

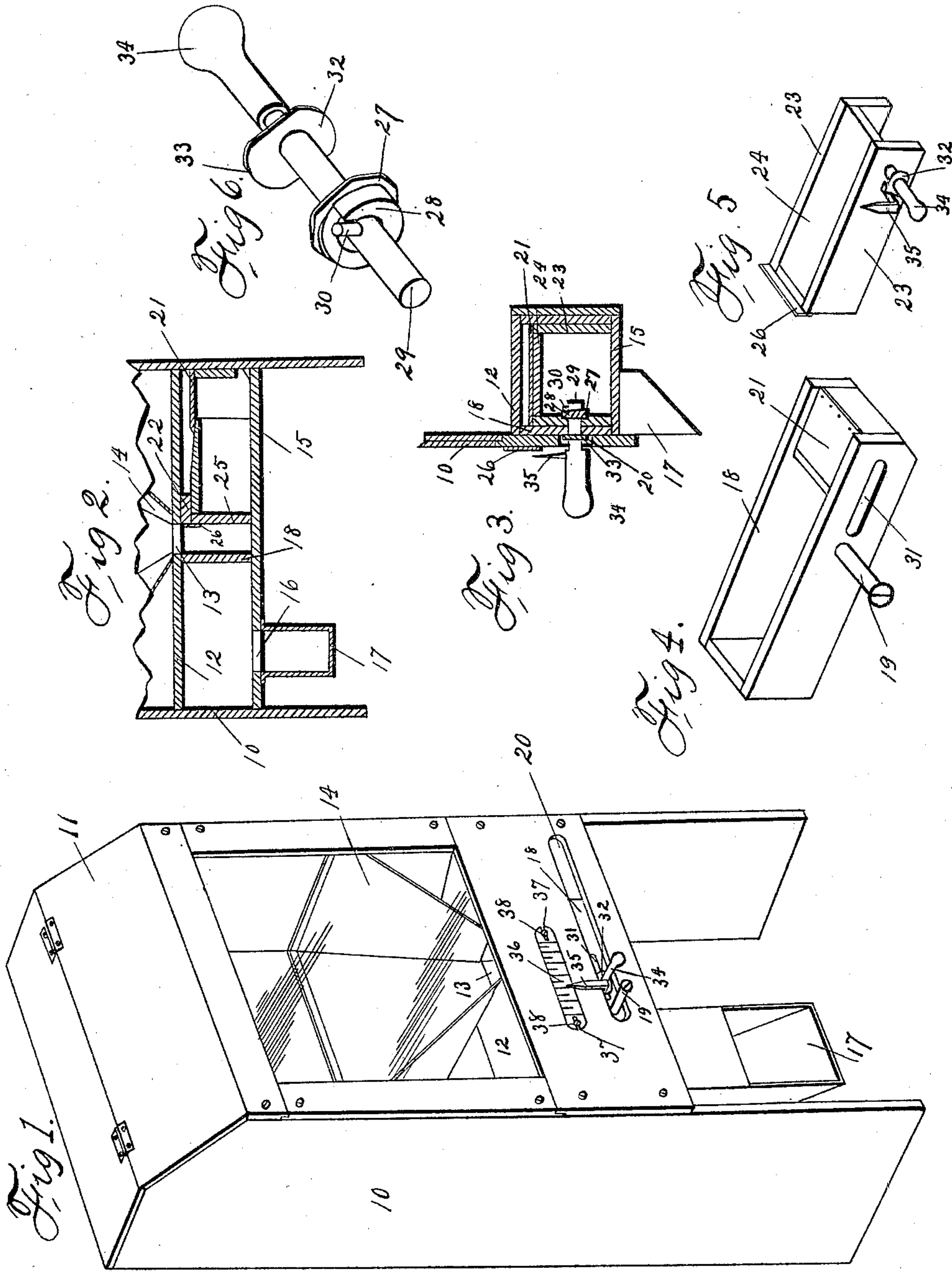
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Patented Apr. 1, 1902.

E. HORNADAY.
COMPUTING MEASURING CABINET.

(Application filed Apr. 26, 1901.)

(No Model.)



Witnesses:
L. H. Orwig.
H. Manger.

Inventor Edson Hornaday
by Orwig & Lane Attys.

UNITED STATES PATENT OFFICE.

EDSON HORNADAY, OF COLFAX, IOWA, ASSIGNOR OF TWO-FIFTHS TO
GEORGE W. SHANAFELT, OF COLFAX, IOWA.

COMPUTING MEASURING-CABINET.

SPECIFICATION forming part of Letters Patent No. 696,564, dated April 1, 1902.

Application filed April 26, 1901. Serial No. 57,626. (No model.)

To all whom it may concern:

Be it known that I, EDSON HORNADAY, a citizen of the United States, residing at Colfax, in the county of Jasper and State of Iowa, have invented certain new and useful Improvements in Computing Measuring-Cabinets, of which the following is a specification.

This invention relates to that class of measuring-cabinets designed to contain a quantity of coffee or the like and to be operated to discharge certain portions of predetermined measure from the machine when operated.

My object is to provide a machine of this class of simple, durable, and inexpensive construction in which the capacity of the measuring-chamber may be quickly and easily and accurately adjusted to measure any certain predetermined quantity; and my object is, further, to provide improved means for discharging this measured quantity of coffee or the like quickly and easily.

A further object is to provide simple inexpensive means whereby the monetary value of the substance in the measuring-chamber may be quickly ascertained, so that a computing measuring-cabinet is provided. More specifically in this connection it is my object to provide a detachable scale having price-marks thereon to be secured to the machine-frame and also to provide a sliding partition in the measuring-chamber of the machine, said partition having an indicating-finger thereon designed to assume a position close to the scale, whereby the indicating-finger will be made to point to the price-mark upon the scale corresponding to the capacity of the measuring-chamber.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows the complete device in perspective. Fig. 2 shows a vertical longitudinal sectional view through the measuring-chamber and adjacent parts. Fig. 3 shows a vertical transverse sectional view of the same. Fig. 4 shows in perspective the frame of a measuring-chamber with its handle attached

thereto. Fig. 5 shows in perspective the adjustable partition to be placed in the measuring-chamber, also showing in position thereon the indicating-finger and the clamping device; and Fig. 6 shows in perspective the means for clamping the movable partition in the measuring-chamber.

Referring to the accompanying drawings, I have used the reference-numeral 10 to indicate the machine-frame. At the top of the machine-frame is a hinged cover 11 and near the central portion is a horizontal partition 12, having the opening 13 near its forward edge. An inclined bottom 14 is provided for the interior of the frame and extends from the sides and back to a point adjacent to the opening 13. The front of the frame is covered by glass, as clearly shown in Fig. 1. At some distance beneath the partition 12 is a second horizontal partition 15, having an opening 16 near one end and out of alinement with the opening 13. A chute 17 is fixed to the under surface of the partition 15 to discharge forwardly and downwardly.

Within the space between the partitions 12 and 15 I have mounted a measuring-chamber 18, open at its top and bottom and of a length capable of extending from one edge of the opening 13 to the opposite side of the cabinet. In height and width the measuring-chamber is designed to accurately fit between the partitions 12 and 15. A handle 19 is fixed to said measuring-chamber and projected through a horizontal slot 20 in the front of the machine-frame, by which it is obvious that the measuring-chamber may be manually moved longitudinally within the machine-frame and beneath the hopper.

At one end of the measuring-chamber is a thin horizontal strip 21, placed some distance beneath the top of the side pieces of said chamber.

The numeral 22 indicates a cross-strip secured to the under surface of the partition 12, at one side of the opening 13 therein.

Mounted within the measuring-chamber 18 is an adjustable partition comprising the parallel sides 23, the vertical dimensions of which are such that the said partition may freely slide under the cross-piece 22. Between the side pieces 23 is a solid top 24, and at one end

is the end piece 25, to which a flexible strip 26 is attached, which strip projects upwardly beyond the top of the end piece 25. This strip 26 readily bends over horizontally when the end piece 25 is moved to the right, so as to pass under the strip 22 and prevent the contents of the hopper from passing between the partition 25 and the strip 22. This partition is considerably shorter than the interior of the chamber 18, and hence may readily slide longitudinally therein. Obviously the size of the measuring-chamber will vary according to the position of said partition.

I have provided means for clamping the partition to any desirable position within the measuring-chamber, as follows: The numeral 27 is used to indicate a collar having a flat surface on its edge, which collar is seated on the inner surface of one of the side pieces 23, where it is securely fixed in position. On the inner face of the collar 27 is a cam-surface 28. A rod 29 is passed through the collar 27, and a pin 30 on said rod is designed to engage the cam-surface 28. Obviously when the said rod is turned the pin 30 will engage the cam in such manner as to move the rod through the collar a limited distance. This rod is designed to pass through a longitudinal slot 31 in the front of the measuring-chamber 18, and on the front surface of this measuring-chamber is a plate 32, having a notch 33 therein, said plate being firmly secured to the rod 29. This rod 29 also projects some distance through the slot 20, and on its outer end are the wings 34, by which it may be readily turned. I have also fixed to the movable partition 23 an indicating-finger 35, which finger projects straight outwardly through the slots 31 and 20 and then inclines straight upwardly, terminating in a point. Mounted upon the front of the machine-frame is a metal scale-plate 36, having the slots 37 in its ends, through which the screws 38 are passed. Obviously the scale-plate may be readily detached by bending it outwardly in its central portion far enough for one of the screw-heads to clear from one of the notches, whereupon the plate may be detached. This plate is in position adjacent to the indicating-finger 35.

In practical use and assuming the hopper to be filled with coffee or the like and assuming, further, that the price at which the coffee is to be sold is twenty cents per pound, the operator places a scale-plate upon the machine-frame bearing indicating-numerals ranging from "1" to "20," and the length of the plate from the first mark to the last is the same as the distance between the inner end of the measuring-chamber and the end piece 25, when the space in the measuring-chamber will hold exactly one pound of coffee. Assuming, then, that it is desired to deliver ten-cents worth of coffee, the operator holds the handle 19 with one end to its limit of movement to the left, as determined by the slot 20,

which is so arranged that the end of the measuring-chamber will then be directly under the opening 13, as shown in Fig. 2. Then the wings on the rod 29 are turned until the pin 30 lies against the shoulder of the cam 28, thereby permitting the partition to be moved freely in the measuring-chamber. The partition is then moved by means of the rod 29 until the indicating-finger reaches the point marked "10" upon the scale. Then the wings 34 are turned until the pin 30 is wedged against the cam-surface in such manner as to hold the partition rigidly in position within the measuring-chamber. When this is done, obviously the measuring-chamber will be filled with coffee through the opening 13, and on account of the strip 26 none of the coffee can pass between the partition and the cross-piece 22. If the opening between the parts 18 and 25 is of the degree shown in Fig. 2, the flexible strip 26 will prevent the passage of the hopper contents between the part 24 and the cross-piece 22, and if the part 25 is moved farther to the right the strip 26 will be folded over by the cross-piece 22 and will pass under the said cross-piece 22 and prevent the contents of the hopper from passing between the parts 24 and 25. Then the operator moves the entire measuring-chamber by means of the handle 19 to the left side of the machine, whereupon the measuring-chamber will stand directly over the opening 16 and the measuring-chamber will be discharged through the chute 17. Obviously the solid top on the partition and the thin strip 21 will prevent grain from entering the other chamber back of the end piece 25 and will prevent any grain from passing through the opening 13 until the measuring-chamber is again moved to position under the said opening. It is obvious that by this means the amount to be given for any sum of money is automatically computed by the indicating-finger and scale, and all that the operator need do is to manipulate the rod 27 in order to set the machine to discharge any given quantity of coffee at a time, and after the partition is thus set the amount determined upon may be withdrawn from the hopper through the chute quickly and easily by simply moving the handle 19 from one limit of its movement to the other.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

1. An improved measuring-cabinet, comprising a hopper having an opening in its bottom, a horizontal partition some distance beneath the hopper and having an opening out of vertical alinement with the opening in the hopper, a measuring-chamber open at its top and bottom and slidingly mounted between the hopper and partition, a sliding vertical partition in the measuring-chamber, means for adjustably securing said sliding partition in position relative to the measuring-chamber, an indicating-finger fixed to the adjust-

able partition, and a scale-plate fixed to the machine-frame adjacent to the said finger for the purposes stated.

2. An improved measuring-cabinet, comprising a hopper having an opening in its bottom, a horizontal partition some distance beneath the hopper and having an opening out of vertical alinement with the opening in the hopper, a measuring-chamber open at its top and bottom and slidingly mounted between the hopper and partition and having a longitudinal slot in one side a sliding vertical partition in the measuring-chamber having an end, top, and side piece, said side piece being designed to cover the slot in the measuring-chamber, an indicating-finger fixed to the sliding partition and projecting through said slot in the measuring-chamber, means for adjusting the vertical partition relative to the measuring-chamber, and a scale-plate fixed to the machine-frame to assume a position adjacent to the indicating-finger for the purposes stated.

3. An improved measuring-cabinet, comprising a hopper having an opening in its bottom, a horizontal partition some distance beneath the hopper and having an opening out of vertical alinement with the opening in the hopper, a measuring-chamber open at its top and bottom and slidingly mounted between the hopper and partition and having a longitudinal slot in one side, a handle fixed to the same side, a strip 21 in the measuring-chamber, an adjustable partition in the measuring-chamber comprising a top, end, and sides, said top being designed to pass under the strip 21, an indicating-finger fixed to the side of the adjustable partition and passed through the slot in the measuring-chamber, a clamping device connected with the vertical parti-

tion and passed through the slot in the measuring-chamber and capable of providing a handle by which the vertical partition may be moved and also providing means for clamping the vertical partition to the measuring-chamber, and a scale-plate having slots in its ends and screws passed through said slots into the body of the cabinet whereby the scale-plate may be detachably and adjustably connected with the said body portion, substantially as and for the purposes stated.

4. An improved measuring-cabinet, comprising a hopper, a horizontal partition beneath the hopper, having an opening therein communicating with the hopper, a second horizontal partition some distance beneath the first, and having an opening out of alinement with the opening in the first partition, a measuring-chamber open at its top and bottom and slidingly mounted between said partitions, said measuring-chamber having a horizontal slot in one side, a strip 21 mounted between the sides of the measuring-chamber near its outer end, a handle 19 secured to the measuring-chamber, a partition comprising the sides 23, top 24, and end 25, said end having a flexible strip, 26 thereon, an indicator fixed to the sliding partition and passed through the slot in the measuring-chamber, means for securely clamping the partition to the measuring-chamber, and a detachable scale-plate on the machine-frame adjacent to the said indicator, arranged and combined substantially in the manner set forth and for the purposes stated.

EDSON HORNADAY.

Witnesses:

J. RALPH ORWIG,
THOMAS G. ORWIG.