

(No Model.)

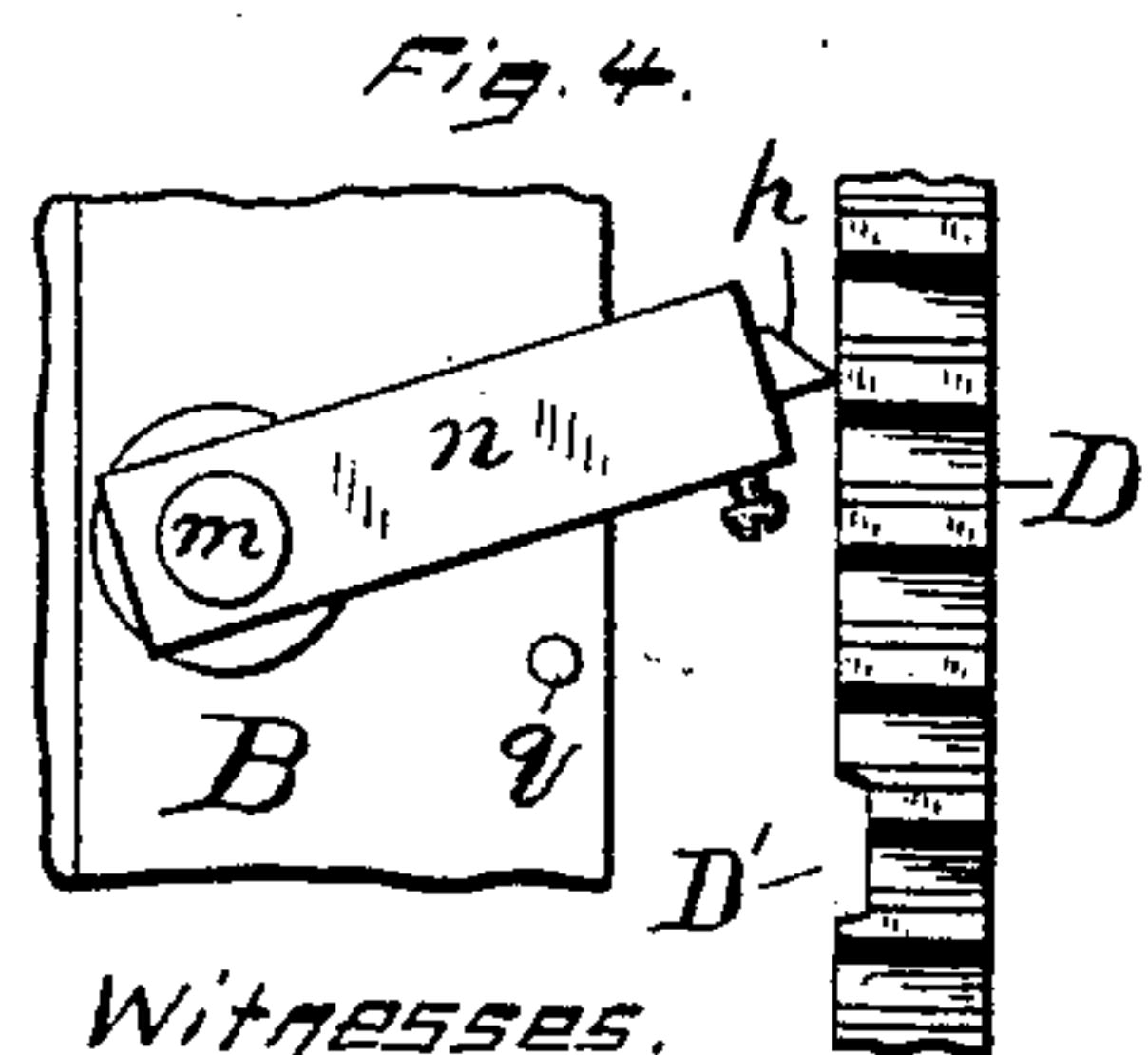
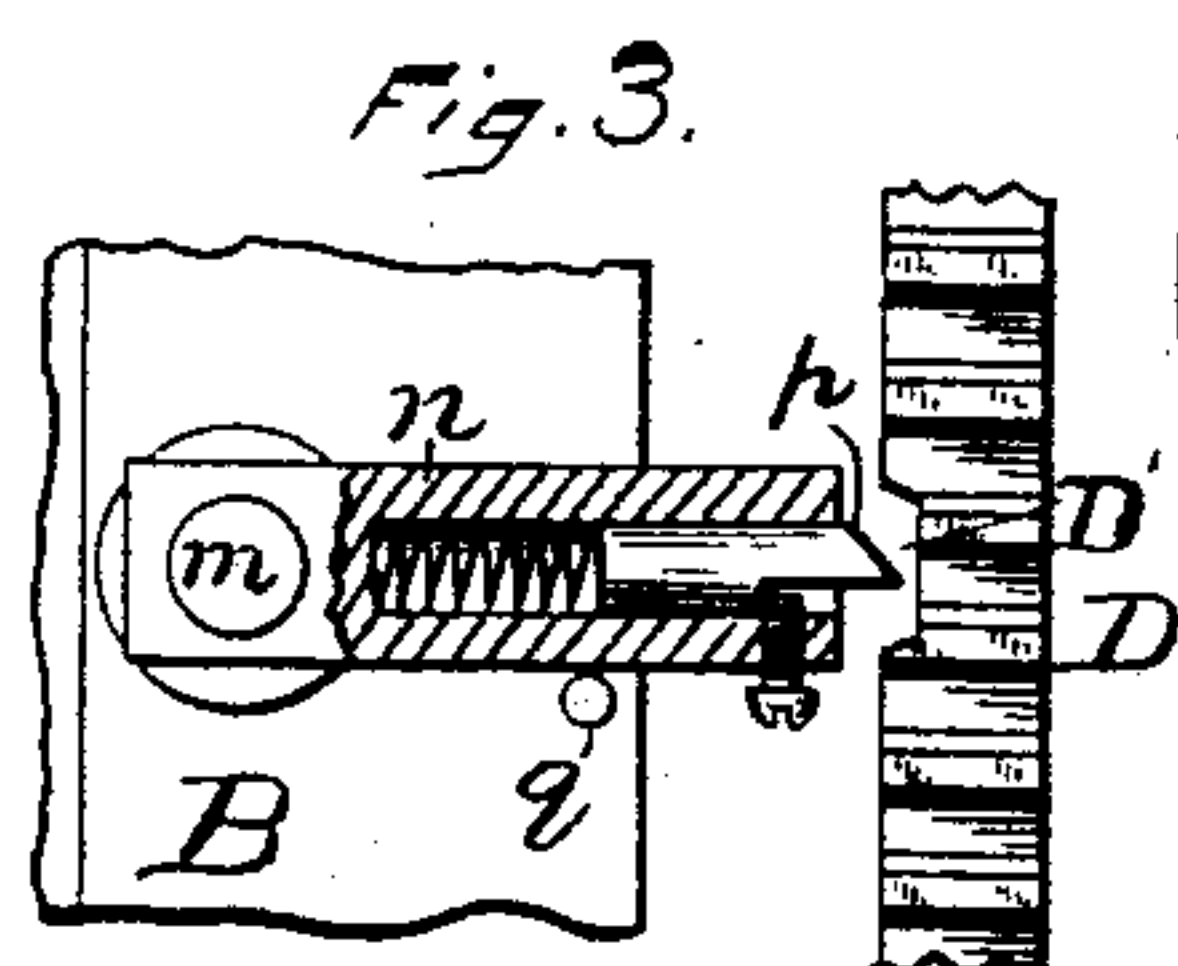
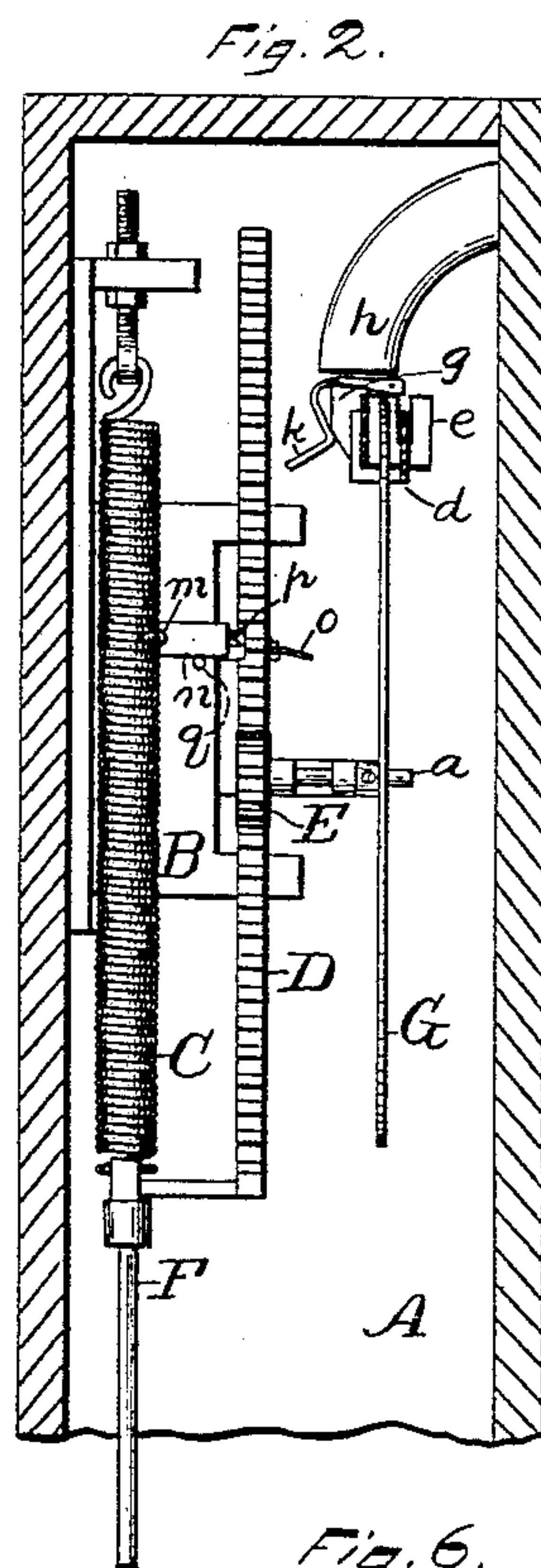
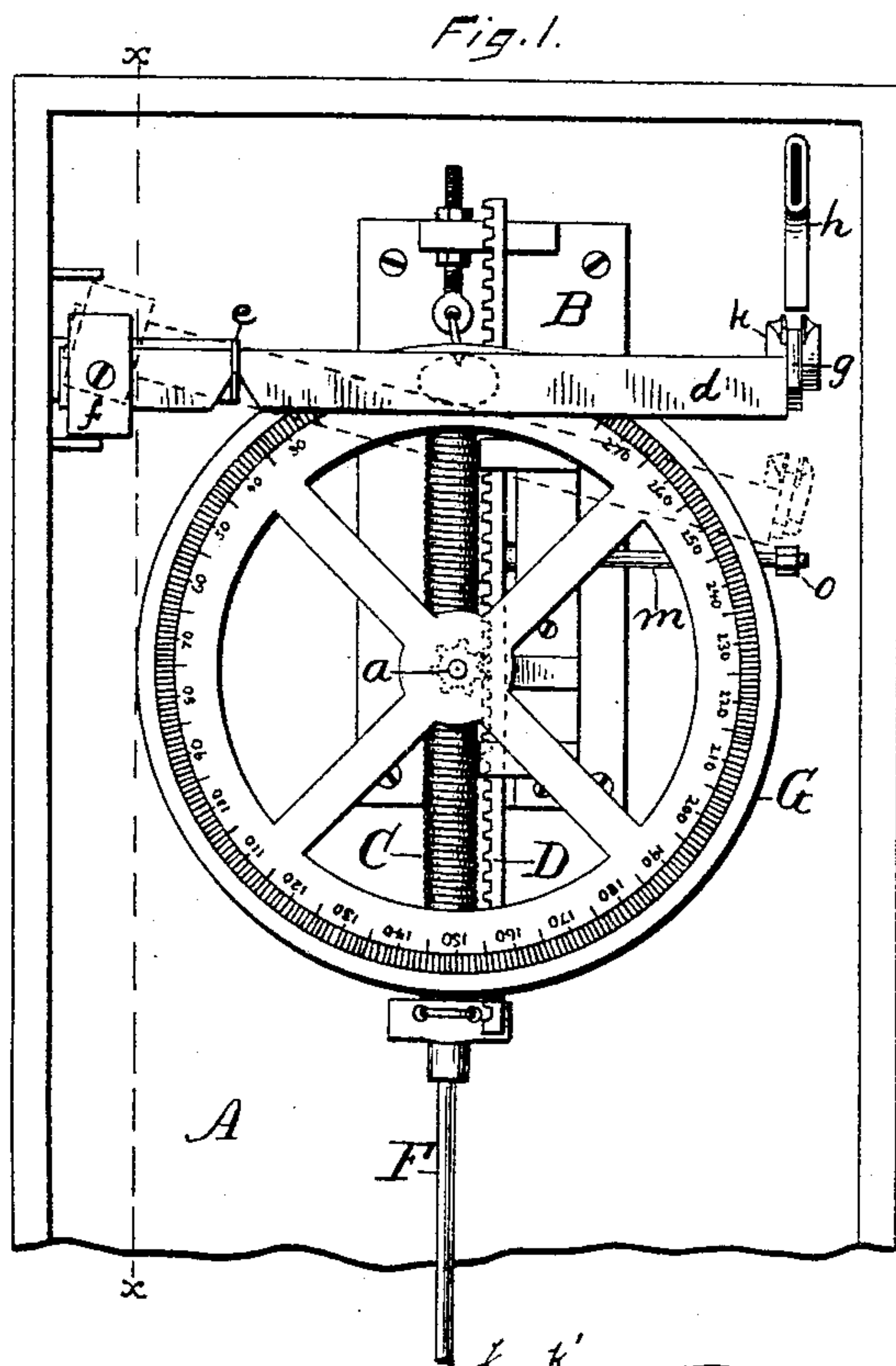
2 Sheets—Sheet 1.

G. P. HILL & A. L. WASHBURN.

COIN CONTROLLED WEIGHING SCALE.

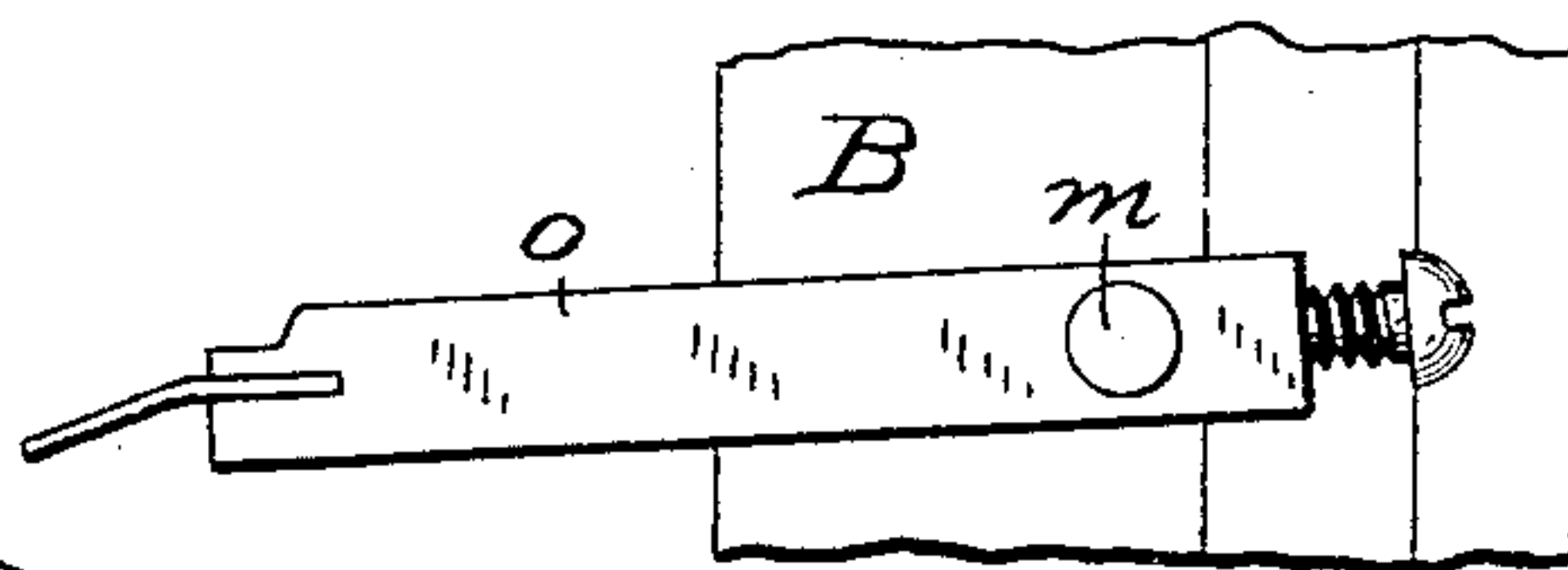
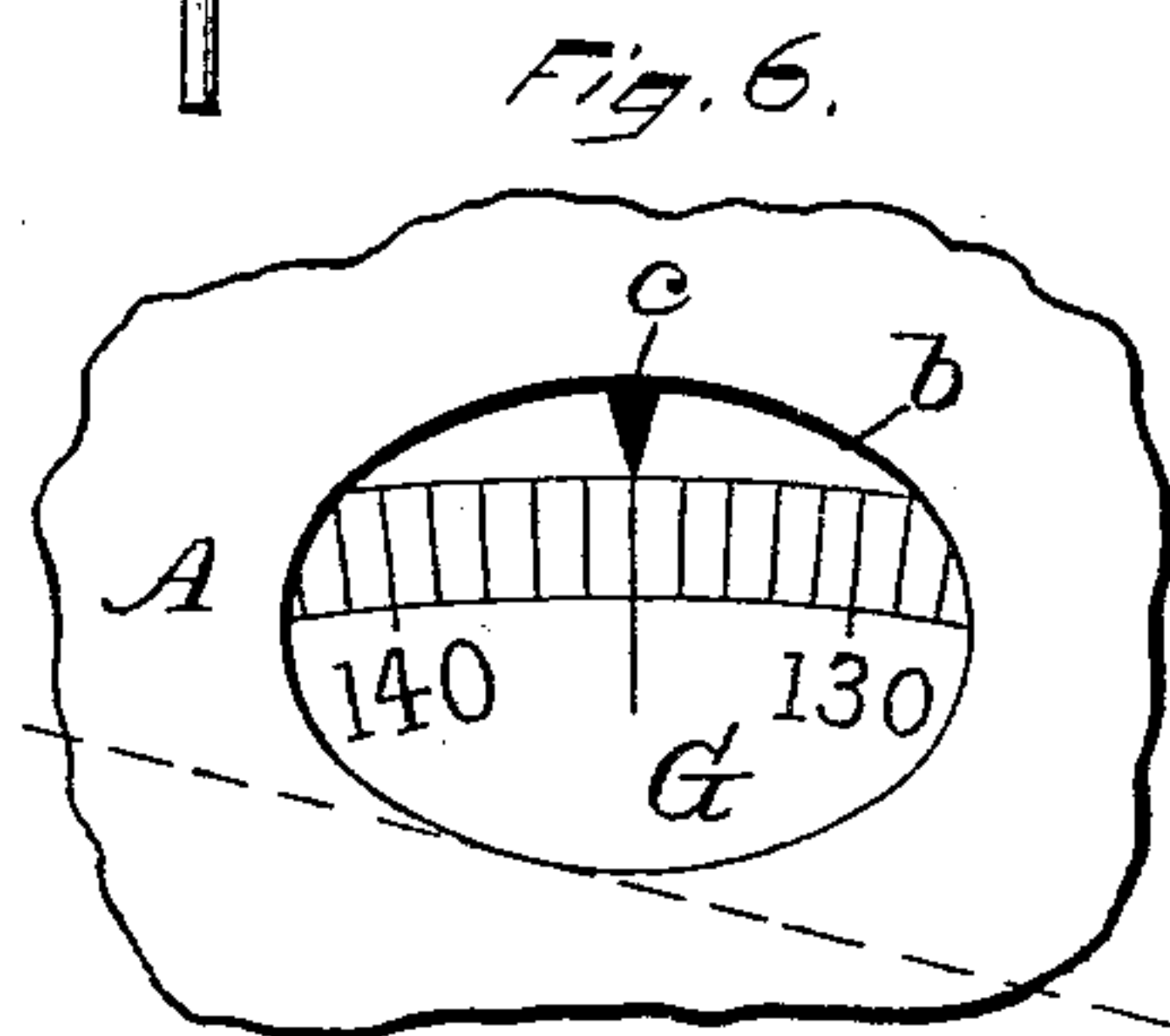
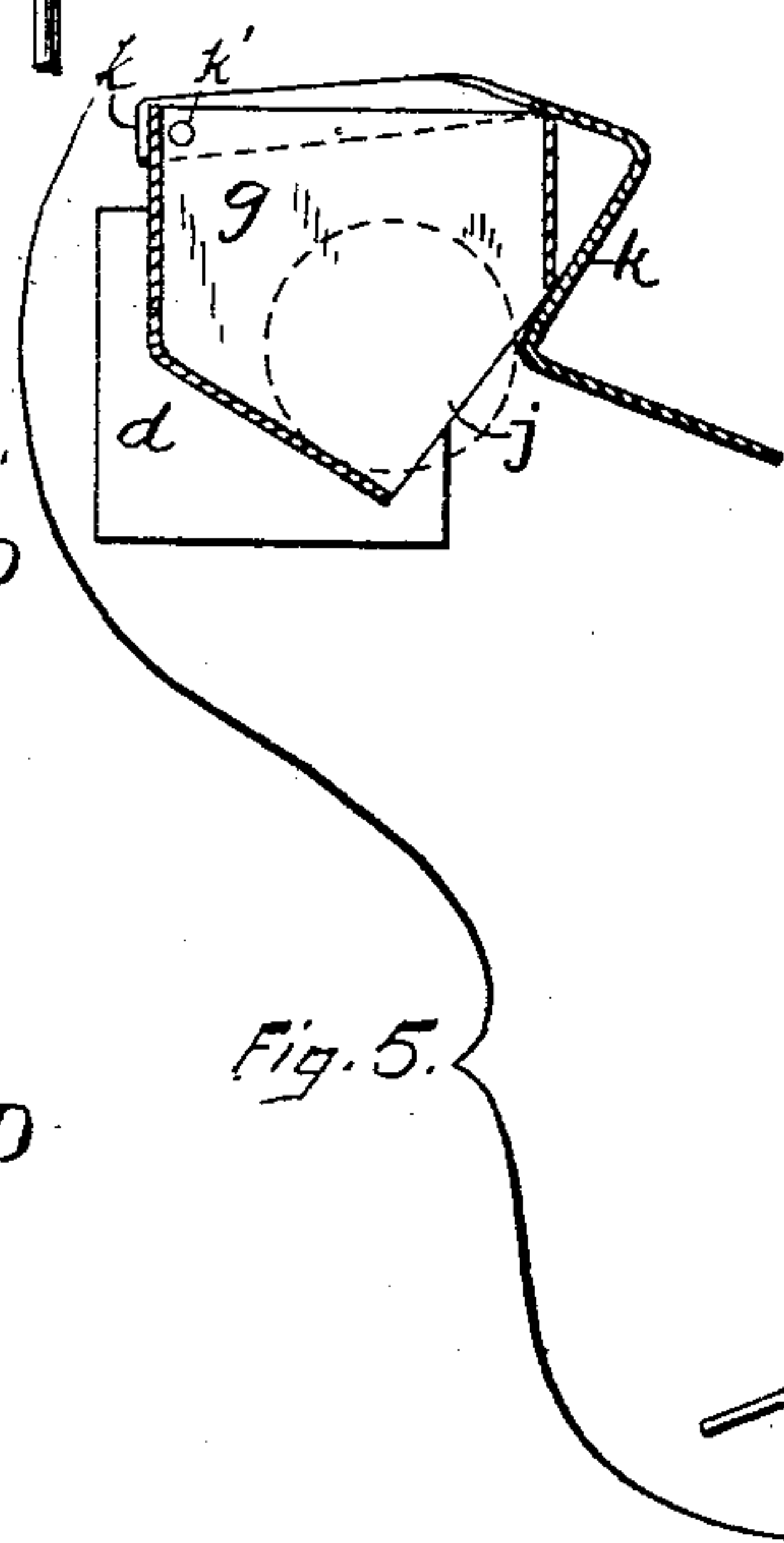
No. 389,223.

Patented Sept. 11, 1888.



WITNESSES.

John Edwards Jr.
J. Brockway.



INVENTORS.
George P. Hill,
Albert L. Washburn,
By James Shepard. Atty.

G. P. HILL & A. L. WASHBURN.

COIN CONTROLLED WEIGHING SCALE.

No. 389,223.

Fig. 7. Patented Sept. 11, 1888.

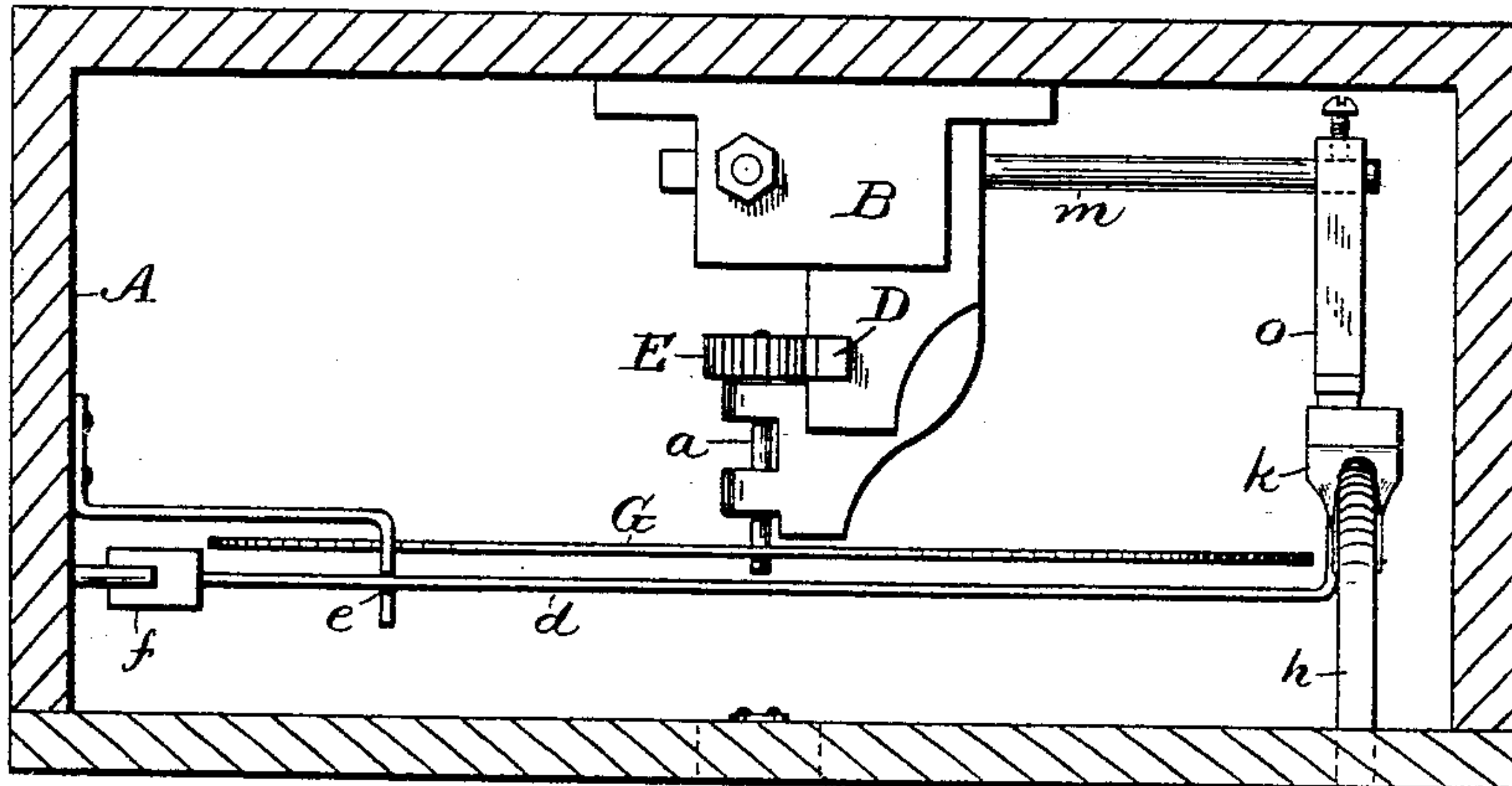


Fig. 8.

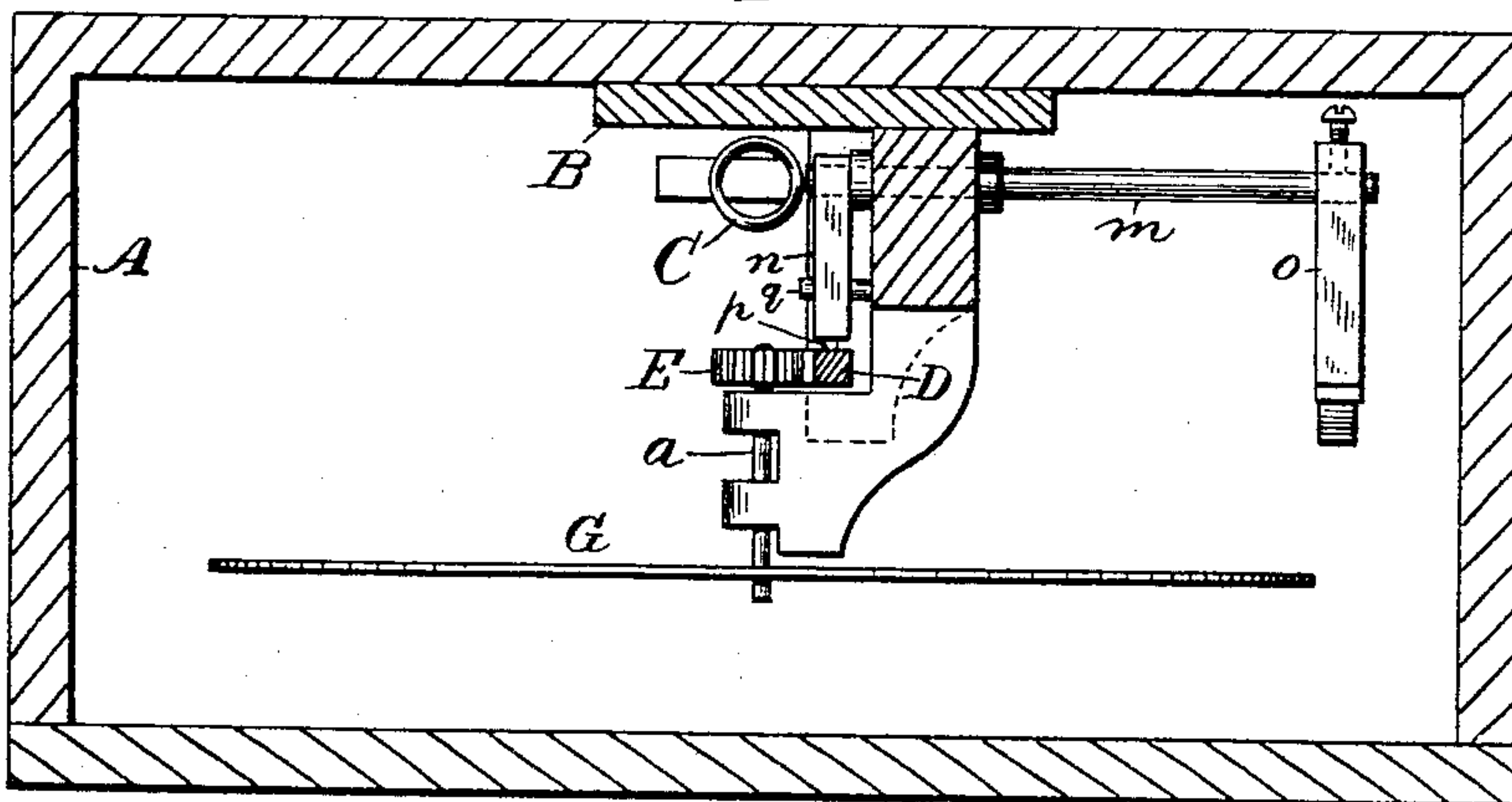


Fig. 9.

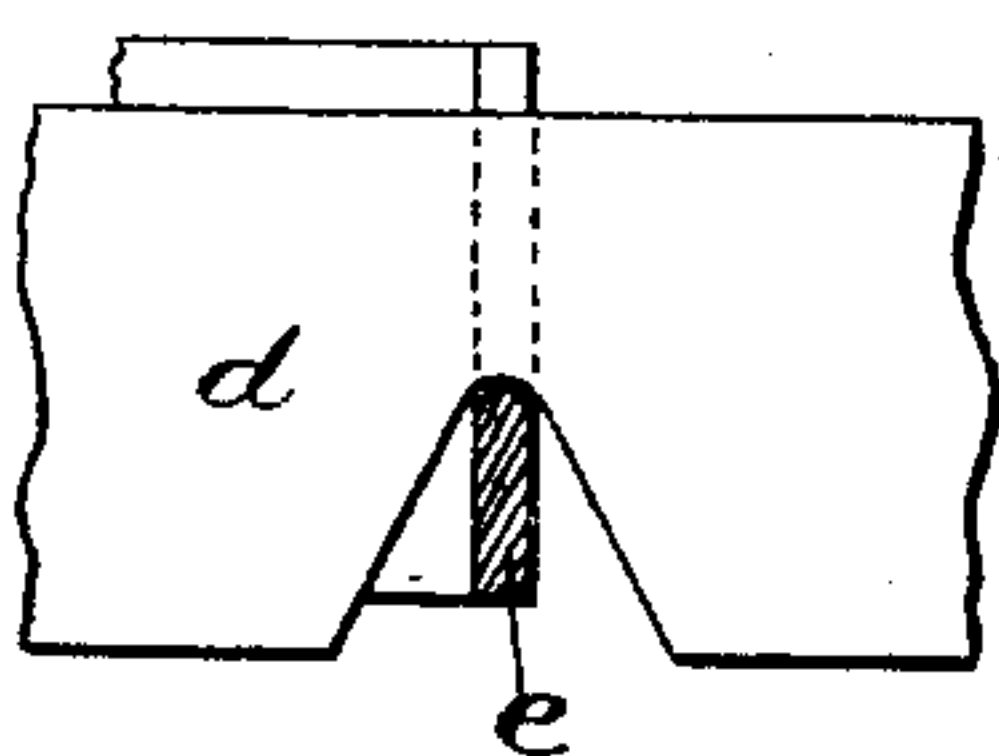
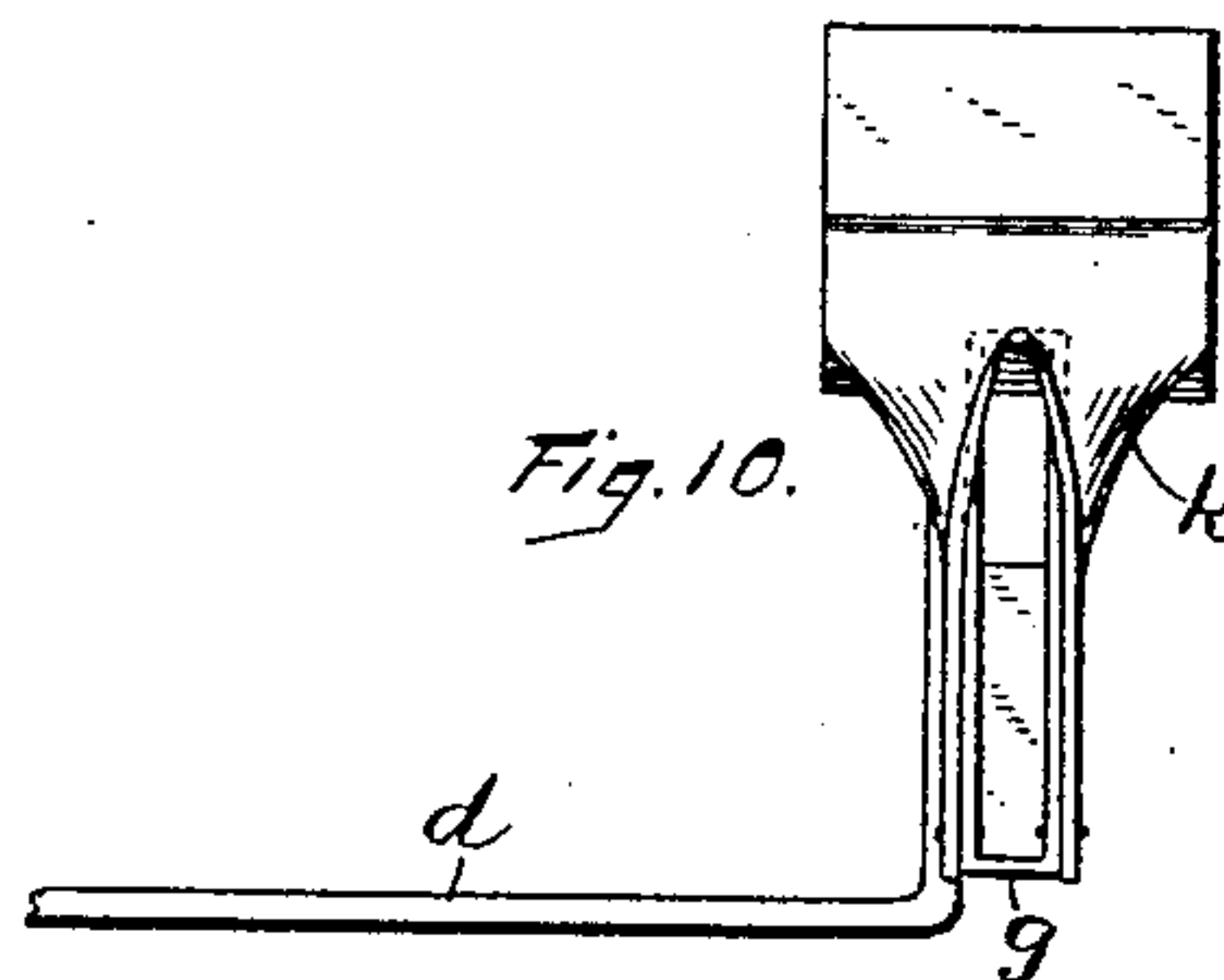


Fig. 10.



WITNESSES,
John Edwards Jr.
W. H. Pierce.

INVENTORS,
George P. Hill.
Albert L. Washburn.
By James Shepard.
Atty.

UNITED STATES PATENT OFFICE.

GEORGE P. HILL AND ALBERT L. WASHBURN, OF NIAN TIC, ASSIGNORS OF
ONE-HALF TO N. S. PERKINS, OF NEW LONDON, CONNECTICUT.

COIN-CONTROLLED WEIGHING-SCALE.

SPECIFICATION forming part of Letters Patent No. 389,223, dated September 11, 1888.

Application filed August 10, 1887. Serial No. 246,558. (No model.)

To all whom it may concern:

Be it known that we, GEORGE P. HILL and ALBERT L. WASHBURN, both citizens of the United States, residing at Niantic, in the
5 county of New London and State of Connecticut, have invented certain new and useful Improvements in Weighing-Scales, of which the following is a specification.

Our invention relates to improvements in
10 weighing-scales of the class in which the weight of the person is shown by the introduction of a coin into the machine; and the objects of our invention are to simplify the construction, to positively connect the dial and index with the
15 weighing mechanism, and in general to improve the efficiency of the machine.

In the accompanying drawings, Figure 1 is a front elevation of the upper portion of our weighing-scales with the front board removed.
20 Fig. 2 is a vertical section on line *x x* of Fig. 1, showing most of the parts in elevation. Figs. 3 and 4 are detail views illustrating the tripping mechanism. Fig. 5 shows the coin-receiver and one tripping-lever arranged in
25 proper relation to said receiver. Fig. 6 is a front view of a portion of our machine, showing the dial as it appears when a person is on the weighing-platform and has deposited a coin in the machine. Fig. 7 is a horizontal section
30 (on a larger scale than Figs. 1 and 2) of the case, with a plan view of the inclosed mechanism. Fig. 8 is a horizontal section of my machine on a line just above the shaft *m*. Fig. 9 is a front view of a portion of the pivotal
35 bar, together with a sectional view of its fulcrum; and Fig. 10 is a plan view of one end of the pivoted bar and the coin-receiver attached thereto.

A designates the case, of any desired construction, having mounted therein the frame
40 B, spring C, sliding rack D, and pinion E, all of ordinary construction, and connected by the rod F with any ordinary platform and weighing-levers in any ordinary manner.

45 As in other weighing-scales, the pinion E has attached to it the indicator-shaft *a*, to which shaft we secure a revolving dial, G, graduated into any desired number of divisions, according to the capacity of the scale—as, for
50 instance, from zero to three hundred pounds. In the front part of the case A, at the proper

point, there is an opening, *b*, which reveals one edge of the dial, as shown in Fig. 6, said opening also being indicated by the oval figure in broken lines in Fig. 1. In connection with
55 this opening and dial we affix to the front part of the case a stationary index or pointer, *c*, Fig. 6. The mechanism thus far described constitutes a complete weighing machine which will indicate correctly the weight of a person
60 or other object placed upon the platform of the scales. In order that this weight may be read only when a coin is deposited in the machine, we provide a pivoted bar, *d*, hung upon a suitable fulcrum, *e*, and counterbal-
65 anced by an adjustable weight, *f*, so that said bar in its normal position comes over the front edge of the dial at the point where the opening *b* and index *c* are located, so as to conceal the figures indicated on the dial from sight.
70 This pivoted bar *d* is provided at one end with a coin-receiver, *g*, the same being located immediately underneath the chute *h*, for directing a coin into the coin-receiver *g*. This coin-receiver is shown in vertical section in Fig. 5,
75 and has an open top, while at the bottom, upon one side, the wall inclines downward toward the oblique exit *j*, Fig. 5. A stop, *k*, is pivoted, as at *k'*, Fig. 5, to one of the upper corners of the coin-receiver *g*, with an angular
80 portion of said stop partially closing the exit *j*, so that a coin of a given size will not pass therefrom until said stop is lifted out of the way, the broken circle in Fig. 5 indicating the outline of such coin. Said stop *k* is forked at
85 its pivoted end, and its two arms extend along by the sides of the open top, so that it does not obstruct the upper end of the coin-receiver. The pivoted bar *d* is so balanced that when
90 the receiver *g* is empty it will remain in the position shown in Figs. 1, 2, and 5; but by the introduction of a proper-sized coin into the receiver the bar will swing on its fulcrum into the position indicated by broken lines in
95 Figs. 1 and 6, the broken line in the latter figure indicating the upper edge of said bar. This uncovers the indicator and enables the person to read his weight.

Within the frame of the weighing mechanism, in suitable bearings, we hang the shaft *m*,
100 to the ends of which we secure the tripping-arms *n* and *o*. The arm *n* is immediately back

of the rack D, and is provided with a spring-pressed slide, *p*, the spring having a tendency to press the slide outward against the rack. On the back of the rack a recess, *D'*, is formed in such a position that when zero is indicated this recess will be immediately opposite the slide *p*, and consequently the slide will not bear against the rack at all, but is free to drop downward until its motion is limited by the arm *n* coming in contact with the stop *q*. (See Figs. 3, 4, and 8.) Thus when zero is indicated the tripping-arms *n* and *o* will fall to their lowermost position. These arms are both rigidly affixed upon the shaft *m*; but one or both of them may be adjustable thereon and held in position by a set-screw. When a person steps upon the platform of the scales, the rack D is pulled downward, and so soon as the recess in the back of said rack passes the slide *p* the solid part of the rack, bearing on the beveled upper side of said slide, pushes said slide inward against its spring, while the stop *q* prevents the arm containing said slide from moving farther downward. A coin is then deposited in the chute *h*, whence it falls into the coin-receiver *g*, and causes the end of the bar *d* containing said receiver to fall into a position where the end of the pivoted stop *k* will be only slightly above the outer end of the tripping-arm *o*, as indicated by the broken lines in Fig. 1, the movement of the bar *d* being limited by the stop-lugs on the case immediately above and below the counterpoise or weight *f*. The pivoted bar *d* is thus carried downward, so as to reveal the weight indicated on the dial, as shown in Fig. 6. As soon as the weight upon the platform is removed, or even partially removed, so as to allow the rack D to rise a little, the spring-pressed slide *p*, pressing against said rack, will rise with said rack into the position shown in Fig. 4, thereby rocking the shaft *m* and elevating the tripping-arm *o* sufficiently to raise the pivoted stop *k* high enough to release the coin, after which release the pivoted bar *d* is returned to its normal position. No weight can be read again until another coin is deposited in the machine.

We hereby disclaim the combination of a disk adapted to be rotated under the force or weight applied to the apparatus, an inclosing-case, its front having an opening through it to expose the graduations on the disk, a passage adapted to receive a coin of certain size, a

cover for said opening, and an obstruction in said passage in connection with said cover, substantially as described, and whereby the coin so introduced will strike the said obstruction and by its weights remove the cover from said opening and expose the graduations on the disk.

We claim as our invention—

1. In a weighing-machine, the combination of the rack having a recess on one side—as, for instance, the back side—the rock shaft *m*, tripping-arms *n* *o*, mounted on said shaft, and a stop to limit their downward movement, the spring-pressed slide carried by the arm *n* and adapted to bear against the rack, and the stop of the coin-receiver within the path of the tripping-arm *o*, substantially as described, and for the purpose specified.

2. In a weighing-machine, the combination of the coin-receiver having an open top for the entry of the coin and at a point below said top a discharge aperture, the stop *k*, having a forked end, the two arms of which extend along by the sides of said open top, said top being pivoted to the upper part of said coin-receiver and having its lower end partly covering the discharge-aperture, and tripping mechanism for contacting with the free end of said stop and operating it to free said discharge-aperture, substantially as described, and for the purpose specified.

3. The combination of a weighing-machine and its indicator with a covering device whose movement covers and uncovers the weight indicated, the coin-receiver necessarily moving with said covering device, the pivoted stop *k*, mounted on said coin-receiver, the swinging tripping-arm *o* for contacting with the free end of the stop, said arm being set at a point just below the lowest point in the downward movement of said stop, and mechanism connecting said arm with that portion of the weighing mechanism which moves under the influence of a person's weight, whereby the tripping-arm *o* is thrown upward against said stop to raise it and release the coin by the upward movement of said part of the weighing mechanism, substantially as described, and for the purpose specified.

GEORGE P. HILL.
ALBERT L. WASHBURN.

Witnesses:

M. W. COMSTOCK,
L. C. COMSTOCK.