

No. 892,735.

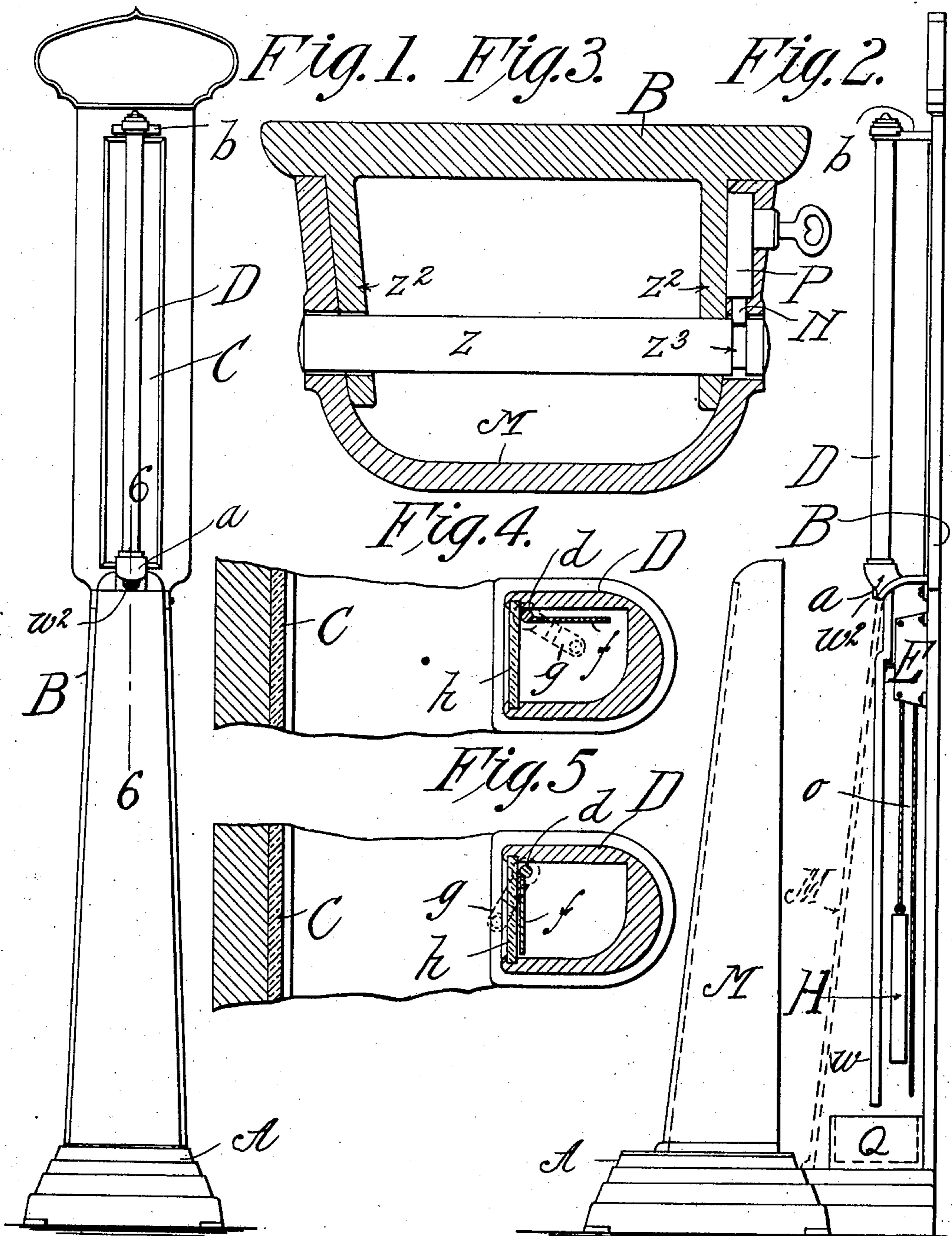
W. H. JOHNSON.

PATENTED JULY 7, 1908.

HEIGHT MEASURING APPARATUS.

APPLICATION FILED APR. 24, 1907.

2 SHEETS—SHEET 1.



Witnesses:
H. L. Sprague
R. M. Mowry.

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William H. Johnson,
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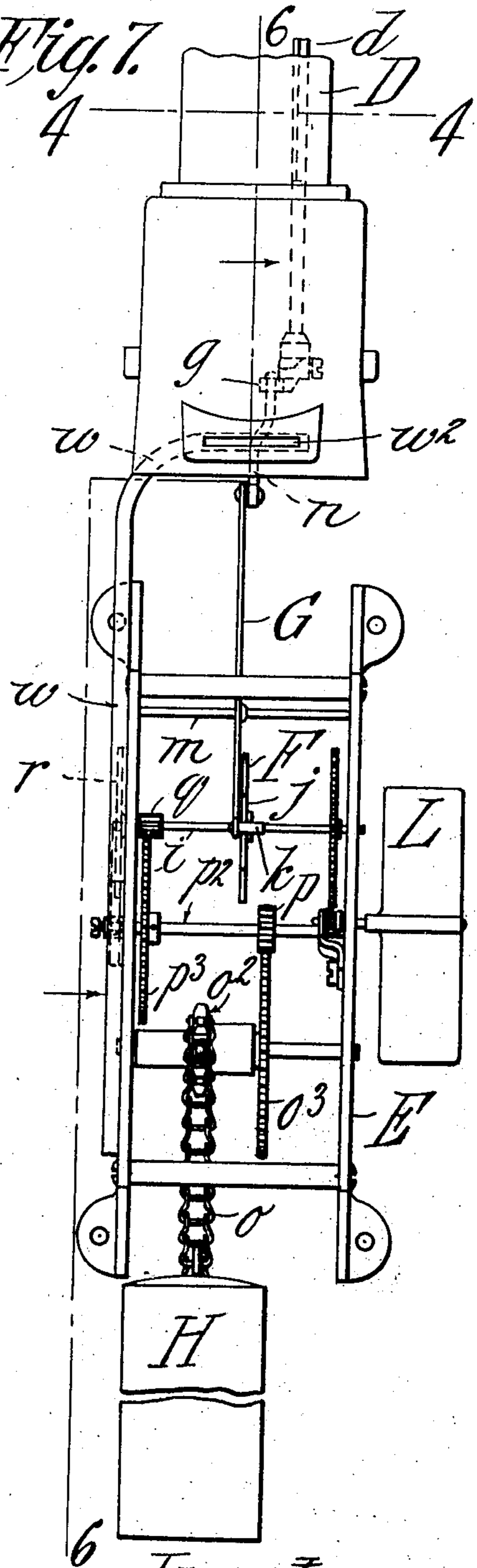
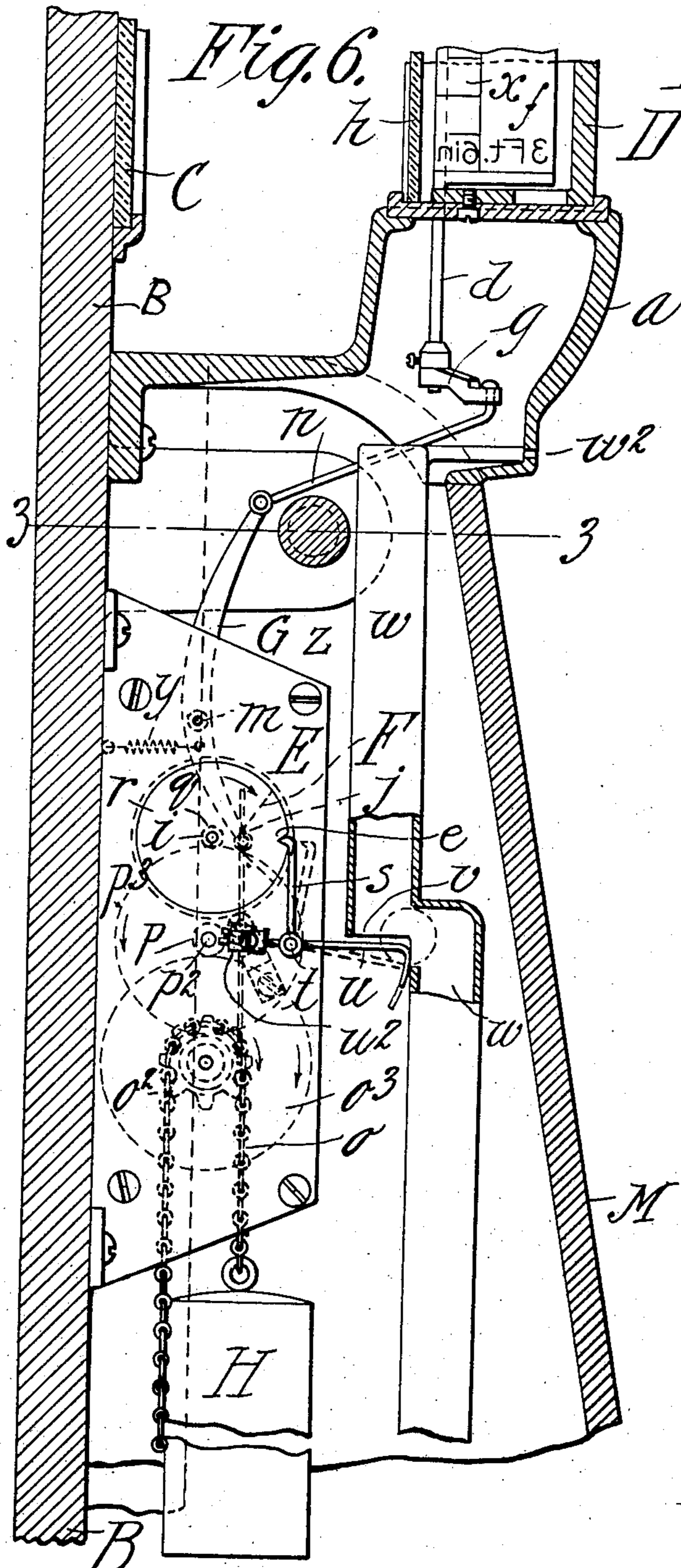
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UNITED STATES PATENT OFFICE.

WILLIAM H. JOHNSON, OF BRANDON, VERMONT.

HEIGHT-MEASURING APPARATUS.

No. 892,735.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed April 24, 1907. Serial No. 369,917.

To all whom it may concern:

Be it known that I, WILLIAM H. JOHNSON, a citizen of the United States of America, and resident of Brandon, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in Height-Measuring Apparatus, of which the following is a full, clear, and exact description.

10 This invention relates to an improved device or apparatus for measuring the heights of persons, and particularly to a device of the character indicated which is coin controlled and whereby the same is operative or effective to enable a person to ascertain his height only during a brief interval, corresponding to the operation of coin controlled mechanism included in the machine.

20 The invention consists in combinations and arrangements of parts, and the constructions of certain of the parts, all substantially as hereinafter fully described and set forth in the claims.

25 The coin controlled height measuring device is illustrated in the accompanying drawings in which,—

30 Figure 1 is a front elevation thereof; Fig. 2 is a side elevation of the same, the vertical cover for inclosing the coin controlled mechanism being shown as displaced from its usual position. Fig. 3 is a horizontal cross section, on a larger scale, as taken on line 3—3, Fig. 6. Figs. 4 and 5 are horizontal cross sections of portions of the device as taken on line 4—4, 35 Fig. 7. Fig. 6 is a vertical section, on the larger scale, as taken on line 6—6, Fig. 1. Fig. 7 is a front elevation of the inclosed mechanism as seen at right angles to Fig. 6, the front cover being absent.

40 Similar characters of reference indicate corresponding parts in all of the views.

45 The device comprises a horizontal base or platform A from which rises, at the rear thereof, a vertical back B having a mirror C on the front thereof and for a suitable upper portion of the height thereof.

50 D represents a vertical tubular bar of the cross section shown in Figs. 4 and 5, supported by suitable brackets a and b, at a short distance forwardly from and parallel with the face of the mirror.

55 Located and suitably journaled within the said tubular bar D is a vertical rockshaft d having a long, narrow plate f which along the vertical line coincident with one edge thereof is affixed on said shaft,—the lower extremity

of the said rockshaft being provided with a crank arm g. The said long, narrow plate constitutes the measuring scale of the device, the same having feet and inch indicating marks x thereon, running, for instance, from three feet six inches (which is the height of the lowermost indication above the top of the base platform A), up to, say, 7 feet, substantially as provided in the device illustrated and described in my application for Letters Patent filed March 27, 1906, Serial No. 308,254. The side of the tubular bar which is faced towards but separated from the vertical mirror C, is constructed with an opening, for which is provided an inclosing long narrow plate of glass h. The scale plate may, with the vertical rockshaft d, have quadrantal, or quarter revoluble, movements, to be positioned either as shown in Fig. 4 edgewise and at right angles to the plane of the glass inclosing the opening, or, as shown in Fig. 5, facewise closely to and parallel with the plane of the glass inclosing the opening, in which latter case the scale marks thereon will be shown by reflection on the mirror. I combine with the rockshaft carrying the scale plate coin controlled mechanism for first swinging the scale plate to the position represented in Fig. 5, whereupon the reflection of the scale on the mirror may be seen and for then, after a short interval, retiring the scale plate to the position shown in Fig. 4; and the same will be now described.

60 On a horizontal stud or arbor i supported between side walls of the frame E which is screwed to the back B below the mirror and bracket a is a disk F, shown in edge view in Fig. 7, and facewise represented by dotted lines in Fig. 6, the same having a recess in its edge at one side, making a cam incline j; and 65 coacting with this cam provided disk is a stud k carried at the lower end of a lever G which is intermediately pivoted at m,—the upper part of said lever G being, by link n, connected with the aforementioned crank arm g on the vertical scale carrying rockshaft d. 70

75 A motor, which may be of any suitable character, is operative through a train of gearing for imparting a slow rotative force to the aforesaid arbor i and the cam disk F carried thereon, said motor in the present instance consisting of a weight H carried by a sprocket chain o, an intermediate portion of which is engaged over a sprocket wheel o² which is made as one with a spur gear wheel 80 85 90 95 100 105 110

o^3 which meshes into a pinion p on an arbor p^2 which also has affixed thereon a spur gear wheel p^3 , which meshes into a pinion q on the arbor i on which the aforementioned cam disk F is carried. There is also affixed on the cam disk arbor i outside of one of the side plates of the frame E , another disk r having a notch e in the edge thereof with which engages the angularly turned extremity of a lever s which is carried on a rocking shaft or pivot t , another member or finger u of said lever projecting through an aperture v in a coin chute w , the entrance orifice of which is represented at w^2 in several of the views.

The weight u^2 carried on an extension of the arm u beyond the pivotal point t normally maintains the detent lever s and finger u in relative positions to the notched disk r and the coin chute shown in Fig. 6. A coin introduced into and falling in the chute, on reaching the step shaped and apertured portion thereof depresses the finger u and causes a swinging to the rightward of the detent lever s which disengages from the notch e in the disk r on the arbor i comprised in the train of gearing before described; and the sprocket chain-carried weight acting on the now released train of gearing causes a rotation of the arbor i which carries the cam disk F , and which latter, by the cam incline j , forces, through its stud k , the lower arm of the lever G to the rightward and its upper arm to the leftward (Fig. 6 being referred to), with the result of changing the scale plate from the position of Fig. 4 to the position of Fig. 5, whereupon a person standing on the platform with his head closely against the tubular bar D may, with both eyes, at either side of the bar, perceive a reflection of the top of his head coincident with a scale mark, indicating his height on the mirror. The motion of the cam disk F , by reason of the reducing gearing in the train, being slow requires an interval of, say from 30 seconds to a minute, for a complete rotation thereof, giving ample time for the person to make observation of his height in the manner explained before the cam recess j permits the return of the lever, as induced by the retracting spring y , to the original position in which the scale plate is retired to the position represented in Fig. 4.

On one of the arbors in the gearing train, which is extended through the side wall of the frame E , is a fan or flier L to act as a governor

in an ordinary manner for steadying and rendering uniform the motion of the gearing.

The coin controlled mechanism is inclosed by an upright front cover M of approximately semi-circular contour in cross section, the same in Fig. 2 being represented as forwardly removed from its usual position. This cover is held in place by a single bolt z which is passed through opposite sides of the cover and through lugs z^2 on the upright back B , said bolt having an annular groove z^3 in which the bolt N of a Yale or other lock P engages.

As shown in Fig. 3, the bolt is made headless and with no protruding parts by means of which it may be pried from its locking position, whereby unauthorized persons might effect a removal of the cover to gain access to the coin receptacle Q below the lower end of the coin chute w .

While I have described with sufficient particularity the construction of coin controlled mechanism operative as desired and effective for the purposes required in my improved height measuring device, it is expressly to be understood that I may utilize coin controlled mechanisms for rendering the height measuring device available only for brief periods following the introduction of coins of different characters from the one here particularly described and shown; and this invention is not in all respects to be limited to the inclusion of the height controlled mechanism herein set forth; and within the scope of the present invention, various changes may be made from the precise arrangements and constructions shown without departing from, or sacrificing any of the advantages of, the invention.

I claim:—

In a height measuring device, the combination with a vertical mirror of a tubular bar, forward of the mirror, provided with an opening through its side towards the mirror, a scale plate therein, pivotally connected for a swinging movement on a vertical axis, and means for swinging the scale plate into and out of position facewise parallel with the mirror.

Signed by me at Brandon Vt. in presence of two subscribing witnesses.

WILLIAM H. JOHNSON.

Witnesses:

J. D. NEEDHAM,
 G. H. YOUNG.