automatic weighing machine, the combination of a series of stationary scales, a corresponding series of stationary chutes delivering into the respective scale pans, and having gates for closing them, mechanism for charging said chutes with material to be weighed, while their gates are closed, so that the charges to be weighed are stored in said chutes, mechanism for opening said gates to dump the stored charges from the chutes into the scale pans, and mechanism for dumping the scale pans. 14th. In an automatic weighing machine, the combination of a series of stationary scales, a corresponding series of stationary chutes delivering into the respective scale pans, a measuring mechanism operating intermittently to deliver charges of material, an intermittently revolving chute for conducting the charges from said measuring mechanism to the stationary chutes successively, an intermittently revolving series of carriers adapted to receive the weighed charges dumped from the scale pans, and means for dumping said carriers. 15th. In an automatic weighing machine, the combination, with the series of stationary chutes F, and an intermittently discharging measure D, of an intermittently moving spout c^2, arranged to receive the contents of the measure and deliver it seriatim into the chutes. 16th. In an automatic weighing machine, the combination, with a circular series of scales and a corresponding series of chutes above them, of an intermittently discharging measure, an intermittently revolving central shaft, a chute carried thereby receiving the material from said measure and conducting it to said series of chutes seriatim, and a series of carriers arranged beneath the scales to receive the weighed material therefrom, and mounted on said shaft. 17th. In an automatic weighing machine, the combination, with a scale and mechanism for dumping charges of material to be weighed therein, of a movable finger arranged to hold the scale while the charge is being dumped therein, and then to release it. 18th. In an automatic weighing machine, the combination, with a scale and mechanism for dumping the same, a stop arranged to hold the scale beam depressed while the scale is dumped and to retract therefrom to permit the beam to rise gradually after dumping. 19th. In an automatic weighing machine, the combination, with a series of stationary scales and mechanism for simultaneously dumping charges of the material to be weighed therein, of a series of movable fingers, connected and moving together, arranged to hold the respective scales while the charges are being dumped therein, and movable to gradually release them. 20th. In an automatic weighing machine, the combination, with a series of stationary scales and mechanism for simultaneously dumping them, of a series of stops connected and moving together, arranged to hold the scale beams depressed while the scales are dumped, and movable slowly away therefrom to permit the beams to rise gradually after dumping. 21st. In an automatic weighing machine, the combination, with a series of scales I, of a ring G, having fingers G^5, arranged to engage the scales and prevent their falling, and stops G^{12}, arranged to engage the scales and prevent their rising, and mechanism for alternately raising and depressing said ring so as to bring said fingers and stops into operation alternately and intermittently. 22nd. In an automatic weighing machine, the combination with a series of scales and a series of chutes above them having gates, of mechanism for operating said gates, consisting of arms engaging the respective gates and connected together, and driving mechanism for moving said arms simultaneously to open the gates and dump the charges in said chutes into the scale pans. 23rd. In an automatic weighing machine, the combination, with a series of scales and a series of chutes above them having gates, of mechanism for operating said gates, consisting of a ring G, having arms G^3, arranged to engage lever arms F^3, attached to said gates, and mechanism for raising and lowering said ring. 24th. The combination of the chutes F, the gates F^2, in said chutes having lever arm F^3, the series of scales situated below said chutes, a ring G, having fingers G^3, arranged to engage and lift levers F^3, and fingers G^5, arranged to engage and hold the scales, said fingers G^3 and G^5, being arranged to act simultaneously, and mechanism for raising and lowering the ring intermittently. 25th. The combination of the chutes F, the gates F^2, in said chutes having lever arms F^3, the series of scales situated below said chutes, a ring G, having fingers G^3, arranged to engage and lift levers F^3, and fingers G^5, arranged to engage and hold the scales, said fingers G^3 and G^5, being arranged to act simultaneously, stops G^{12}, also secured to ring G, arranged to engage the scales and prevent their rising during dumping, and mechanism for raising and lowering the ring intermittently. 26th. In a scale, a scale pan consisting of an inclined bottom hung from the scale beam, and a movable body adapted to be lifted from said bottom to dump the scale. 27th. In a scale, a scale pan consisting of an inclined bottom hung from the scale beam, and a movable body pivoted to the upper part of said inclined bottom, and adapted to be lifted from the lower part of said bottom to permit the contents of the pan to slide out. 28th. In a scale, a scale pan consisting of an inclined bottom hung from the scale beam, by hangers guided to confine the bottom to a vertical motion, and a movable body adapted to be lifted from said bottom to dump the scale. 29th. The combination, with the scale pans I, each consisting of an inclined bottom I^1, supported on the scale beam, and movable only in a substantially vertical line, and a movable body I^3, pivoted to the upper end of said inclined bottom, of a dumping ring J, arranged to lift the bodies I^3, and mechanism for intermittently raising and depressing said ring. 30th. The combination, with a series of scales of a series of receptacles adapted to receive the charges dumped from the scales, consisting each of an inclined bottom and a movable body adapted to be lifted off said bottom to dump the receptacle. 31st. The combination, with a series of scales of a series of receptacles adapted to receive the charges dumped from the scales, consisting each of an inclined bottom and a movable body pivoted to the upper part of the inclined bottom and adapted to be lifted at its opposite side from the lower part of said bottom to permit the contents of the receptacle to escape. 32nd. The combination with a series, of a series of receptacles adapted to receive the charges dumped from the scales, consisting each of an inclined bottom and a movable body, adapted to be lifted off said bottom to dump the receptacle, and means for dumping said receptacles consisting of an intermittently rising finger engaging the movable bodies thereof in succession and lifting each in turn. 33rd. The combination, with a series of stationary scales, of a series of intermittently rotating carriers, consisting each of an inclined bottom and a movable body adapted to be lifted off said bottom to dump the carrier, and means for dumping the carriers as they arrive at the dumping position, consisting of an intermittently rising finger engaging the carriers as they reach said position, and by its rising movement lifting the movable body of each carrier in turn. 34th. In an automatic weighing machine, a feeder for delivering a graduated feed to the scales, consisting of a cylindrical casing having openings communicating by chutes with the respective scales, a perforated cylinder revolving in said casing, and a stationary part mounted in said casing to cover the perforations during their coincidence with said openings. 35th. In an automatic weighing machine, a feeder for delivering a graduated feed to the scales, consisting of a cylindrical casing, having openings communicating by chutes with the respective scales, a perforated cylinder revolving in said casing, and a stationary brush mounted in said casing to cover the perforations in the perforated cylinder during their passage over said openings, and brush off all material except that carried in the perforations. 36th. In an outside weighing machine, the combination with an intermittently rotating shaft of mechanism for imparting to its intermittent movements consisting of a disc on said shaft, having as many slots as the number of its movements in a revolution, a rock lever, a bolt carried by said lever adapted to enter said slots, a locking bolt having a stationary mounting and adapted to engage and lock said disc, a driving shaft and interposed mechanism for swinging said lever and for engaging and disengaging said bolts, adapted to engage the bolt on said rock lever with the disc, and hold it engaged during the forward vibration of said lever, and to engage said locking bolt and hold it engaged during the return vibration of said lever, whereby the shaft is positively propelled, and positively locked in position during the intervals between the propulsive movements. 37th. In an automatic weighing machine, the combination of a shaft E, carrying a series of circularly arranged receptacles with mechanism for giving it an intermittent rotary motion consisting of a notched disc E^1, a rock lever E^2, pivoted on or concentric with the shaft, mechanism for intermittently moving the rock lever, as described, a bolt E^3, guided in lever E^2, a stationary guide E^9, a bolt E^{11}, having bearings in said guides, and intermittently acting mechanism connected with bolts E^3, and E^{11}, arranged to engage them alternately with notches in disc E^1, substantially as set forth. 38th. In a weighing mechanism, the combination, with a circular series of scales, means for supplying them, and a movable chute for each scale, through which the material is supplied thereto, connected to the scale beam to be deflected by the descent of the scale pan so as to deliver into the pan when the latter is under weight, and outside of the pan when it is full weight, of a box beneath the scales for receiving the material falling outside the pans, having a discharge opening and a revolving arm adapted to sweep the material accumulating in said box into said opening.

No. 43,800. Automatic Weighing Machine.

(*Bascule automatique.*)

Henry Eyster Smyser, Germantown, Philadelphia, U.S.A., 1st August, 1893; 6 years.

Claim.—1st. The combination, with a series of scales and a corresponding series of stationary receptacles arranged to receive charges of the material to be weighed and deliver them into the scale pans, of a movable slide beneath the receptacle having openings registering with the respective receptacles, and movable to bring said openings out of register therewith to close the receptacles, or to bring said openings into register therewith to discharge the receptacles. 2nd. The combination, with a series of scales and a corresponding series of receptacles arranged to receive successive charges of the material to be weighed and deliver them simultaneously into the scale pans, and a measuring device delivering the charges into said receptacles successively, of a movable slide, having openings registering with the respective receptacles and movable to bring said openings out of register therewith to close the receptacles and to bring them into register therewith to discharge the receptacles. 3rd. The combination, with a series of scales, and a corresponding series of stationary receptacles arranged to receive charges of the material to be weighed and deliver them into the scale pans, of a movable slide beneath the receptacles having openings registering with the respective receptacles, and movable to bring said openings out of register therewith to close the receptacles, or to bring said openings into register therewith to