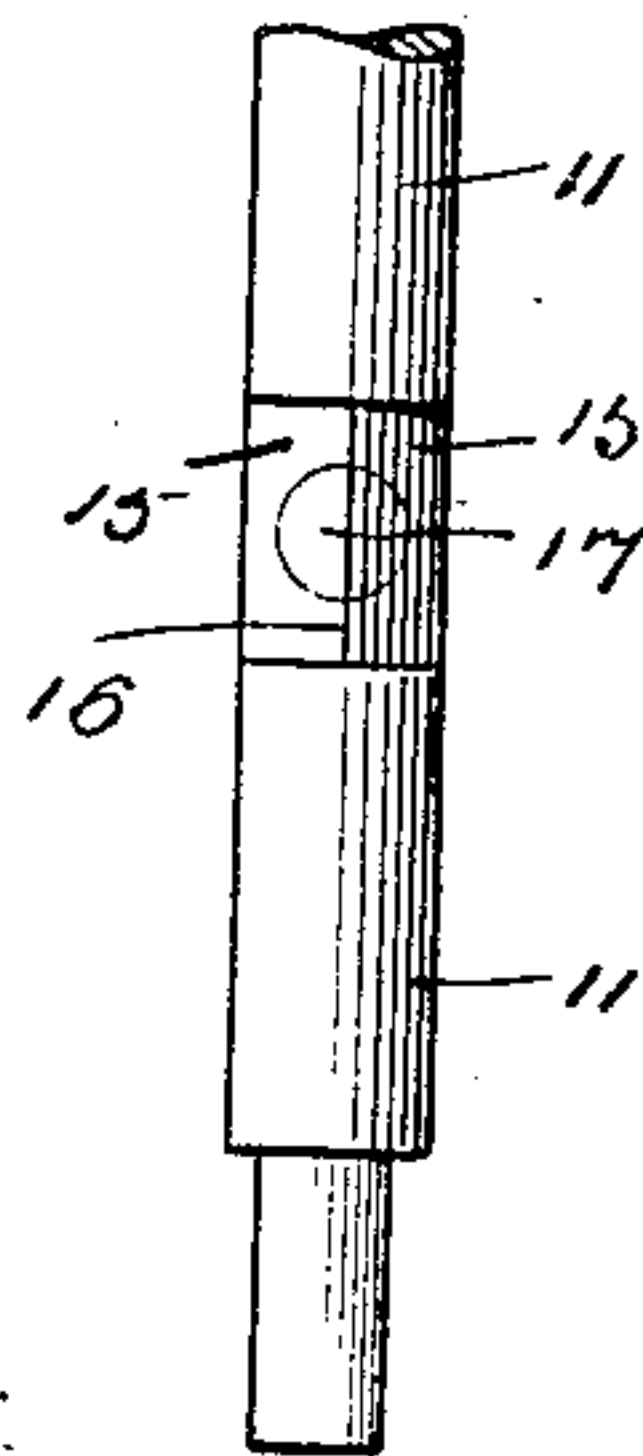


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLARD M. DELAVAN, OF PITTSFIELD, MASSACHUSETTS, AND WILLIAM I. T. FOSDICK, OF BRIDGEPORT, CONNECTICUT, ASSIGNORS TO TRIUMPH VOTING MACHINE COMPANY, OF PITTSFIELD, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

FRICTION DEVICE FOR VOTING-LEVER SHAFTS.

No. 817,473.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLARD M. DELAVAN, residing at Pittsfield, county of Berkshire, State of Massachusetts, and WILLIAM I. T. FOSDICK, residing at Bridgeport, county of Fairfield, State of Connecticut, citizens of the United States, have invented a new and useful Friction Device for Voting-Lever Shafts, of which the following is a specification.

This invention relates to the class of voting-machines in which the voting operation is performed by means of voting-levers carried by oscillatory voting-lever shafts, and has for its object to provide a simple, durable, and inexpensive friction device which shall act to retain the voting-lever shafts in either the voting or non-voting position, so that having been placed in either position by the act of a voter or the operation of the mechanism of the machine they will remain in that position until moved therefrom by act of a voter or by the operation of the mechanism of the machine. With this object in view we have devised the simple and novel mechanism of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to indicate the several parts.

Figure 1 is a view showing one of the standards of a voting-machine in rear elevation, voting-lever shafts being shown in cross-section and hubs in longitudinal section on the line 1 1 in Fig. 2 looking up, the plungers, springs, and screw-plugs being shown in elevation and the position of a voting-lever in the non-voting and voting positions being indicated by dotted lines; Fig. 2, a horizontal section of the standard, hub, and screw-plug on the line 2 2 in Fig. 1, a voting-lever, voting-lever shaft, and plunger appearing in plan; and Fig. 3 is an elevation of a voting-lever shaft detached.

10 denotes the standard of a voting-machine, which may be of any required design or configuration, 11 a voting-lever shaft mounted to oscillate therein, and 12 a voting-lever secured to the shaft in any suitable manner, as by a screw 13, and provided with a finger-piece 14 for convenience in manipulation. Each voting-lever shaft is provided with two bearing-surfaces 15, which lie at an angle to each other and meet at a ridge indi-

cated by 16. These bearing-surfaces may be formed by machining away the metal of the shaft. In order to reduce the wear of the bearing-surfaces to the minimum, we preferably drill a hole in the shaft and insert therein a hardened plug 17, the outer end of which is machined away with the metal of the shaft in forming the bearing-surfaces, the plug extending far enough into each bearing-surface to receive the wear in use. 18 denotes plungers lying in holes 19 in the standard and adapted to engage the bearing-surfaces on the voting-lever shafts. Each plunger is provided with a shank 20 and shoulder 26. The shank lies within a coil-spring 21, the inner end of which engages the shoulder, the outer end of said spring lying in a socket 22 in a screw-plug 23, which engages the outer end of a hub 24, extending from the standard and preferably cast integral therewith. The outer ends of the screw-plugs are provided with knurled heads 25 for convenience in rotating them to adjust the tension of the springs upon the plugs.

As indicated in the drawings, the normal position of the voting-levers is in the horizontal plane, in which position the operative end of the plunger is in engagement with one of the bearing-surfaces, in the present instance the lower bearing-surface, as clearly shown at the top in Fig. 1 and in Fig. 2. In the operation of voting a voting-lever is swung from the upper dotted position in Fig. 1 to the lower dotted position in said figure. This movement of the lever oscillates the voting-lever shaft and causes the ridge between the bearing-surfaces thereon to move over the operative end of the plunger, forcing the plunger backward against the power of the spring. As soon as the ridge between the bearing-surfaces has passed the mid-width of the end of the plunger the spring will act to continue the forward movement of the shaft and if given sufficient tension will of itself throw the voting-lever to the voting position when said lever has been swung past the mid-position and the ridge has passed the mid-width of the end of the plunger. When a voting-lever is in the voting position, as indicated by the dotted position of the lower lever in Fig. 1, the operative end of the plunger will be in engagement with the other

bearing-surface—that is, the upper one in the present instance upon the voting-lever shaft—as is clearly shown, in which position the voting-lever will remain until returned to its normal position by the act of a voter or through the operation of the mechanism of the machine, which is not illustrated, as it forms no portion of the present invention. When a voting-lever is being returned to its normal position, as soon as the ridge on the voting-lever shaft has passed the mid-width of the end of the plunger the spring will assist to throw the voting-lever and shaft to the non-voting position, or if sufficient tension is placed upon the springs the springs themselves will throw the voting-lever shafts and levers to the non-voting position as soon as the ridges have been moved past the mid-width of the ends of the plungers.

20 Having thus described our invention, we claim—

1. The combination with a voting-lever shaft having bearing-surfaces which meet in a ridge, of a spring-actuated plunger adapted to engage either of said bearing-surfaces to retain the shaft at either the voting or non-voting position and to carry said shaft to either the voting or non-voting position when the ridge has been carried past the mid-width of the end of the plunger.

2. The combination with a voting-lever

shaft having bearing-surfaces which meet in a ridge and a hardened plug inserted in said bearing-surfaces and the ridge, of a spring-actuated plunger adapted to engage said bearing-surfaces and the ridge, substantially as described, for the purpose specified.

3. The combination with a voting-lever shaft having bearing-surfaces which meet in a ridge, of a plunger adapted to engage either of said bearing-surfaces or the ridge and having a shank and a shoulder and a spring surrounding said shank and bearing against the shoulder, whereby the plunger is forced forward.

4. The combination with a voting-lever shaft having bearing-surfaces meeting in a ridge, of a plunger adapted to engage said bearing-surfaces and ridge and having a shank and a shoulder, a spring surrounding the shank and bearing against the shoulder, a hub which incloses the spring and a screw-plug having a socket which receives the outer end of the spring by which the tension of the spring is adjusted.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLARD M. DELAVAN.
WILLIAM I. T. FOSDICK.

Witnesses:

JAMES W. SGUAV,
JAMES FALLON.