

pendent center or holding axis, substantially as set forth 3rd. In an automatic grain meter, the combination of a rotating disc or frame, a molecular pivot mounted upon an independent supporting frame, a rigid arm attached to said pivot as a fulcrum and engaging said stop or detent by contact, and a regulating weight carried upon the extension of said arm, substantially as set forth. 4th. In an automatic grain meter, in which is embodied oscillating or rotating mechanism actuated by the passage of grain through the same, and a molecular pivot through or by means of which the resisting force is applied, a "tension frame" combined with an endless strip of elastic metal constituting the torsion pivot carried around said frame and thereupon maintained in tension, substantially as set forth. 5th. In a rotating automatic grain meter, the combination of a rotating bucket wheel provided with an engaging stop, a spring-held arm engaging said stop by temporary contact, and a conduit valve carried by a standard upon and reciprocated by the oscillation of said arm, substantially as set forth. 6th. In a grain meter, the combination of the following elements, viz: a rotating bucket wheel, an engaging stop upon said wheel, a balance beam having a pivotal resistance and engaging said stop by temporary contact, a delivery valve carried medially by and reciprocated by said balance beam across the supply orifice, and cams upon the bucket wheel adapted to engage the connections of said valve, and to retain the same closed during the revolution of the wheel and buckets until the proper bucket reaches its filling position, substantially as set forth.

### No. 29,421. Money Till or Drawer for Checking and Recording. (*Tiroir-caisse pour contrôler et enregistrer*)

James E. Farrow, Southport, and James M. Carson, Salford, Eng., 3rd July, 1888; 5 years.

*Claim*.—1st. A money till or drawer for checking and recording having an index plate cut with slots, and inscribed with a scale for each denomination of money, in combination with an operating lever or pointer, substantially as described. 2nd. A money till or drawer for checking and recording having one, two, or more revolving drums, which display the amounts of money registered, and a corresponding number of sliding racks which actuate the recording and counting mechanism, in combination with an operating lever and index scale. 3rd. In a money till or drawer for checking and recording, the combination, with the index plate having scales inscribed thereon, of the operating lever *E* and pointer *e*, substantially as described. 4th. In a money till or drawer for checking and recording, the combination, with the index plate *C*, saw for checking and recording, the combination, with the sliding rack *F*, substantially as described. 5th. In a money till or drawer for checking and recording, the combination of a sliding rack *F*, pinion *G* and recording or counting mechanism and dials *I*. 6th. In a money till or drawer for checking and recording, the combination, with the sliding rack which actuates the recording mechanism, of a swinging rack frame by the movement of which the racks are moved into and out of gear with the pinions with which they engage. 7th. In a money till or drawer for checking and recording, the combination of the racks *F*, the rods or pillars *f* and the cross bars *f*, substantially as and for the purposes described. 8th. In a money till or drawer for checking and recording, the combination, with the sliding racks of pinions having one or more teeth or projections on the back, and pivoted levers which transmit a movement from one wheel to the next for the purpose of registering the amounts on the recording mechanism, substantially as described and shown Fig. 7. 9th. In a money till or drawer for checking and recording, the combination, with the sliding racks *F*, of the pinions *G*, the pivoted levers *H*, the levers *h*, substantially as and for the purposes described. 10th. In a money till or drawer for checking and recording, the combination, with the sliding rack *F* and swinging rack frame *f*, of the pinion *G* and the weighted guard or tumbler *N*. 11th. In a money till or drawer for checking and recording, the combination, with the sliding racks *F* and pinions *G* having teeth *g* on their back, of the catch or pawl levers *J*, the pivoted levers *H* and *h*, and the recording dials *I*. 12th. In a money till or drawer for checking and recording, the combination, with the sliding actuating rack *F*, of the pinion *G*, pawl or catch lever *J*, bell *K* and bell hammer *L*, substantially as described and shown. 13th. In a money till or drawer for checking and recording, the combination, with the sliding rack and swinging rack frame of the pivoted lever *i*, substantially as and for the purposes described. 14th. In a money till or drawer for checking and recording, the use or combination of a revolving drum *L* having numerals inscribed on its periphery, which displays in a prominent place before the customer the amount recorded, substantially as and for the purposes described. 15th. In a money till or drawer for checking and recording, the combination of the revolving drums *L*, pulley *i*, cord or band *M*, sliding racks *F* and operating levers *E*, substantially as described. 16th. In a money till or drawer for checking and recording, the combination, with the sliding racks and swinging rack frame, of the pivoted fork *O* and swinging bracket *o*, substantially as and for the purposes described. 17th. In a money till or drawer for checking and recording, the combination, with the sliding racks and swinging rack frame, of the fork *O*, bracket *P*, swinging bracket *o* and spindle *p*, substantially as described. 18th. In a money till or drawer for checking and recording, the combination, with the sliding racks and swinging rack frame, of a pivoted hook or catch *S*, to lock or retain the racks out of gear with the pinions. 19th. In a money drawer or till for checking and recording, the combination of the sliding racks, swinging rack frame, pivoted hook or catch *S* and bolt or lock on the drawer, substantially as and for the purposes described. 20th. In a money till or drawer for checking and recording, the combination, with the cash drawer, of a pulley *t*, band *U*, spiral spring *U* and spindle *v*, substantially as described and shown. 21st. A money till or drawer for checking and recording the amounts taken, in which the amount is displayed before the customer and a record of the amounts kept, constructed and arranged substantially as described and shown.

### No. 29,422. Metallic Leaf and Flower.

(*Feuille et fleur métalliques*.)

Richard W. Russell, Hamilton, Ont., 3rd July, 1888, 5 years.

*Claim*.—The combination of a metal stem or stem *A*, having trolly-wires provided with metal leaves and flowers attached to the same, and secured thereto by means of solder, and the blow pipe, substantially as and for the purpose hereinbefore set forth.

### No. 29,423. Gas Burner. (*Dec à gaz*.)

Walter M. Jackson, New York, N.Y., U.S., 3rd July, 1889; 5 years.

*Claim*.—1st. In a gas burner, the combination, with a shell having an outwardly extended flange adapted to fit within the rim of an opposed shell, of a flexible diaphragm, the edge of which is adapted to lay between the opposed flat flange of the two metal shells, and be secured between them by the returned edge of one flange clamping upon the outer surface of the other flange, substantially as set forth. 2nd. In a gas burner, the combination, with a diaphragm to separate the interior of a burner into two gas chambers, of two interlocking diaphragm plates, one located above and one below the diaphragm, they being secured in place by slots in one plate, and tongues integrally struck from the other plate to enter the slots and be clinched on the plate, substantially as set forth. 3rd. In a gas burner, the combination, with a flexible diaphragm adapted to separate the interior of a burner into two gas chambers, of two interlocking diaphragm reinforce plates, the upper plate being provided with a cupped recess in its under side adapted to receive the head of a valve stem, and the under plate provided with a perforation for the passage of the valve stem, substantially as set forth. 4th. In a gas burner, the combination, with a flexible diaphragm adapted to separate the interior of a burner into gas chambers, of a pair of interlocking diaphragm plates one located above and one below the diaphragm of the plates, being provided with legs that are adapted to rest upon an interior shoulder or floor of the burner shell, substantially as set forth. 5th. In a gas burner, the combination, with a flexible diaphragm and a gas regulating valve suspended therefrom, of a diaphragm plate provided with legs adapted to engage a shoulder or floor within the burner shell, and thereby limit the depression of the diaphragm and its connected valve, substantially as set forth. 6th. In a gas burner, the combination, with a pair of diaphragm reinforce plates located one above and one below the flexible diaphragm, of a gas regulating valve suspended from the flexible diaphragm, the head of the valve stem being located in a recess in the under side of the cap plate, and resting upon the diaphragm, substantially as set forth. 7th. In a gas burner having the gas to be burned on both sides of a diaphragm, and a pendant weighted valve operated by gas pressure against said diaphragm by means of which the gas is partially or wholly cut off or put on, the combination, with the pendant valve, of an independent by-pass, substantially as set forth. 8th. In a gas burner, the combination, with the jointed shells, a superimposed secured diaphragm and a valve pendant from the diaphragm to oppose a valve seat in the base plate of the lower shell, of a conical valve, and a gas by-pass made in the base wall of this lower shell to admit a limited amount of gas into the lower chamber of the burner independent of the valve, substantially as set forth.

### No. 29,424. Bottle Filler. (*Embouteilleuse*.)

William H. Comstock, Oskaloosa, Iowa, U. S., 3rd July, 1888; 5 years.

*Claim*.—1st. The combination, with a filling cylinder having an inlet at one end, and a valve outlet between its ends, of a piston within the cylinder provided with a valve opening away from the inlet end, and a piston rod passing through the opposite end of the said filling cylinder, substantially as shown and described. 2nd. The combination, with a filling cylinder having an inlet at one end, a valve outlet between its ends, and a flexible siphon tube or pipe connected with the inlet of a piston within the cylinder provided with a valve opening away from the inlet, and a piston rod extending through the opposite end of the cylinder, substantially as shown and described. 3rd. In a bottle filler, the combination, with a filling cylinder provided with short tubes, of a valve held in each of the said short tubes, and a bottle holder, substantially as described, located under each of the said valves, substantially as shown and described. 4th. In a bottle filler, the combination, with a valve having a hollow stem provided with a collar, of a bottle holder located under the lower end of the said stem, so that the latter passes into the mouth of the bottle, and the stem collar rests on top of the bottle, and a weighted lever carrying at one end the said bottle holder, substantially as shown and described. 5th. In a bottle filler, the combination, with a weighted lever, of a bottle holder comprising a flanged tube held on one end at the said lever, and a spring secured to the said tube and adapted to engage the neck of the bottle, substantially as shown and described. 6th. In a bottle filler, the combination, with a valve adapted to open into the filling cylinder and provided with a hollow stem having a collar, of a weighted lever extending with its front end under the lower end of the said valve stem, and a bottle holder held on the front end of the said lever, and adapted comprising a flanged tube pivoted on the said lever, and springs secured on the said tube and adapted to engage the neck of the bottle to be filled, the mouth of the said bottle passing over the lower end of the said valve stem, and the said collar of the latter resting on the top of the bottle, substantially as shown and described. 7th. In a bottle filler, a valve adapted to open into the filling cylinder, a spring for closing said valve, and a valve tube in which the said valve operates, in combination with a bottle rest pivoted at its lower end, a link connected with the said bottle rest, a lever connected with the said link, and a weight adapted to slide on the said lever, so as to counterbalance the pressure of the spring and the weight of the bottle when filled, substantially as shown and described. 8th. In a bottle filler a valve adapted to open into the filling cylinder, a spring for closing said valve, and a valve tube in which the said valve operates, in combination with a bottle rest pivoted at its lower end, a link connected with the said bottle rest, a lever connected with the said link, a weight adapted to slide on the said lever, an arm extending from the lower end of the said bottle rest, and an adjustable spring connected with the said extension, and operating in conjunction with the said weight, so as to counterbalance the pressure of the spring on the valve and the weight of the bottle when filled, substantially as shown and described.