

(No Model.)

2 Sheets—Sheet 1.

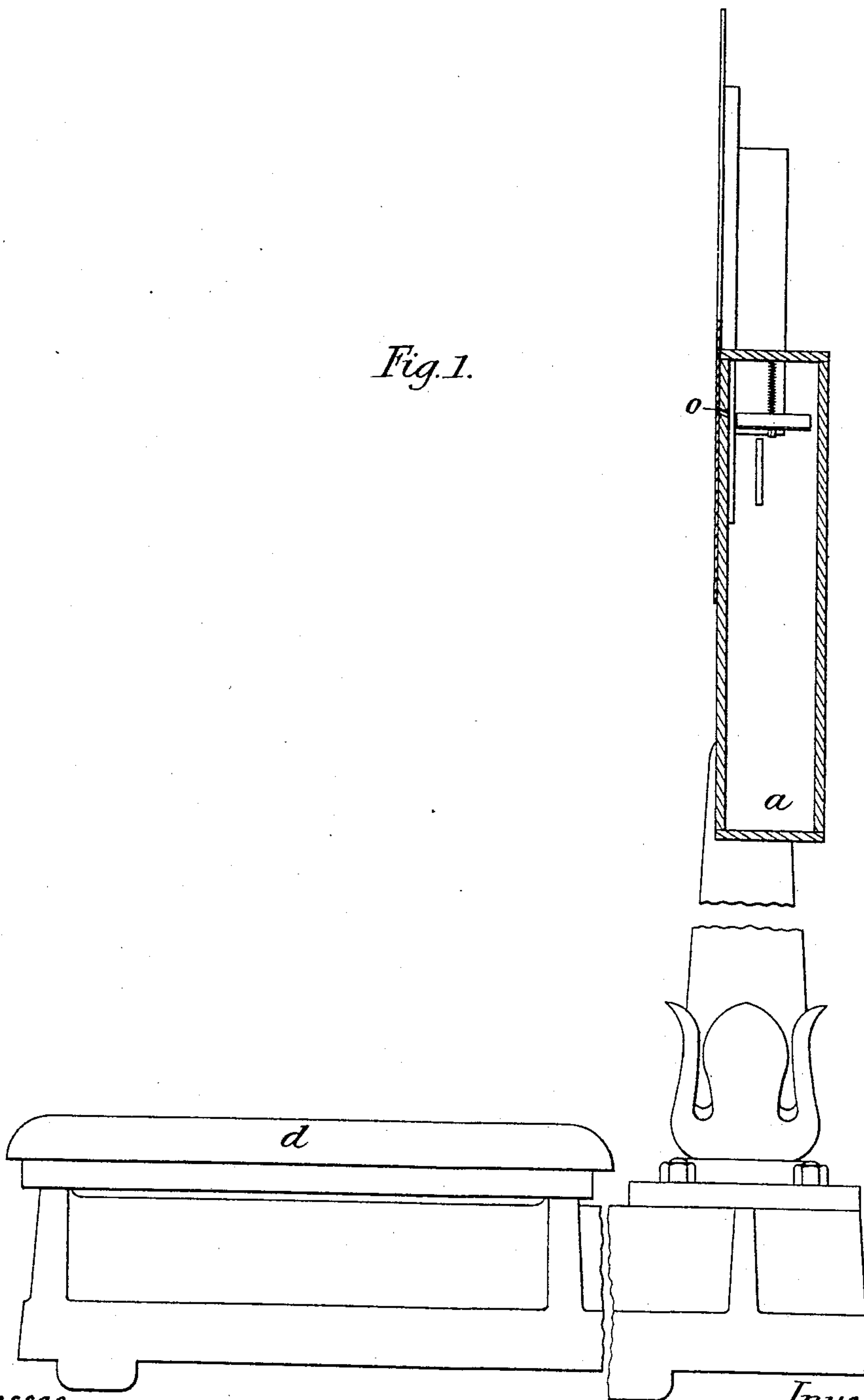
G. SALTER.

COIN OPERATED WEIGHING MACHINE.

No. 395,926.

Patented Jan. 8, 1889.

Fig. 1.



Witnesses

Geo. H. Rea.

Robert Emmett.

Inventor

George Salter.

By James L. Norris.
Atty.

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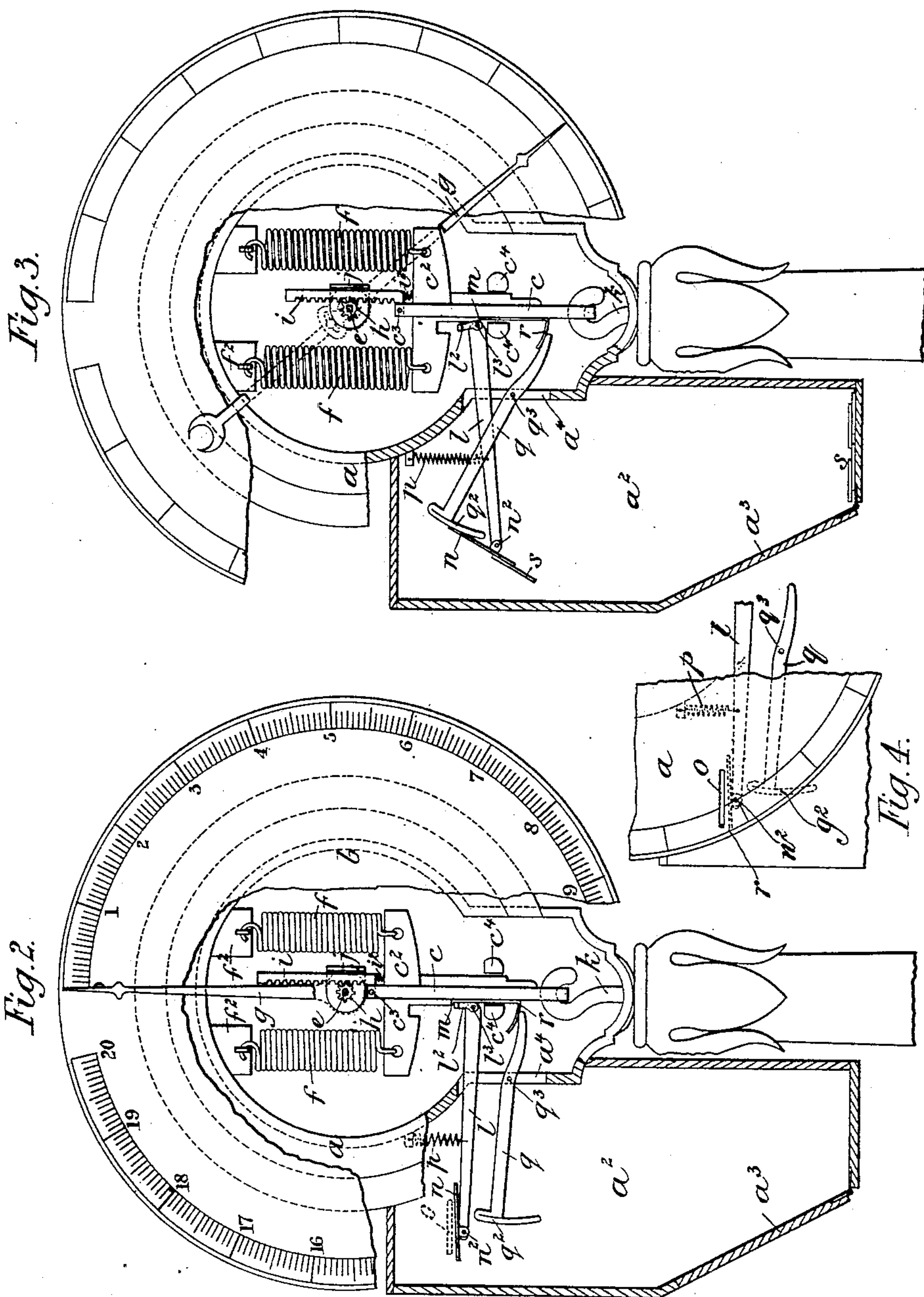
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UNITED STATES PATENT OFFICE.

GEORGE SALTER, OF WEST BROMWICH, COUNTY OF STAFFORD, ENGLAND.

COIN-OPERATED WEIGHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 395,926, dated January 8, 1889.

Application filed March 17, 1888. Serial No. 267,557. (No model.) Patented in England May 25, 1886, No. 6,983, and in Germany June 22, 1887, No. 39,664.

To all whom it may concern:

Be it known that I, GEORGE SALTER, a subject of the Queen of Great Britain, residing at West Bromwich, in the county of Stafford, England, have invented a certain new and useful Improvement in Coin-Operated Weighing-Machines, (for which I have obtained a patent in England, No. 6,983, dated May 25, 1886, and in Germany, No. 39,664, dated June 22, 1887,) of which the following is a specification.

My invention relates to that class of weighing-machines in which the indication of weight is dependent upon the introduction into the machine of a coin of predetermined denomination.

The main feature of my invention consists in the employment, in connection with weighing mechanism, of a catch or locking device normally holding such mechanism from operation and adapted to be unlocked and release said mechanism by the mechanical effect of the inserted coin.

My invention includes, also, means for discharging the coin into a receptacle provided for it after it has exercised its function of unlocking the weighing mechanism; and, further, my invention consists in the various novel devices and combinations of devices employed by me to produce a simple and effective machine of the general character above indicated, as will be hereinafter fully set forth and claimed.

According to the preferred mode of carrying out my invention, I provide a pivoted lever, one end of which engages a stop or projection on the rod which connects the platform with the weight-indicating scale, so as to lock the same from downward movement. The other end of said lever is formed to receive and retain the coin inserted through a slit in the casing which incloses the mechanism, and when said coin is so received its weight moves the lever so that the inner end thereof is disengaged from the weighing-rod and the use of the apparatus is permitted. When the weight is removed from the platform, the parts resume their normal position, means being provided whereby during the weighing operation the coin is removed from the end of the lever, such means consisting, preferably, of a tilting plate for holding the

coin and an arm for tilting it worked by the downward movement of the weighing-rod.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of an automatic weighing-machine constructed according to my invention, a portion of the body of the machine being broken off. Fig. 2 shows a section of that portion of the machine containing the weighing and check mechanism, the dial of the machine being partially removed. The said machine, Fig. 2, is also shown out of action or with the parts in the positions which they respectively assume before the desired or predetermined fee or coin is placed upon the tipping plate on the end of a lever, which liberates or takes away the check mechanism, in order to allow an object resting upon the platform of a machine to be weighed. Fig. 3 represents a similar view, the check or stop mechanism being removed from the bar of the weighing mechanism by the gravitating weight of a predetermined coin or fee, which is shown in the act of falling into the box or receptacle made to receive it. Fig. 4 is a side elevation of a portion of the frame of the machine, exhibiting the slit-hole through which a coin passes.

The same letters of reference indicate corresponding parts in the several figures of the drawings.

a is a hollow casing wherein the weighing and transmitting mechanism is inclosed, and *b* is an indicator-dial situated on the front of the said casing.

c is a weight-transmitting rod through which motion is communicated from the platform or seat *d* (see Fig. 1) to the arbor *e*, carrying the indicating-finger *g*. The said rod or bar *c* carries a T or cross head, *c*², at its upper end, to which the lower ends of two coiled springs, *f f*, are connected. These springs depend or hang from lugs *f*² on the top of the inside of the casing *a*. The said arbor or axis *e* carries a toothed pinion, *h*, which engages with a rack, *i*, carried by and jointed at *c*³ to the rod or T-piece *c c*², so that the joint end upon which the rack turns is cranked, which admits of a coiled spring, *i*², being placed under the heel or bottom of the under side of the rack, so as to constantly keep it up to its work.

j is the index-bracket and rack-guide, and

k is a hook-ended rod connected to the lower end of the transmitting-rod c , and through this rod or link k motion is communicated from the platform d by means common to this class of weighing-machine. The vertical movement of the parts is determined by guides c^4 .

l is a long lever with a short cranked arm, l^2 , the outward end of which (when not weighing) is presented to a shoulder or stop, m , carried by the motion-transmitting rod c , while the other end of the lever, which is in the money-box portion a^2 of the machine, carries a tilting or tipping plate, n , jointed at n^2 , and upon which plate a coin or other weighted fee is deposited and passed thereon through the slit or opening o , as best seen in Figs. 1 and 4, and also represented in dotted lines in Fig. 2. The lever and cranked arm at its end turns upon the fulcrum-center l^3 .

p is a delicate counterpoise-spring for returning the lever to its normal position after the overbalancing of the arm and the removal of the coin or fee from the tipping plate by the turned or crutch-end portion q^2 of the lever q . This lever q is jointed at q^3 , thus forming a long and short arm, the latter of which is presented to a curved projection or plate, r , carried by the motion-communicating rod c , so that the downward motion of the said rod through the influence of the curved plate r turns the lever q upon its fulcrum-center and inclines the plate to a sufficient angle, so as to compel the coin s to slip from off it and be deposited in the box a^3 , access to which is gained by the hinged door a^4 .

The levers l and q pass from the weighing-mechanism casing to the supplementary casing or money-box a^2 by a slit or opening, a^4 .

When a person or object requires or is required to be weighed, the fee, in the form of a penny or other predetermined coin, is passed through the slit or opening o and deposited on the jointed tipping plate n . The gravitating weight of the coin thus deposited causes the long arm or lever l to be lowered into the position as represented in Fig. 3, and which said lowering of the lever removes the cranked short arm l^2 from in front of or from under the check-stop n , thereby liberating or setting free the weighing and indicating mechanism. The person or object to be weighed then mounts or is placed upon the platform, when the weight of the person or other object pulls down the motion-communicating bar c , distends the springs $f f$, lowers the rack i , which rotates the finger axis or arbor e through the pinion h , and so indicates the weight of the person or other object by the finger g traversing and coming in front of the graduations of the dial. The downward movement of the said bar c causes the curved plate or shoulder r to turn the lever q upon its center q^3 , so as to bring the hooked or crutch end q^2 in contact with the plate n and tip it or incline it upward, so that the coin s shall be slipped from off or removed therefrom into

the receptacle a^2 . Thus the levers l and q are so arranged that the machine is rendered automatic by the gravitation of a predetermined coin (or weighted fee) placed upon the end of the lever q , so as to lower said lever and also turn it upon its joint center to an extent that will remove the impediment in the form of the arm l^2 from a shoulder, stop, or its mechanical equivalent carried by a movable part of the weighing portion of the mechanism. It therefore follows from the description herein given that a person can only be weighed by my invention if the requisite coin be passed through the slit-hole made for the purpose and the coin deposited upon the plate, which becomes lowered through the influence of its weight, thereby taking out of position a stop, which admits of the weighing mechanism being operated, and should a coin of less weight be tendered in payment for the weighing then the machine will remain inoperative until the proper amount is forthcoming; and, further, it will also be understood that the lowering of the lever l is only sufficient to take the short arm l^2 from out of the way of the stop m of the bar c , and that the coin shall remain upon the plate even in its lowered position until the lever or knocker-off q shall remove it from the plate upon which it rests, for if this were not so a person requiring to be weighed might place the coin through the slit, which would operate the releasing mechanism and return the parts to their normal position before a person would have time to get upon the platform. This is obviated by the lower lever, q , which can only be operated by the lowering of the curved plate or shoulder r , which is effected by the pulling down of the bar c on a person or a weight being placed upon the platform.

On a person or object being removed from the platform of the machine the parts resume their normal positions, as represented in Fig. 2.

What I claim is—

1. In a weighing-machine, the combination, with weighing mechanism, of a lever one end of which engages said mechanism to hold it from operation, and whose other end is provided with a coin-receptacle, and means operated by the movement of the weighing mechanism for discharging the coin from said receptacle, substantially as set forth.

2. In a weighing-machine, the combination, with weighing mechanism, of a lever one end of which engages said mechanism to hold it from operation, a tilting plate on the other end of said lever for receiving a coin, and an arm moved by the weighing mechanism for tilting said plate to discharge the coin, substantially as set forth.

GEORGE SALTER.

Witnesses:

THOMAS SMITH,

High St., West Bromwich.

W. SCHEER,

64 Reservoir Road, Birmingham.