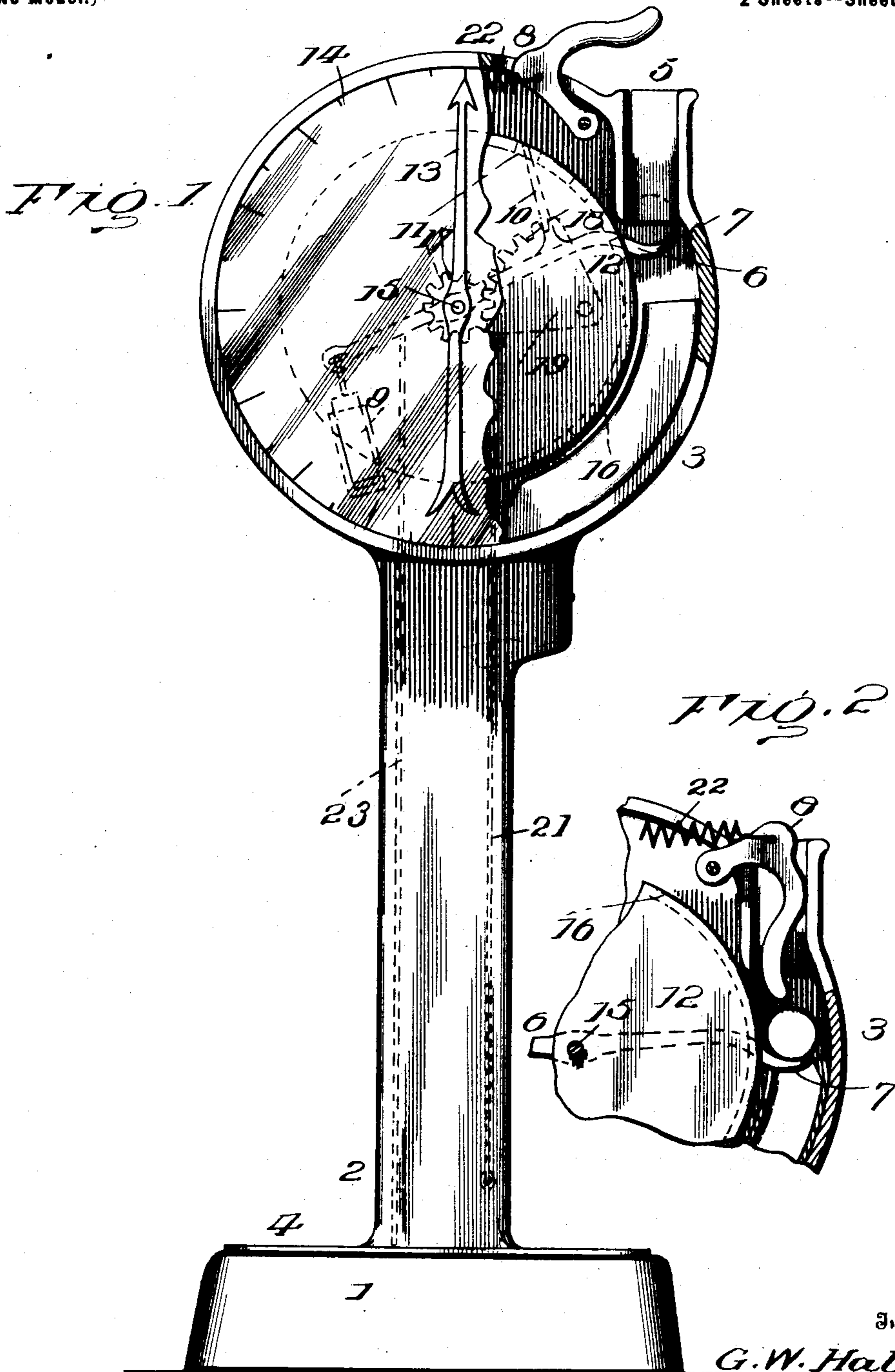


G. W. HALL.
COIN ACTUATED SCALE.

(Application filed Apr. 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. HALL, OF LA CROSSE, WISCONSIN, ASSIGNOR TO ANDREW OLSON, OF SAME PLACE.

COIN-ACTUATED SCALE.

SPECIFICATION forming part of Letters Patent No. 684,060, dated October 8, 1901.

Application filed April 29, 1901. Serial No. 58,053. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HALL, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Coin-Actuated Scales; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to weighing mechanism which is released for actuation by the weight to be determined by means of a coin of determinate value dropped into an opening, the purpose being to prevent more than one weighing for each coin deposited.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a weighing-machine embodying the invention, parts being broken away. Fig. 2 is a detail view showing the operation of the finger-piece. Fig. 3 is a vertical transverse section of the entire machine on the line X X of Fig. 4 looking to the left, as indicated by the arrows. Fig. 4 is a rear view, parts being broken away.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In general appearance the scales will not differ materially from those commonly in use and located in public places for accommodation of the community. The frame comprises a base 1, hollow standard 2, and head 3, the latter inclosing the operating mechanism and provided with the dial and pointer. The base 1 is provided with the usual platform 4, upon which the object or article to be weighed is placed, and this platform is mounted in any of the usual ways, with the exception that the

bearings are located a little to one side of the center to admit of a rocking movement of the platform sufficient to release the pointer and admit of its returning to a starting-point.

The head 3 is of circular form and is provided at one side with a slot or opening 5, into which the coin is dropped. A lever 6 has one end extending below and across the opening or slot 5 to receive the coin, said end being depressed, as shown at 7, to hold the coin in place until pressed upon to release the weighing mechanism. A finger-piece or lever 8 is pivoted adjacent to the opening or slot 5 and is curved, so as to admit of its free end entering the opening 5 to come in contact with the coin deposited therein and press the end 7 of the lever 6 downward to release the locking mechanism and to actuate the retarder 9 to prevent the quick return of the locking mechanism and lever 6 to a normal position, whereby ample time is afforded for the actuation of the weighing mechanism, so as to accurately determine the weight of the object placed upon the platform 4. The retarder 9 may be a dash-pot of any construction and, as shown, consists of telescoping cylinders, one being fixed to a part of the frame and the other attached to the end of the lever 6, so as to move therewith. The weight of the cylinder attached to the lever 6 is sufficient to return it and the said lever to a normal position after being actuated by the coin and part 8; but should it be deemed necessary a spring may be provided for co-operation with the lever 6 to insure its return to a normal or given position after being operated. The lever 6 is loosely mounted and preferably has its fulcrum in coaxial alignment with the dial and pointer. A pawl, dog, or lock-bar 10 is attached to the lever 6 and moves therewith and is adapted to coöperate with teeth 11 of a locking-disk 12, so as to secure the pointer in a given position or in the position to which it is moved by the weight upon the platform after the scales have operated to indicate the weight.

The locking-disk 12 is mounted coaxially with the pointer 13 and dial 14 and is secured to the shaft 15, carrying the pointer 13, whereby said pointer and locking-disk move together as one part. The pointer 13 travels

over the dial 14, whereas the locking-disk, lever 6, and adjunctive parts are located in the rear of the said dial, so as to be concealed from view thereby. A rim 16 projects rearwardly from the locking-disk and is provided with the teeth 11, which are spaced apart any desired distance either to allow for a margin of five, ten, or any other number of pounds. By this is meant that there will be a tooth for each five pounds, six pounds, or any other weight, thereby permitting the locking-disk and pointer to have a limited movement when indicating the weight of an object placed upon the platform.

A pinion 17 is secured to the shaft 15 and is in meshing relation with the teeth 18 of a segment 19, pivotally mounted to admit of the teeth 18 moving in a circle and in every position intermeshing with the teeth of the pinion 17. A spring 20 of determinate strength holds the toothed segment 19 in a given position. A rod 21 connects the outer lower end of the toothed segment 19 with a part of the platform 4, so as to actuate the toothed segment when the weighing mechanism is released and the weight is placed upon the platform 4.

To operate the scales, the weight to be determined is placed upon the platform 4, after which a coin is dropped into the slot or opening 5 and is received upon the depressed end 7 of the lever 6. The finger-lever 8 is operated to exert a downward pressure upon the coin and depress the end 7 of the lever 6, thereby withdrawing the dog or lock-bar 10 from the teeth 11 of the locking-disk 12, thereby permitting the platform to descend under the weight of the load placed thereon, whereby the toothed segment 19 is operated to turn the locking-disk 12 and pointer 13, which latter moves to a position upon the dial 14 to indicate the weight, it being understood that the strength of the spring 20 and the operating parts are so proportioned that the weighing will be accurate, according to a standard gage. When the weighing mechanism is released, the part 10 is moved away from the teeth 11 a sufficient distance to permit of the free operation of the locking-disk 12 and pointer 13 to properly and accurately determine the weight before the said part 10 turns to a position to engage with the teeth 11 and lock the parts 12 and 13 in the position to

which they have been moved by the weight imposed upon the platform 4. This result is accomplished by means of the retarding mechanism 9, which prevents the parts 10 and 6 from returning quickly to a normal position after released from the influence of the coin and part 8. When the lever or finger-piece 8 is released, it is returned to a primal position by means of a spring 22.

In order to reset the weighing mechanism, it is necessary to provide a releasing mechanism, which in the present instance consists of a rod or bar 23, having its upper end adapted to engage with the lever 6 and its lower end constructed to be operated by the platform 4, so that when the weight is removed from said platform and the latter assumes a normal position it will operate the rod 23 by moving it upward, so as to turn the lever 6 a distance to withdraw the part 10 from engagement with the teeth 11 and admit of the locking-disk 12 and pointer 13 returning quickly to a normal position.

Having thus described the invention, what is claimed as new is—

1. In combination with weighing mechanism including a dial and pointer, a locking-disk connected with the pointer for rotation therewith and provided with teeth representing a number of pounds, a coin-actuated lever, and a dog carried by said lever and adapted to enter the space between adjacent teeth to lock the pointer and disk connected therewith in the located position, substantially as set forth.

2. In combination, a dial, a pointer cooperating with the dial, a toothed locking-disk connected for rotation with the pointer, a coin-actuated lever, a dog operated by means of the coin-actuated lever and adapted to secure the locking-disk and pointer in a given and in an operated position, a retarder applied to the said coin-actuated lever, and a connection between the platform and said lever for automatically releasing the locking-disk upon the removal of the weight or load from the platform, substantially as set forth.

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

GEORGE W. HALL. [L. S.]

Witnesses:

F. E. WITHROW,
WM. E. SLOTTER.