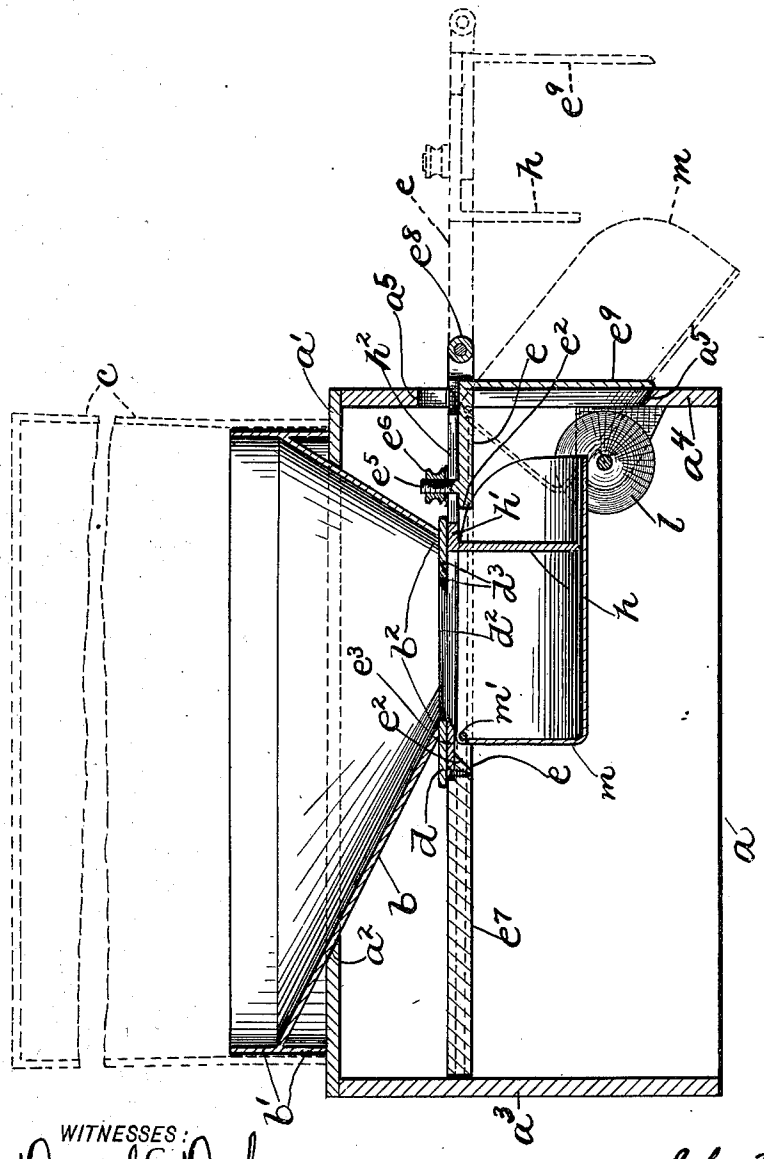
No. 672,782. Patented Apr. 23, 1901.

J. M. KINNARD.

MEASURING CABINET.

(Application filed Jan. 2, 1901.)

(No Model.) 2 Sheets—Sheet 1.



- FIG. 1 -

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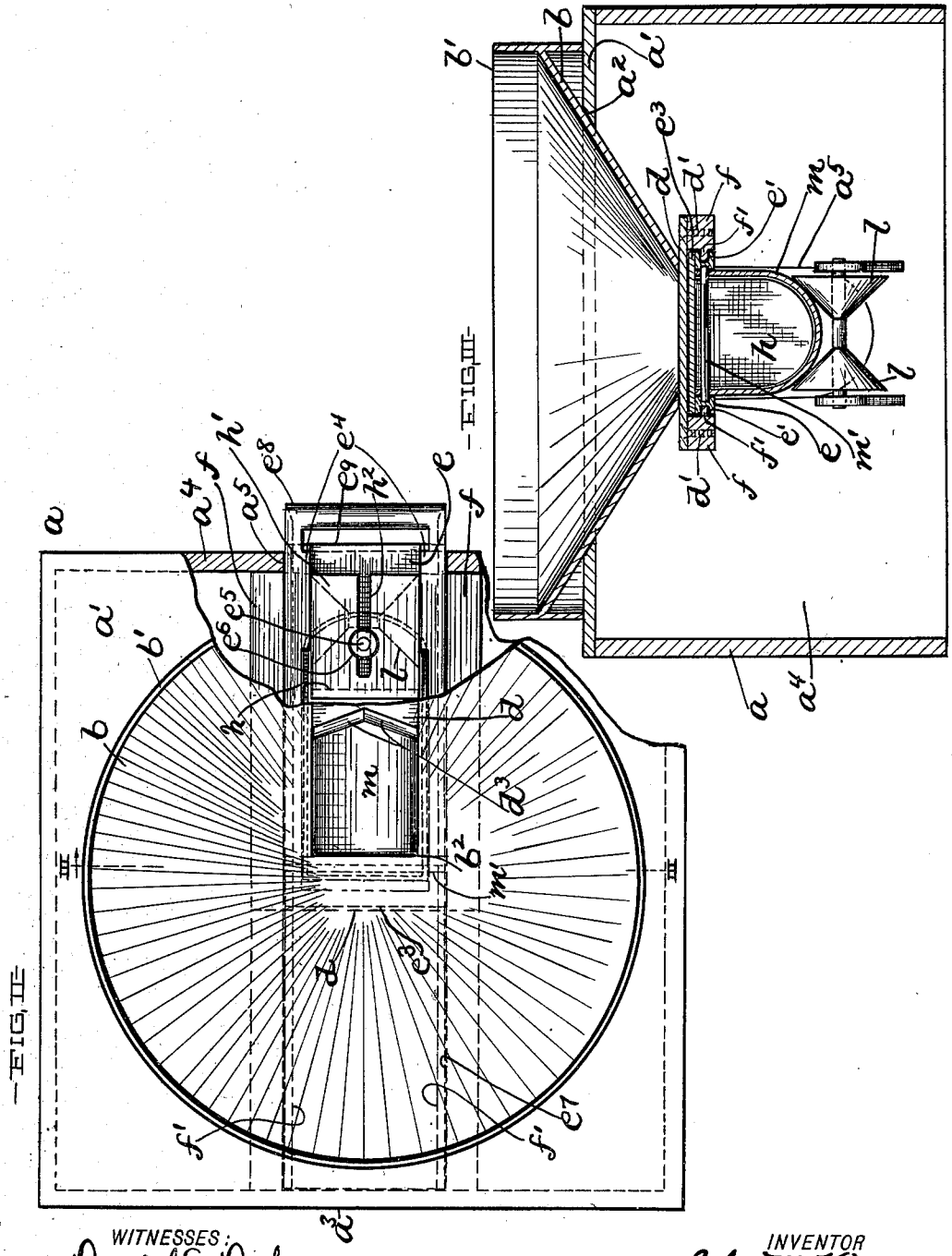
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UNITED STATES PATENT OFFICE.

JOHN M. KINNARD, OF CLEVELAND, OHIO.

MEASURING-CABINET.

SPECIFICATION forming part of Letters Patent No. 672,782, dated April 23, 1901.

Application filed January 2, 1901. Serial No. 41,800. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. KINNARD, a resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Measuring Caddies or Cabinets; 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 pertains to make and use the same.

My invention relates to improvements in measuring caddies or cabinets more especially designed for use in conveying small crackers or other dry merchandise from a storage-tank, cask, or container in uniform predetermined quantities.

The object of this invention is to provide apparatus of the character indicated which is exceedingly simple and durable in construction and reliable and convenient and non-destructive in its operation.

With this object in view and to the end of realizing other advantages hereinafter appearing the invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a side elevation, mostly in central vertical section, of apparatus embodying my invention, and portions are broken away in this figure to reduce the size of the drawing. Fig. II is a top plan of the apparatus, and portions are broken away in this figure to reduce the size of the same and to more clearly illustrate details of construction. Fig. III is a rear side elevation in vertical section on line III III, Fig. II.

Referring to the drawings, a designates a stationary casing or framework that is composed, preferably or in the main, of wooden members, and a' designates the top of the said casing. The top a' is provided centrally with an aperture a^2, having an upwardly-flaring surrounding wall that forms a seat for a correspondingly-shaped hopper b, which is formed, preferably, of sheet metal. The hopper b has its upper end provided with an annular vertically-arranged rim-forming ring b' of metal, which rests upon the top a'.

The receptacle or container c, (shown in dotted lines, Fig. I,) having an open end and containing the crackers or goods (not shown) to be delivered to the hopper b, is placed, open end down, over the ring b', so that the goods within the said container can gravitate into the hopper b.

The hopper b has its lower end provided with an outlet-forming opening b^2, arranged to discharge downwardly and registering with the hole d^2, formed within and extending vertically through a metallic plate d, which is arranged horizontally next below and contiguous to the hopper's lower end and is rendered stationary by rigidly securing it, preferably by means of screws d', to a stationary member or members of the apparatus. The plate d has the rearwardly-facing forward wall of the opening extending therethrough formed into a knife d^3, whose cutting edge is adapted to coöperate with the cutting edge of a knife e^3, formed upon the manually-operated slide e, which is arranged horizontally next below the plate d and extends and is shiftable endwise forwardly and rearwardly of the machine. The slide e engages slideways suitably formed upon the stationary part of the apparatus, and the said slideways are formed, preferably, by tongues f' and f', formed upon the opposing edges of two horizontally-arranged and parallel forwardly and rearwardly extending bars f and f, that are secured in any approved manner to the casing a, and the tongues f' and f' of the different bars f and f engage correspondingly-arranged grooves e' and e', formed in opposite side edges, respectively, of the slide e. The plate d is secured, preferably, to the bars f and f.

The knife e^3 of the slide e is formed, preferably, upon a metal plate that is set into the slide flush with the slide's upper surface, as shown in Fig. I, and is arranged horizontally and extends transversely of the slide and projects forwardly into the rear portion of the opening e^2, formed in and extending vertically through the slide e. The arrangement of the parts is such that in their normal position the slide e has its opening e^2 in registry with the hole d^2 in the plate d and the outlet b^2 of the hopper b and is in its rearward position, wherein the rear end of the said slide engages the inner surface of the rear wall a^3 of the casing a, and the wall a^3 forms, there-

fore, a stop for limiting the rearward movement of the slide *e*. The arrangement of the parts is furthermore such that in their normal position the knife d^3 of the plate *d* overhangs the forward portion of the opening e^2 of the slide *e*.

The slide *e* has its opening e^2 extending forwardly and rearwardly far enough to accommodate the location and operation of the measuring-scoop *m*, which is open at the top and has a rounded bottom and is carried by the slide *e*. In the normal position of the parts the scoop *m* is arranged horizontally and forwardly and rearwardly of and, in the main, below the slide *e* and has its upper portion extending into the slide's opening e^2. The scoop *m* is tiltable vertically and is pivoted at the top and rear end horizontally to and transversely of the slide, preferably by a pin *m'*, that extends through the said portion of the scoop into the side walls of the slide's opening e^2. It will be observed, therefore, that in the normal position of the parts the scoop *m* has its merchandise-receiving chamber in open relation with the chamber of the hopper, so that goods can gravitate from within the hopper into the scoop.

A gage for regulating the measuring capacity of the scoop is provided and comprises, preferably, a laterally-movable partition *h*, which is arranged within and transversely of the scoop and extends from side to side and from top to bottom of the scoop, conforming to the rounded bottom of the scoop. The partition *h* is provided at its upper end with a forwardly-projecting horizontally-arranged arm *h'*, which constitutes a slide that engages a correspondingly-arranged slideway e^4, formed in and extending longitudinally of the slide *e*, forwardly of the hopper *b*. The gage-bearing portion of the slide *e*, a suitable distance forwardly of the gage-forming partition, is provided with a stud e^5, that projects upwardly through a slot h^2, formed in and longitudinally of the gage-arm *h'*, and a correspondingly-threaded nut e^6 is mounted upon the said stud, bridges the slot, and overlaps the upwardly-facing surface of the gage-arm *h'*. The slot h^2 is long enough to accommodate a suitable range of adjustment of the gage endwise of the scoop *m*. Upon turning the nut e^6 in the direction required to clamp the gage-arm downwardly against the slide *e* the gage is secured in the desired adjustment, and upon turning the said nut in the opposite direction, so as to loosen the gage-arm relative to the slide *e*, the gage is rendered free to be adjusted, as aforesaid. The opening e^2 in the slide *e* extends forwardly far enough to accommodate the location and range of adjustment of the gage *h*.

Two oppositely-located conical rollers *l* and *l*, arranged in a horizontal plane and a suitable distance apart, with their diametrically smaller ends vis-à-vis, are supported in any approved manner from and at the inner surface of the forward wall a^4 of the casing *a* next below opposite sides, respectively, and transversely of the path of the scoop *m* and arranged to afford bearing for the scoop. The rollers *l* prevent wear upon the external surface of the bottom of the scoop during the movement of the said scoop upon the actuation of the slide *e*. Obviously the scoop travels forwardly or rearwardly upon the anti-friction-rollers *l* and *l*, according as the slide *e* is actuated forwardly or rearwardly, and the arrangement of parts is such that in their normal position the forward or discharging end of the scoop has a bottom bearing upon the aforesaid rollers. The portion e^7 of the slide *e*, which extends rearwardly of the scoop, is long enough to form a cut-off adapted to close the hole d^2 in the plate *d* from below in the forwardly-actuated position of the slide *e*, and thereby close the hopper's outlet, so that when the scoop is actuated into its forward and discharging position no merchandise can escape from within the hopper rearwardly of the scoop. The slide *e* and the connected scoop are shown actuated into their forward position in dotted lines, Fig. I, and the forward wall a^4 of the casing *a* is provided with an opening a^5 to accommodate the location and operation of the slide *e* and the connected scoop. The said opening a^5 extends downwardly far enough to permit the scoop during the forward actuation of the slide to tilt downwardly upon and forwardly of the rollers *l* below the gage *h*, as shown in dotted lines, Fig. I.

The slide *e* has its forward end provided with a handle e^8 and extends forwardly far enough in the normal position of the parts to have the said handle exposed for use forward of the casing *a*.

The cutting edge of one of the knives hereinbefore referred to is arranged at an angle to the cutting edge of the coöperating knife. Preferably the knife e^3 upon the plate *e* has its cutting edge extending straight across the path of the said slide, whereas the stationary knife d^3 has its cutting edge extending diagonally of the said path and V-shaped in plan with the opposite arms of the same diverging rearwardly from a point centrally between the ends of the knife *d*, so that any crackers or other merchandise which have only partially entered the scoop, and consequently depend into or through the path of the movable knife e^3, are split or severed with a shear cut during the coöperation of the knives e^3 and d^3 upon the forward actuation of the slide *e*, and crushing, pulverizing, or destruction of the goods thus protruding into or extending through the path of the knife e^3 is avoided. I would remark also that the slide *e* at its forward end is provided with a depending door-forming member e^9, having the arrangement and dimensions required to render it capable of closing the opening a^5 in the forward wall a^4 of the casing *a* below the path of the slide, so as to exclude dust, dirt, &c., from the interior of the said casing. It will be observed

also that the opening a^5 above the slide e need only be wide enough to accommodate the location of the stud e^5 and the nut e^6 during the shifting of the said slide from the one to the other of its positions.

What I claim is—

1. In apparatus of the character indicated, the combination, with a hopper having a downwardly-discharging outlet, a stationary casing or framework supporting the hopper, a suitably-supported forwardly and rearwardly movable slide arranged in a horizontal plane and having a path in under and near the hopper's outlet and provided with a cut-off arranged to close the said outlet from below when the slide is actuated into its forward position, and a vertically-tiltable measuring-scoop having a rounded bottom and pivotally supported at the rear end from the slide and normally in open relation with the hopper's outlet, of two suitably-supported conical rollers l and l arranged in a horizontal plane transversely of and next below the path of the scoop with their smaller ends vis-à-vis, substantially as shown, for the purpose specified.

2. Apparatus of the character indicated, comprising a hopper having a downwardly-discharging outlet; a stationary casing or framework supporting the hopper; a slide arranged in a horizontal plane and extending forwardly and rearwardly below and in close proximity to the hopper and movable endwise and having an opening which extends therethrough and is normally in registry with the hopper's outlet; slideways for the slide; a cut-off formed by the portion of the slide rearwardly of the slide's opening and arranged to close the outlet of the hopper from below when the slide is actuated into its forward position; a vertically-tiltable measuring-scoop having a rounded bottom and pivoted horizontally and transversely, at the top and rear end, to the slide and normally in open relation with the slide's opening and consequently with the outlet of the hopper, and the two suitably-supported conical rollers l and l arranged in a horizontal plane transversely of and next below the path of the scoop with their smaller ends vis-à-vis, substantially as shown, for the purpose specified.

3. Apparatus of the character indicated, comprising a hopper having a downwardly-discharging outlet; a stationary casing or framework supporting the hopper; a slide arranged in a horizontal plane and extending forwardly and rearwardly below and in close proximity to the hopper and movable endwise and having an opening which extends therethrough and is normally in registry with the hopper's outlet; slideways for the slide; a cut-off formed by the portion of the slide rearwardly of the slide's opening and arranged to close the outlet of the hopper from below when the slide is actuated into its forward position; a vertically-tiltable measuring-scoop pivoted horizontally and transversely, at the top and rear end, to the slide and normally in open relation with the slide's opening and consequently with the outlet of the hopper; a bearing for the forward and discharging end of the scoop, and a gage-forming partition supported from the slide and normally extending into and transversely of the scoop at the forward end of the opening formed in the slide, which partition has its upper end provided with a forwardly-projecting arm resting upon the slide and adjustable endwise, and means for securing the said arm in the desired adjustment, substantially as and for the purpose set forth.

4. In apparatus of the character indicated, the combination, with an endwise-shiftable slide provided with a measuring-scoop arranged longitudinally of and, in the main, below the slide, and means for feeding material to the scoop, of a gage-forming upright partition arranged within and transversely of the scoop and having its upper end provided with an arm resting upon and arranged and shiftable longitudinally of the slide, and means for securing the said arm in the desired adjustment, substantially as and for the purpose set forth.

5. In apparatus of the character indicated, the combination, with an endwise-shiftable slide provided with a measuring-scoop arranged longitudinally of and, in the main, below the slide, and means for feeding material to the scoop, of a gage-forming upright partition arranged within and transversely of the scoop and having its upper end provided with an arm resting upon and arranged and shiftable longitudinally of the slide and having a vertical slot extending longitudinally of the said arm, a stud rigid with the slide and projecting upwardly through the aforesaid slot, and a nut engaging the stud and bridging the said slot and overlapping the upwardly-facing surface of the slide, substantially as shown, for the purpose specified.

6. Apparatus of the character indicated, comprising a hopper having a downwardly-discharging outlet; a casing or framework supporting the hopper; a slide arranged in a horizontal plane below and in close proximity to the hopper and extending forwardly and rearwardly and shiftable endwise, which slide has an opening extending vertically therethrough and normally registering with the outlet of the hopper, and a cut-off-forming section extending rearwardly of the said opening and arranged to close the outlet of the hopper from below when the slide is shifted into its forward position; a stationary metal plate d between the slide and the hopper and having a hole extending therethrough in registry with the hopper's outlet and having the forward wall of the said hole forming a knife; another knife secured to and extending transversely of the slide next below the aforesaid plate at the rear side of the hole in the said

plate, and a vertically-tiltable scoop arranged, in the main, below and registering with the slide's opening.

7. Apparatus of the character indicated, comprising a hopper having a downwardly-discharging outlet; a casing or framework supporting the hopper; a slide arranged in a horizontal plane below and in close proximity to the hopper and extending forwardly and rearwardly and shiftable endwise and having an opening extending vertically therethrough and normally registering with the outlet of the hopper, which slide is provided with a measuring-scoop arranged to receive the material gravitating from the hopper, and has a cut-off-forming section extending rearwardly of the aforesaid opening and arranged to close the outlet of the hopper from below when the slide is shifted into its forward position; a stationary metal plate d arranged in a horizontal plane between the slide and the hopper and having a hole extending therethrough and registering with the hopper's outlet, which plate has the forward wall of its hole forming the V-shaped knife d^3, and another knife e^3 secured to and extending straight across the slide and at the rear side of and projecting into the opening of the slide, substantially as shown, for the purpose specified.

Signed by me at Cleveland, Ohio, this 26th day of December, 1900.

JOHN M. KINNARD.

Witnesses:
C. H. DORER,
A. H. PARRATT.