

No. 633,629.

Patented Sept. 26, 1899.

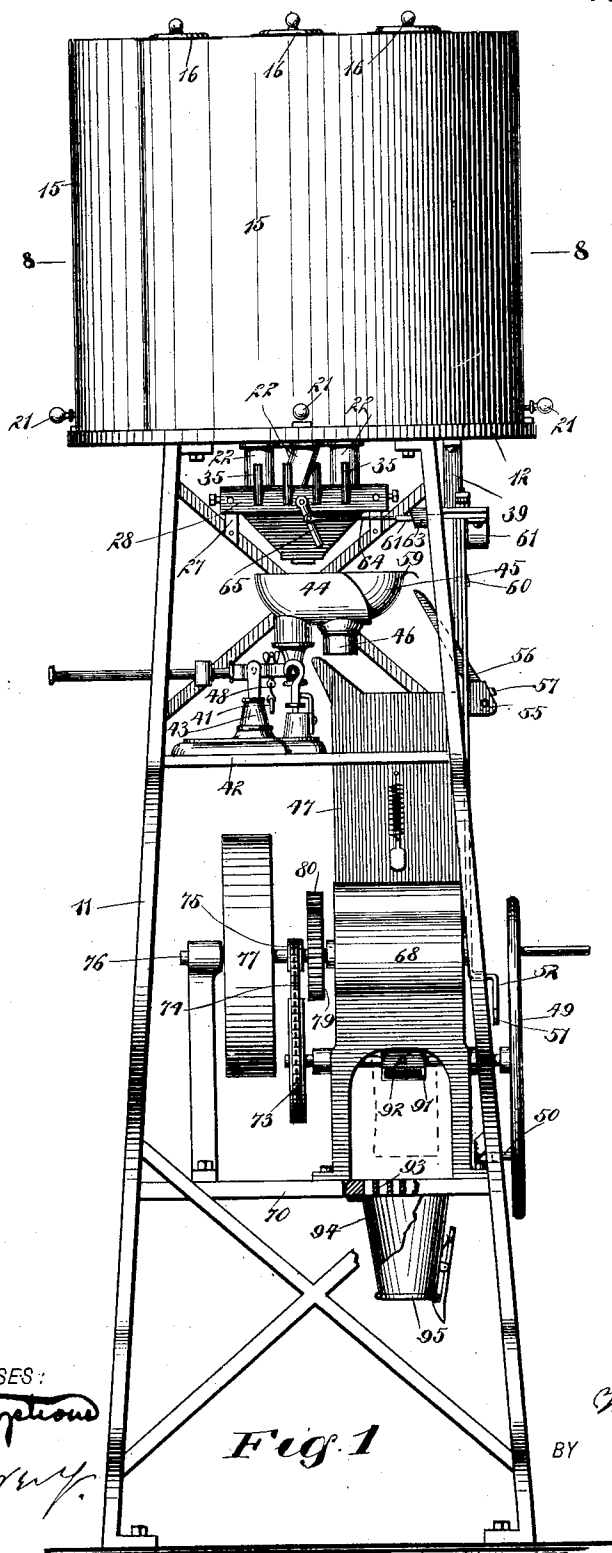
W. D. WANZER.

APPARATUS FOR WEIGHING, MEASURING, AND DELIVERING PROVISIONS.

(Application filed Feb. 28, 1898.)

(No Model.)

4 Sheets—Sheet 1.



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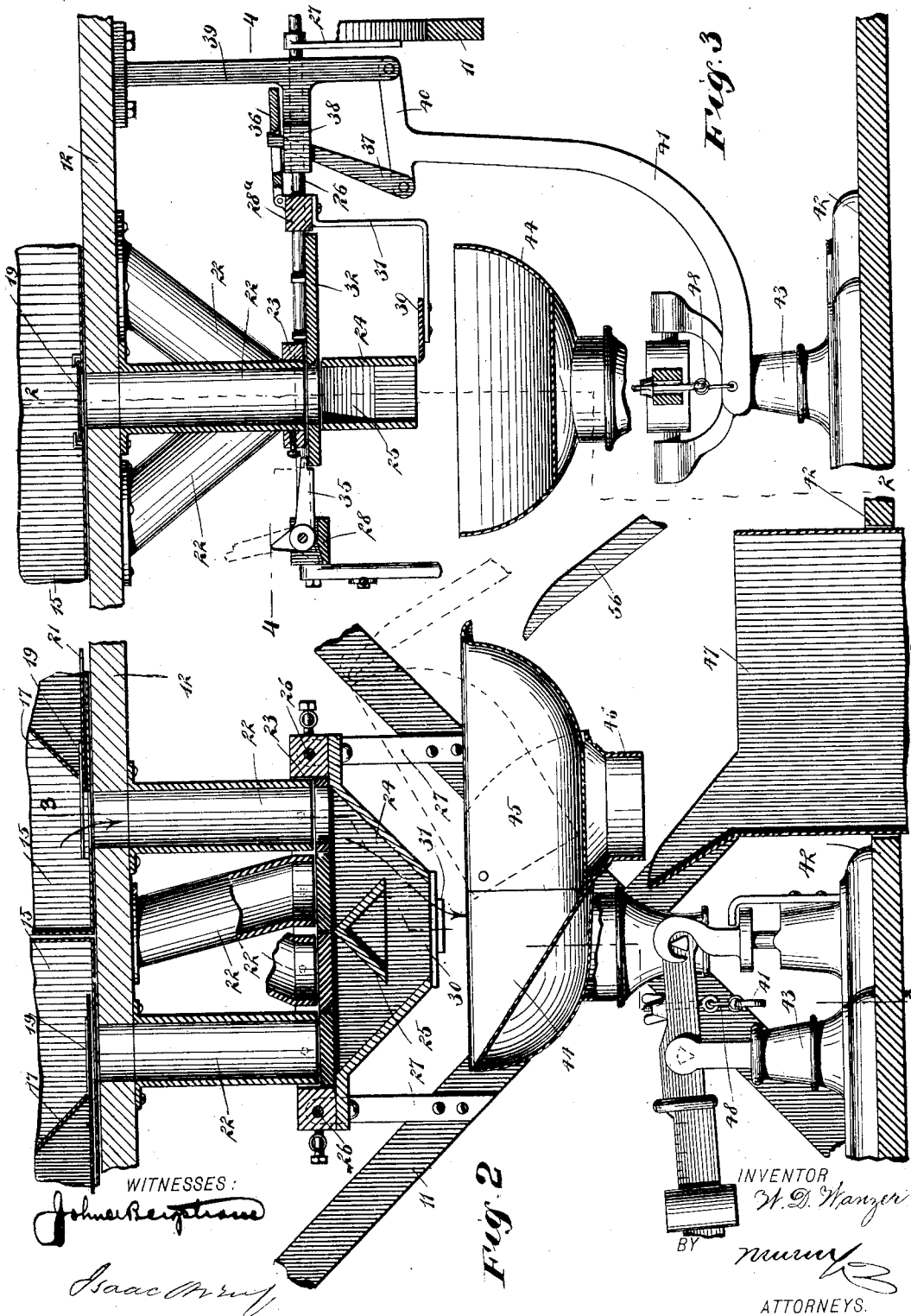
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Fig. 4

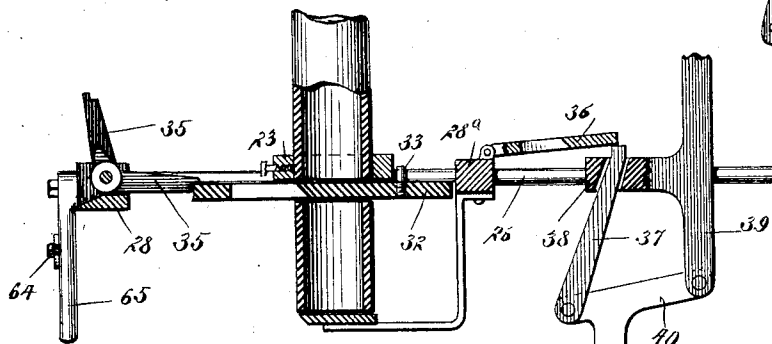
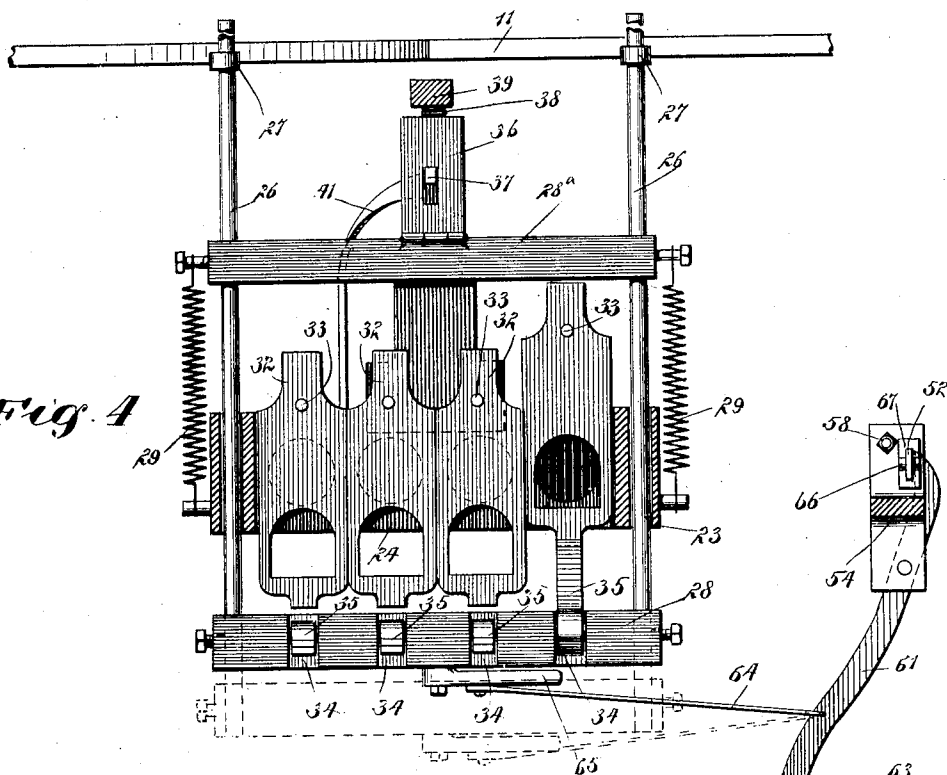
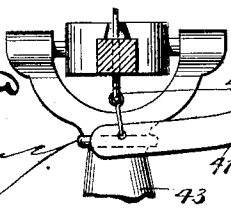


Fig. 5

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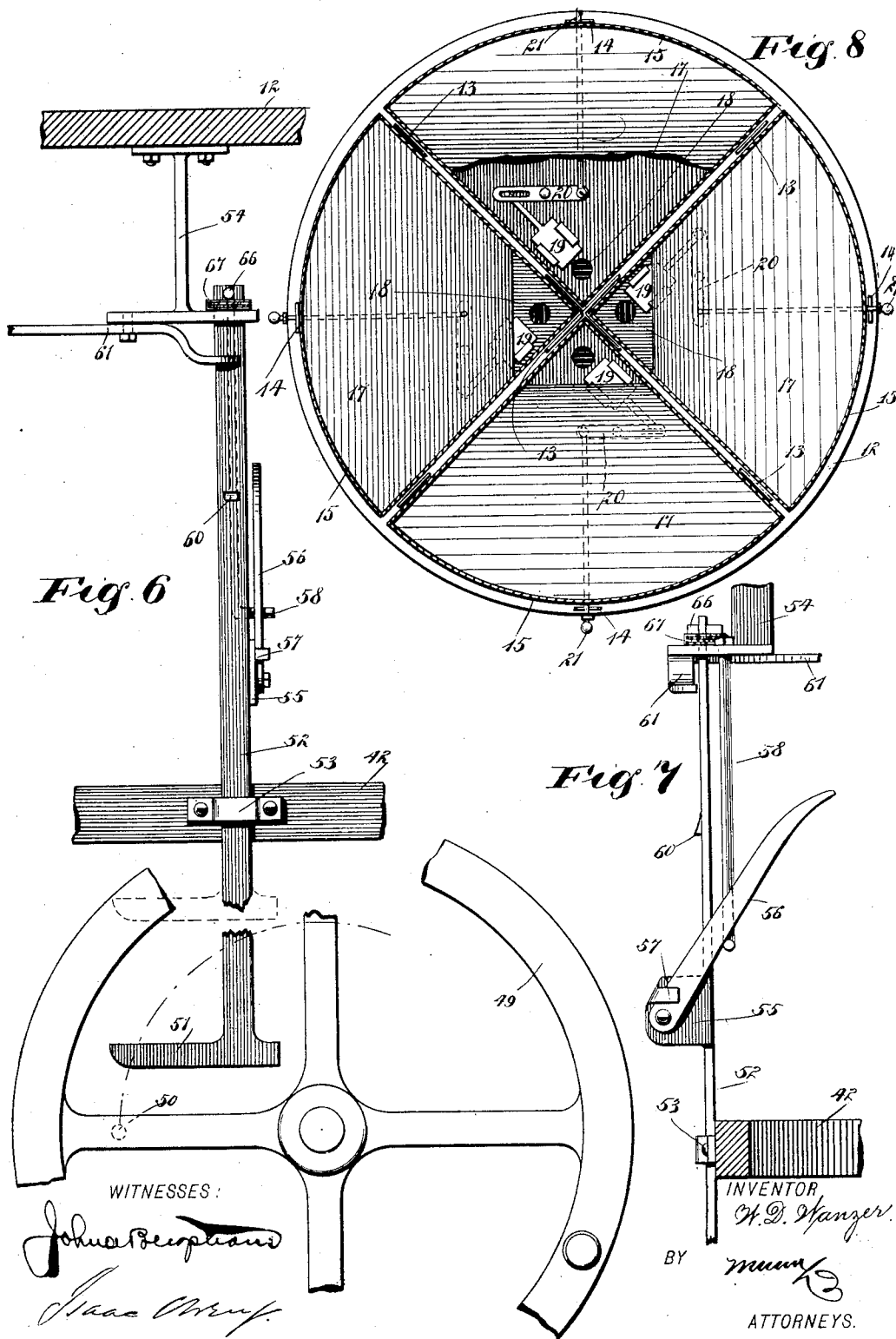
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(Application filed Feb. 26, 1898.)

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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR WEIGHING, MEASURING, AND DELIVERING PROVISIONS.

SPECIFICATION forming part of Letters Patent No. 633,629, dated September 26, 1899.

Application filed February 26, 1898, Serial No. 671,752. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DAVID WANZER, of Clintondale, in the county of Ulster and State of New York, have invented a new and Improved Provision Measuring and Delivering Apparatus, of which the following is a full, clear, and exact description.

This invention is an apparatus in which provisions, particularly coffee, may be stored and measured out in variable quantities and then ground or otherwise treated and finally delivered to the consumer, the apparatus being adapted especially for use in retail grocery establishments.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the invention. Fig. 2 is an irregular enlarged section on the line 2 2 of Fig. 3. Fig. 3 is an irregular enlarged section on the line 3 3 of Fig. 2. Fig. 4 is a sectional plan looking downward from the line 4 4 of Fig. 3. Fig. 5 is a fragmentary view illustrating the action of the parts, the view being sectional on the line 3 3 of Fig. 2. Fig. 6 is a fragmentary elevation of parts at the right-hand side of the machine, which parts serve to direct the weighing or scale pan so that the provisions are delivered to the grinding apparatus. Fig. 7 is a fragmentary elevation of the same parts in a different position; and Fig. 8 is a section on the line 8 8 of Fig. 1, the view showing parts broken away.

The form of the invention illustrated is adapted to the handling of coffee. The machine stands on a tower-like structure 11, forming the framework of the apparatus. This frame supports at its top a circular head-plate 12, having, as shown best in Fig. 8, radially-disposed ribs 13, rising from its upper face, and four lugs 14, also rising from its upper face and situate, respectively, intermediate the radial lines of the ribs 13. Bearing on the head-plate 12 and held by the ribs 13 and lugs 14 are four quadrant-shaped coffee-cans 15, having suitable lids 16, covering

feed-orifices in their tops, and having inclined slide-plates 17, respectively located in their bottoms. These slide-plates are inclined toward the inner corners of the cans 15, so that all of the contents of the cans will be settled toward the discharge-orifices 18, formed, respectively, in the bottoms proper of the cans. These discharge-orifices 18 are respectively commanded by sliding valve-plates 19, actuated through the medium of levers 20, in turn connected with push-rods 21, that extend out radially to the exteriors of the cans. By manipulating the rods 21 the cans 15 may be opened and closed. The normal positions of the rods 21 are those shown in Fig. 8, which is to say the rods are pushed inward to open the orifices 18.

The head-plate 12 is provided with four orifices, respectively registering with the orifices 18 in the cans 15. Passing, respectively, from the orifices in the head-plate 12 are tubes 22, which lead downward and two of which are extended diagonally, so that all four of the tubes 22 have their lower or discharge orifices arranged in transverse alinement. A frame-plate 23 engages and holds the lower ends of the tubes 22, the frame-plate being connected with the tubes 22 by means of set-screws passing through the frame-plate and impinging, respectively, against the tubes, as shown by full lines in Fig. 3 and by dotted lines in Fig. 2. The parts 22 and 23 act, therefore, to brace and strengthen each other, and the whole is supported by the attachment of the tubes to the head-plate 12. Attached rigidly to the frame-plate 23 and running beneath the frame-plate for the length thereof is a funnel 24, wherein is located a triangular spreader 25, serving to separate and mix the coffee as it passes into the funnel 24. Sliding through each end of the frame-plate 23 is a rod 26, the rear ends of which are respectively slidably held in braces 27, rising from the frame 11, and the front ends of which are respectively attached rigidly to a bar 28, located forward of the frame-plate 23. Located rearward of the frame-plate 23 and extending between and rigidly attached to the rods 26 is a cross-bar 28^a, connected with retractile springs 29, which are also connected with the respective ends of the frame-plates 23. The

mouth or lower end of the funnel 24 is commanded by a closure-plate 30, supported through the medium of an angular arm 31, attached to the middle portion of the cross-bar 28^a. As this cross-bar 28^a moves rearward the cover-plate 30 is withdrawn from the mouth of the funnel 24 and the funnel is opened, and as the cross-bar moves forwardly the cover-plate 30 is moved under the funnel 24 to close the same. Located beneath and commanding each tube 22 and sliding freely between the frame-plate 23 and the upper edges of the funnel 24 are four valve-plates 32, which are provided with orifices capable of registering with the tubes 22 to open the tubes, and which are also provided with imperforate portions capable of closing the tubes such construction being best illustrated in Figs. 2, 3, and 4. The rear portion of each valve-plate 32 is provided with a stud 33, serving to engage the frame-plate 23 and limit the forward movements of the valve-plates, and when the studs 33 are engaged with the frame-plate 23 the valve-plates will be held in position to close the tubes. The springs 29 drawing forward the cross-bar 26, the attached parts serve to keep the valve-plates 32 in this forward position, and consequently the tubes 22 are normally closed. Pivotaly mounted in recesses 34, formed in the cross-bar 28, are four L-shaped dogs 35, each of which is adapted to stand normally in the position shown by dotted lines in Fig. 3 and by full lines in Fig. 1, in which position the long arms of the dogs will be vertical and the short arms will bear on the cross-bar 28 and hold the dogs raised. The normal position of the bar 28 is that shown by full lines in Fig. 3. Now should one or all of the dogs 35 be thrown rearward in the position shown in full lines in Fig. 3 the dogs will engage the front extremities of the valve-plates 32, and then if the cross-bar 28 and its attached parts be pushed rearward against the springs 29 those valve-plates 32 which are engaged with the dogs 35 will be moved to open position and the coffee will be free to pass through the orifices 18 downward through the tubes 22 and funnel 24.

Pivoted to the middle of the cross-bar 28^a is a latch 36, which has an orifice capable of receiving and locking with a bolt 37, the upper end of which slides through an orificed stud 38, projecting forward from an arm 39, that depends from and is rigidly attached to the head-plate 12. The bolt 37 is pivotaly supported on the head 40 of a tripping-lever 41, which is fulcrumed to the lower end of the arm 39 and which is adapted to swing forward and back on its horizontal fulcrum, so as to raise and lower the bolt 37 in the stud 38. The normal position of the latch 36—which is to say, the position of the latch when the bars 28 and 28^a are moved forward—is, as shown in Fig. 5, with the rear or free end of the latch bearing loosely on the head of the bolt 37. Now when the bars 28 and 28^a

and their attached parts are moved rearward the latch is moved rearward, so that the head of the bolt 37 is received in the orifice of the latch, as shown in Fig. 3. It is by these means that the parts 28 and 28^a and their attachments are held in rearward position against the tension of the springs 29. A platform 42 is carried in the frame 11. On this platform a suitable weighing-scale 43 is mounted. This scale 43 has a pan in two sections, (designated 44 and 45, respectively.) The section 44 has a rightwardly-extended portion, with a spout 46 delivering downwardly, and the section 45 is hinged to the section 44 and normally raised in horizontal position, so as to close the spout 46. When, however, the section 45 swings upward, as shown by dotted lines in Fig. 2, the spout 46 is uncovered and the contents of the pan are dropped into the stack 47 of the grinding-mill 68, which may be of any desired construction. The lower end of the lever 41 is attached to the beam of the scale 43 through the medium of a shackle 48, comprising a screw and thumb-nut, by which the parts may be adjusted to operate with exactness. This screw and thumb-nut also permits the parts to be adjusted to operate instantly upon the balancing of the scale or at a moment later. When, therefore, the valve-plates 32 are actuated to permit the coffee to pass from the tubes 22, the coffee passes into the pan of the scale. The scale should first have been adjusted to the desired weight of coffee, and when this weight has been poured into the pan of the scale the pan, with the beam of the scale, drops so as to swing the lever 41 rearward, whereupon the bolt 37 is drawn down and the latch 36 is released. The springs 29 now assert themselves and throw forward the cross-bars 28 and 28^a, which, moving with their attached parts, return the valve-plates 32 to their normal positions and the flow of coffee is cut off.

The hand-wheel 49 of the grinding-mill is provided with a pin 50, which projects inwardly from one of the spokes, as shown best in Fig. 1 and as indicated by dotted lines in Fig. 6. As the wheel 49 turns, this pin is adapted to strike the foot 51 of a bar 52, held to slide vertically in a cleat 53, attached to the platform 42, and in the horizontally-extending foot of an arm 54, which depends from the head-plate 12. The bar 52 has a lug 55 projecting out to the right therefrom, on which lug is pivoted a finger 56, the rightward movement of which is limited by a projection 57 from the lug 55 and the inward movement of which is limited by a bent rod 58, depending rigidly from the foot of the arm 54, as shown by full lines in Fig. 7, the bent portion of the rod 58 being arranged to lie beneath the finger 56. The finger 56 projects inward toward a lip 59 on the section 45 of the scale-pan. As the wheel 49 turns, the pin 50 engages the foot 51 and lifts the bar 52, which carries with it the finger 56 and causes

the same to engage the lug 59, thus throwing up the section 45 of the scale-pan and emptying the contents of the pan into the grinding-mill. The bar 52 must be held raised, with the foot 51 out of the path of the pin 50, while the coffee-mill is being operated. To do this, I provide the bar 52 with a shoulder 60, arranged to engage the short arm of a lever 61, which is fulcrumed to the foot of the arm 54, as shown in Figs. 4, 6, and 7, and which, as shown in Fig. 4, extends forwardly to the front of the machine. A retractile spring 62 is attached to the lever 61 and to a bent plate 63, running inward and thence leftward from the forward right-hand post of the frame 11. The spring 62 draws the front end of the lever 51 rightward, (see Fig. 4,) and the inner extremity of the arm 63 is engaged by the lever 61, so that the rightward movement of the lever is limited. A rod 64 is attached pivotally to the lever 61 and extends leftward to pivotal connection with a finger-piece 65, pivoted to the front edge of the bar 28. When the bar 52, therefore, is raised, it is locked and held in raised position. The bar remains in this position until the finger-piece 65 is manually thrown to the left, (see Fig. 1,) whereupon the lever 61 is moved in the same direction and the shoulder 60 of the bar 52 disengaged by said lever. The gravity of the bar 52 will now cause said bar to return, downward movement being limited by a stud 66, attached to the upper end of the bar 52 and bearing normally on a rubber cushion 67, supported on the foot of the arm 54.

The grinding-mill 68 has a discharge-spout 91, with a spur 92, on which a paper bag may be hung to fill said bag. Below the spout 91 the platform 70 has an orifice covered by a grating 93. (See Fig. 1.) Beneath this grating a vessel 94 is located to catch the waste coffee from the spout 91. The vessel 94 has a lid 95 at its bottom, by which to open and close the vessel.

In using the invention several cans or receptacles 15 are filled with different brands of coffee, and the dogs 35 may be marked so as to refer, respectively, to said different brands. By means of the machine any mixture of these brands may be obtained by throwing down the dogs 35, to which said brands refer, and thus opening more than one of the receptacles 15. When it is desired to withdraw the coffee, if one brand is wanted the dog 35 of that brand is thrown down. If a mixture of brands is wanted, all of the dogs relating to the brands desired are thrown down. Then the cross-bar 28 is pushed rearward by manual force. This opens the proper valve-plates 32, whereupon the coffee pours from the tubes 22 into the scale-pan. The scale should have been previously adjusted to the weight of coffee desired, whereupon as this weight is poured into the scale-pan the scale-beam trips and the lever 41 is thrown to draw down the bolt 37 and release the latch

36. The springs 29 then act immediately to close the tubes 22, while the valve-plates 30 are pushed forward to close the funnels. The operator now begins the rotation of the wheel 49, whereupon the bar 52 is lifted and the section 45 of the scale-pan tripped. The coffee is now poured into the stack 47 of the grinding-mill and is ground thereby.

From the foregoing description it may be deduced that while my invention is applicable especially to the retail coffee trade the invention is also applicable to the handling of other articles of merchandise and provisions.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a frame, of a receptacle having a tube leading therefrom, a frame-plate attached to the tube, two rods sliding in the frame-plate, two cross-bars fixed to the rods, a funnel held rigidly beneath the frame-plate, a valve reciprocal between the funnel and frame-plate and located between the cross-bars, a spring attached to the frame-plate and to one of the cross-bars, a latch pivoted to one of the cross-bars, a bolt serving to hold the latch, and a dog pivoted to the other cross-bar and capable of engaging the valve-plate.

2. The combination of a frame, with a plurality of receptacles, a valve commanding each receptacle, a dog transmitting movement to each valve, and means carrying the dogs, such means being movable with the dogs to actuate the valve in unison, or separately.

3. The combination of a plurality of receptacles, a valve commanding each receptacle, and means movable in the vicinity of the valves, by which to actuate the valves independently, or together.

4. The combination of a plurality of receptacles, a valve commanding each receptacle, a dog capable of transmitting movement to each valve, means for causing said dogs to move together, a spring actuating said means in one direction, and a latch capable of holding said means against the action of the spring.

5. The combination of a plurality of tubes, a frame-plate held thereby, a funnel located beneath the frame-plate, a series of valve-plates sliding between the frame-plate and funnel and respectively commanding the tubes, a series of dogs capable respectively of engaging the valve-plates, means for carrying said dogs, such means sliding on the frame-plate, a spring actuating said means, and a latch capable of holding said means against the action of the spring.

6. The combination of a slidably-mounted latch, a bolt movable to hold and release the latch, a lever whereto said bolt is pivoted, a scale-beam, and an adjustable connection between the lever and scale-beam.

7. The combination of a plurality of valves, a swinging dog capable respectively of engaging and disengaging the valves to trans-

mit operative movement thereto, and means for supporting and moving the dogs together, whereby the valves may be operated independently, or together.

5 8. The combination of a slidably-mounted latch, a bolt movable to hold and release the latch, a lever whereto said bolt is pivoted, and a scale-beam in connection with the lever.

9. The combination of a valve, means for
10 operating said valve, a latch in connection with said means, a bolt capable of holding the latch, a lever to which said bolt is pivoted, and a scale in connection with and moving the lever.

15 10. The combination of a receptacle, a valve commanding the same, means actuating the valve, a spring moving said means in one direction, a latch pivoted to the said means, a bolt with which the latch coacts, a lever to
20 which the bolt is pivoted, and a scale to which the lever is connected.

11. The combination of a scale, having a dumping-pan, a mill into which the pan dumps, a reciprocal bar driven by the mill,
25 and a finger attached to the bar and movable thereby against the dumping-pan, to operate the same.

12. The combination of a dumping-scale, a mill into which said scale dumps, a hand-
30 wheel geared with the mill, and having a pin thereon, a reciprocal bar having a foot engaged by the pin by which to move the bar,

and a finger attached to the bar and serving to actuate the dumping-scale.

13. The combination of a dumping-scale, a
35 reciprocal bar, a finger pivoted to the bar and capable of engaging the scale to dump the same upon the movement of the bar, and a rod supported in proximity to the finger and serving to limit the movement thereof. 40

14. The combination of a dumping-scale, a reciprocal bar, a finger carried by the bar to dump the scale, a spring-pressed lever engaged by a shoulder on the bar to hold the bar, and means for swinging the lever to re-
45 lease the bar.

15. The combination with a frame or support, of a provision-receptacle sustained at the top thereof, a valve commanding said provision-receptacle, a weighing-scale located
50 beneath the provision-receptacle and having a dumping-pan, a connection between the scale and the valve by which the valve is actuated, devices held below the scale and comprising a wheel with a pin thereon, a reciprocal bar held by the frame and driven by the
55 pin of said wheel, and a finger pivotally mounted on the bar and coacting with the scale-pan to dump the same.

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Witnesses:

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