Feb. 23, 1943. W. C. WYLAND 2,311,722

MACHINE FOR GRADING EGGS BY WEIGHT

Filed April 14, 1941 2 Sheets-Sheet 1

Fig. 1

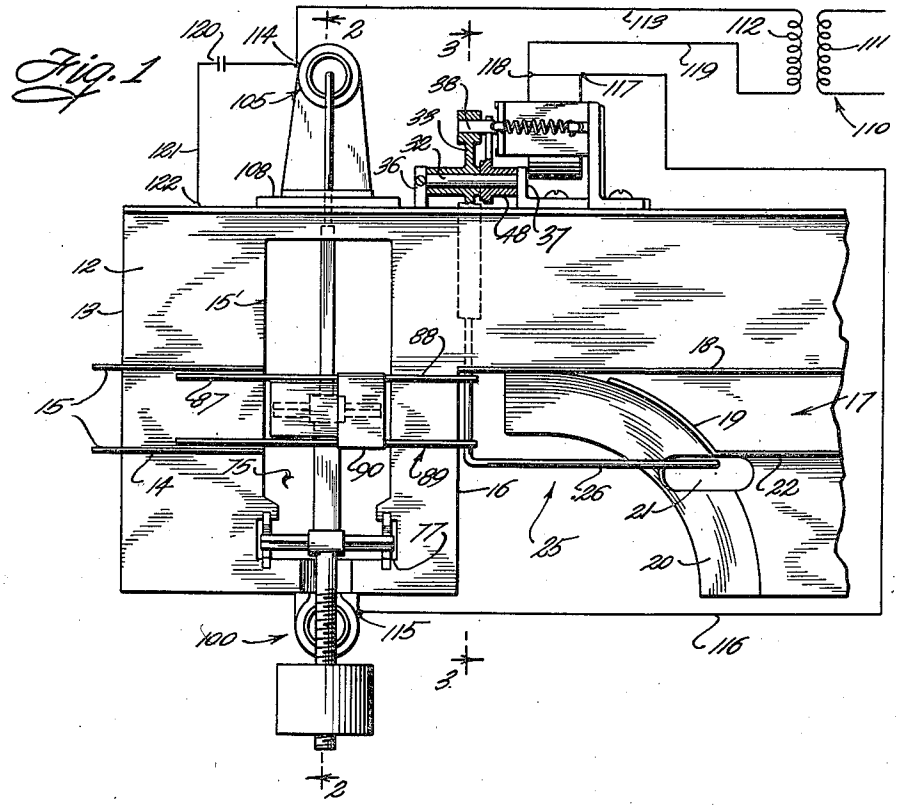
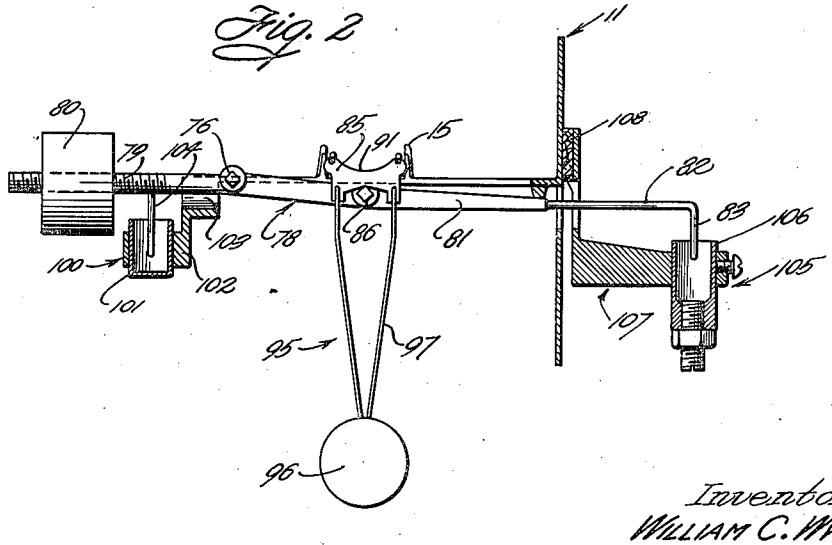


Fig. 2



Inventor
WILLIAM C. WYLAND
By Hazard & Miller
Attorneys

Feb. 23, 1943. W. C. WYLAND 2,311,722

MACHINE FOR GRADING EGGS BY WEIGHT

Filed April 14, 1941 2 Sheets-Sheet 2

Fig. 3

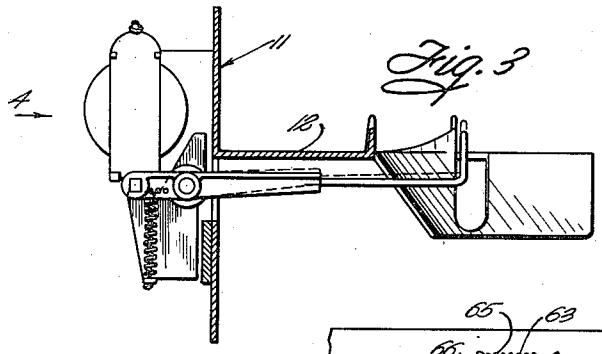


Fig. 4

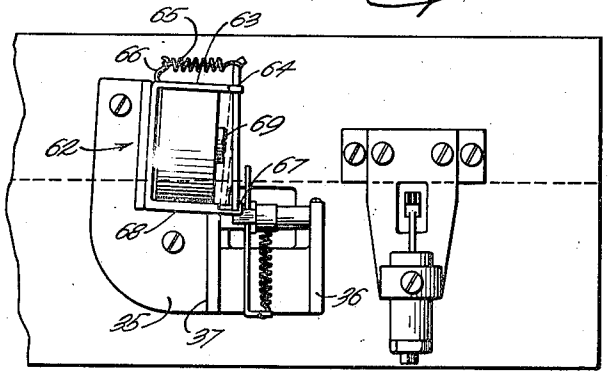


Fig. 5

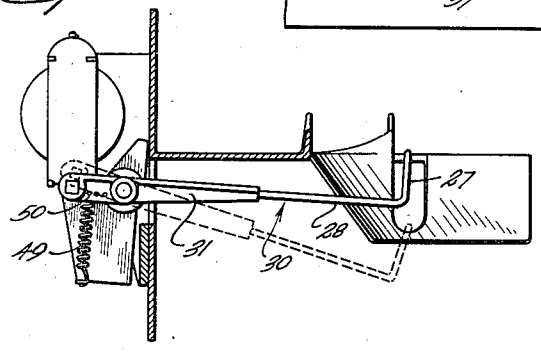


Fig. 7

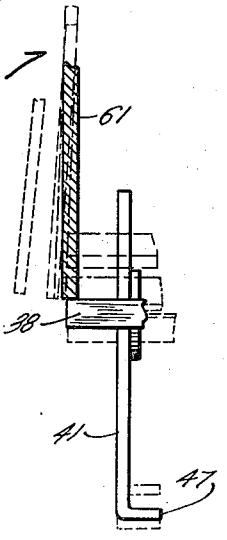
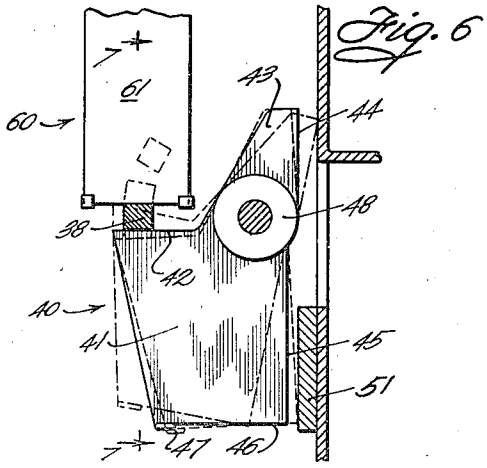


Fig. 6



Inventor
WILLIAM C. WYLAND
By Hazard & Miller
Attorneys

Patented Feb. 23, 1943 2,311,722

UNITED STATES PATENT OFFICE

2,311,722

MACHINE FOR GRADING EGGS BY WEIGHT

William Chester Wyland, Alhambra, Calif., assignor to J. W. Wyland & Sons, Inc., San Gabriel, Calif., a corporation of California

Application April 14, 1941, Serial No. 388,465

11 Claims. (Cl. 209—121)

Machines for grading eggs by weight to establish the various commercial grades has become the generally accepted and approved manner of properly sorting and grading eggs as to this country. Machines of this type are exemplified in the U. S. patent to J. W. Wyland for Egg sizing machine by weight, No. 1,728,463, issued September 17, 1929, filed September 17, 1927, Serial No. 220,177, in which the eggs in rolling over a weighing scale cause the actuation of an electro-magnetic control releasing a dumping panel, this panel pivoting transversely of the path travelled by the eggs and dumping the eggs downwardly substantially in the vertical plane of their line of travel. Another machine is U. S. Patent No. 1,954,164, for Egg sizing by weight, issued to J. W. Wyland on April 10, 1934, filed February 19, 1930, Serial No. 429,724, of the same general type of the patent before mentioned except that the release of the dumping panel was by a mechanical connection to the weighing scale. Another and improved machine is set out in U. S. patent to Chester William Wyland for Egg grading machine by weight, Patent No. 2,112,259, issued March 29, 1938, filed October 24, 1934, Serial No. 749,766. In this case the track located beyond each weighing scale had a dumping or tilting rail discharging the eggs laterally of their line of travel and employed electro-magnetic equipment to actuate a trigger releasing the tilting rail for dumping. My present invention is an improvement on and further development of the above mentioned patents and machines resulting therefrom.

An object of this invention is to develop a machine which will speed up the grading of eggs and to do this it is necessary to have a quicker action of the tilting rail, including its release by a trigger, the return and the positive latching of such tilting rail in position to receive the next egg passing over the preceding scale. Another object of the invention is to simplify the construction of the release and control including the return of the tilting rail and to include in this only one spring for returning the tilting rail supported by a pivoted arm to its initial position in the line of the track. In certain of the patents and in machines now employed two springs are used to control the reactions as to the initial movement, the return and the stop for the tilting rail or dumping panel which construction necessitates the careful tensioning by a so-called balancing of one spring in relation to the other in order that each spring will perform its own function without this being nullified in whole or in part by the other spring. In the Wyland Patent No. 1,728,463 this combination of springs included a coil spring and a leaf bumper spring.

In this type of machine it is desirable on energizing of the electro-magnetic device operating the trigger to not only release the tilting rail or dumping panel but to have this move a small part of its arcuate rotation so that when the electro-magnetic device is de-energized after the weighing scale has returned to its initial position, the egg having passed thereover so that there is no chance of the tilting rail or dumping panel becoming latched, when it should operate to discharge an egg of the proper weight for depressing the weighing scale. Therefore in my present invention a further object and feature is the employment of a detent lever rotatable on the same pintle as the arm which carries the tilting rail and this detent lever and the arm are interconnected by a coil spring. The arm is held in its initial position to form a rigid track for transference of eggs which are too light to operate at the preceding scale and when released by an electro-magnetically controlled trigger, there is an initial movement of the assembly of the detent lever, the arm having a tilting track and a keeper pin connected to such arm. As the tilting rail moves downwardly a short distance, the keeper pin swings upwardly in an arc so that on release of the trigger which is spring actuated for a return, it cannot again latch the assembly.

In these types of machines when the tilting rail or panel has been slightly moved to prevent relatching, the weight of the egg coming on the panel or rail causes its further movement to dump or discharge the egg and it is usual to have the arm or dumping panel returned by a spring to its latched position. In this feature a further object and feature of my invention relates to the construction and action of the detent lever and the keeper pin attached to the arm of the tilting rail. This arm is retracted by the reaction of the tension spring which has one end connected to such detent lever, this lever only having a limited movement so that on the return the arm or the keeper pin or some similar structure delivers a hammer-like blow to the detent lever swinging this with the arm and tilting rail slightly beyond its initial position. This movement is sufficient to permit the trigger actuated by a spring to again engage the keeper pin or equivalent and retain the tilting rail, the arm to which it is connected and

the detent lever in its initial position ready for passage of eggs lighter than those of the scale preceding the dumping panel or tilting rail or to receive the next egg to be dumped.

My invention is illustrated in connection with the accompanying drawings, in which:

Fig. 1 is a plan view partly broken away of part of one section of the machine illustrating a weighing scale and a dumping track assembly.

Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1 in the direction of the arrows through the weighing scale equipment and showing the mercury type of circuit closers.

Fig. 3 is a vertical transverse section on the line 3—3 of Fig. 1 in the direction of the arrows with the tilting rail shown in its locked position for transference of eggs showing a portion of the tilting rail, the supporting arm therefor and the detent lever, keeper and trigger assembly therewith.

Fig. 4 is a side elevation taken in the direction of the arrow 4 of Fig. 3.

Fig. 5 is a section similar to Fig. 3 showing the tilting rail in its initial drop position on release of the trigger and in dotted lines the completely depressed position when dumping an egg.

Fig. 6 is an enlarged view of a portion of Figs. 3 and 5 illustrating the detent lever, the keeper pin on the tilting rail arm and the trigger.

Fig. 7 is a vertical longitudinal section taken on the line 7—7 of Fig. 6 in the direction of the arrows.

In the general set up of the weighing scale and dumping track equipment there is a vertical beam 11 which is a compartively thin plate. From this there is a horizontal plate 12, the whole being preferably an aluminum casting. The plate at the infeeding end 13 has a raised stationary track 14 formed of two rails 15, also part of the casting. There is an open or cut-out section 15' to accommodate the weighing scale assembly. The plate 12 has a transverse edge 16 beyond the weighing scale, a fixed track 17 is formed on the horizontal plate or platform 12 towards the discharge end of the machine of which one rail 18 is fixed and extends to the edge 16. There is a curved gradually rising diverting rail 19 which is an arcuate depending skirt 20 to guide eggs in their dropping action. This skirt has a slot 21, the slot running partly into the trailing portion of the horizontal plate 12. The diverting rail 19 connects with the second fixed rail 22.

The dumping assembly 25 employs a longitudinal rail 26 which aligns substantially with the fixed rail 22 but is positioned slightly outside of the same. The slot 21 is to accommodate the arcuate up and down motion of this rail 26. The rail is formed of wire and has a drop portion 27 connecting to an arm extension 28. This forms part of the tilting rail arm assembly 30. The wire 28 connects to an aluminum or die cast metal casting arm 31 which is pivoted for rotation on a main pintle 32, the arm having an extension 33 beyond the pintle. The pintle is supported by the bracket casting 35 having journal arms 36 and 37. A keeper pin 38 preferably made of a hard metal is secured in the extension 33 of the tilting rail arm assembly 30. This pin is shown as square in cross section having in its normal position a flat under-surface to strike the detent lever as hereunder described.

The detent lever assembly 40 is formed of a flat plate 41 with an edge 42 which is normally horizontal when the tilting rail is in position for transference of eggs. There is an upwardly extended finger 43 on this lever. There are two substantially vertical edges 44 on the finger and 45 on the inner edge of the plate 41. From the lower edge 46 there is a tab 47. A hub 48 is preferably formed integral with the plate or made of a suitable bearing metal with the plate attached thereto and this hub is journalled on the main pintle 32. The hub of the arm 30 and the hub 48 of the detent lever are confined between the journals 36 and 37. A tension spring 49 is secured to the tab 47 and to any one of a series of perforations 50 on the extension 32 of the tilting rail arm 30. The web 51 of the bracket 35 forms a stop for the motion of the detent lever in its oscillating movement.

The assembly of the tilting rail with its arm and the detent lever is retained in an egg transmitting position by a pivotally mounted trigger assembly 60. This employs a trigger plate 61 which is the armature of an electro-magnetic device 62, this being mounted on the bracket 35. A plate 63 at the top of the magnet forms the pivoting support at 64 for the trigger plate. This plate has its upper end retracted by the spring 65 secured to the upper end of the trigger plate above the pivot, the spring being attached to a clip 66 forming part of the electro-magnet assembly. Stop fingers 67 are mounted on a plate 68 adjustably secured to the lower part of the lower part of the electro-magnet frame. These limit the outward movement of the armature trigger under the influence of the spring 65 after it has been retracted by the metallic core 69 of the electro-magnet assembly.

As the features of my invention relating to the trip caused by the egg passing over a weighing scale or the like is not dependent on the particular type of scale shown for instance in Figs. 1 and 2, the electro-magnet may be described as controlled by any suitable arrangement so that this is momentarily energized before the egg passing along the track reaches the tilting rail assembly. The eggs may be fed very much in the same manner as in the prior patents designated in which the eggs roll by gravity over the track 14 prior to reaching the weighing scale, running ahead of the slats of an overhead draper which feed the eggs to the machine and from one dumping and grading discharge to the next in an assembly of weighing scales and dumping tracks. In the prior construction the egg also rolls by gravity over the rails on the weighing scale but in this case instead of running on a bridging track, are discharged directly onto the dumping rail assembly which as above mentioned, has the fixed rail 18.

On the presumption of the above construction, the manner of operation and functioning of my invention is substantially as follows: presuming the trigger which in this case is an armature of an electro-magnet is in the locking position, it engages the keeper pin 38 on its upper surface which extends laterally from the tilting arm assembly 30 and thus holds the tilting rail 26 in the position for carrying and transferring eggs which do not operate the particular scale preceding this discharge point. This keeper pin also engages the upper edge 42 of the detent lever and due to the tension of the spring 49 between the tip 47 on the plate 41 and the lever arm 30, these are held together as a unit. The edges 44 and 45 of the plate 41 and the finger 43 have a clearance from the plate 11 and the web

50 of the bracket 35 as shown in Fig. 3. As soon as the trigger is released by energizing the magnet it swings to one side to the most remote left hand dotted position as shown in Fig. 7 thus giving sufficient room for release of the end of the keeper pin. Due to the tilting arm overbalancing the detent lever assembly, the arm drops from the full line position of Fig. 3 to the full line position of Fig. 5 and the detent lever acting under the influence of the tension spring 49 tilts until the upper end of the finger 43 engages the back of the plate 11. This action may occur while the egg is transferring from the scale rails to the tilting rail assembly or the action may occur as the weight of the egg is brought on the tilting rail, this being immaterial so long as the drop action of the arm is sufficiently rapid so that the keeper pin 38 lifts to the first dotted position of Fig. 6 or the full line position of Fig. 5 so that the trigger on its return cannot again latch this keeper pin. The weight of the egg acting on the tilting rail then moves this from the full line position of Fig. 5 to the dotted line position of Fig. 5. This action tensions the spring 49 and raises the keeper pin 38 to the dotted line position of Fig. 5 or the upper dotted position of Fig. 6. During this movement the end of the keeper pin slides on the flat surface of the plate 61 of the trigger and causes this to have a slight motion as indicated by the close-in dotted lines of Fig. 7.

An important characteristic of my invention is that as soon as the egg is released, the extended spring 49 acting with the detent lever in the full line position of Fig. 5 exerts a downward pull on the extension end 33 of the arm 30. This action brings the keeper pin 38 into contact with the edge 42 of the detent plate 41 giving this a hammer-like blow and swinging such plate to have its lower portion with the edge 45 swing into contact with the web 50, this limiting the motion. This action carries the keeper pin 38 slightly below the lower edge of the trigger plate 61 allowing such plate to swing by the action of its tension spring 65 to its active position engaging the stop tabs 67, then both on the rebound action of the plate 41 from the web 50 and the over-balancing action of the arm 30, the keeper 38 is again engaged and locked with the detent plate and the arm 30 in its operating position. This action is very quick. It is only necessary to have one spring 49 causing the return of the tilting arm. Where it is desired to change the tension reaction of the spring it may be caught into one or other of the eyes or perforations 59 on the lever arm.

The particular type of weighing scale and the electrical control for the dumping of eggs shown in this case is quite similar to that of my Patent No. 2,112,259 of March 29, 1938, above mentioned, however to give a sufficient operating construction properly described in this specification, the present arrangement is constructed substantially as follows, having reference particularly to Figs. 1 and 2. The weighing scale assembly designated 75 for the main part operates in the opening 15' of the horizontal plate 12. The fulcrum 76 is pivoted on support 77 mounted on the plate 12 and on opposite sides of the opening. The scale beam 78 has an extended screw threaded end portion 79 with a counterweight 80 threaded thereon. The main portion 81 of the beam extends transversely across the opening 15' below the level of the horizontal plate 12 and has a pin end 82 with a downwardly extended pin point 83. The scale platform 85 is pivoted on transverse balance edges 86 which is transverse to the beam 78 but longitudinal as to the tracks 14. There are two leading rails 87 and two trailing rails 88 of the track 89 mounted on the platform. The leading rails receive the eggs and the raised stationary track 14. The tracks are formed of wires connected rigidly at the supporting portion 90 of the platform. These wires are so mounted that they form a smooth edge and there is a central depression 91 to give clearance to the convex curve on the outside of the egg shell. Depending from the platform there is a pendulum 95 in which the weight 96 depends from the platform by wire supports 97. This is to allow a slight swing to the platform and provide somewhat the same action as in my patent above mentioned.

The electrical equipment provides a mercury switch 100. This employs a mercury cup 101 mounted in a bracket 102 which may be formed integral with the plate 12, there being a depression 103 to accommodate the movement of the scale beam. A contact pin 104 attached to the portion 79 of the beam dips into the mercury in this cup. A second mercury switch 105 is on the opposite side of the machine. This employs a mercury cup 106 mounted in a bracket 107 which is connected to the vertical beam 11 through an insulating plate 108. The pin 83 is designed to dip into the mercury cup 106. The electrical circuits shown in diagram in connection with Fig. 1 illustrate a transformer 110 having a primary 111 which may be conventional 110 volts and a secondary 112 of reduced voltage of which I find about 16 volts satisfactory. A lead 113 from one end of the secondary leads to a connector 114 at the dip mercury switch 105. The circuit then passes through the scale beam when the contact is made to the mercury contact 100 in which the pin 104 is always immersed in the mercury. Thence from the connector 115 by a lead line 116 to a connector 117 to the electro-magnetic assembly 62. From a second terminal 118 there is a lead 119 connecting to the other end of the secondary of the transformer. A condenser 120 is bridged by circuit lines 121 between the mercury switch 105 from the connector 114 to a connector 122 on the metal frame of the machine and thus forming a bridge across the make and break points of the connector pin 83 and the mercury in the mercury switch 105 thus reducing sparking.

It will thus be seen from my invention that the eggs are transferred directly from the rails of the weighing scale to the dumping track without necessitating the intermediate construction of a transfer portion or rail. If the egg is not of sufficient weight to depress the scale, of course the electro-magnet is not energized and eggs are transferred to the dumping rail and then onto a further scale if desired for operating on lighter weight eggs. Should however an egg in rolling over the rails of the scale be sufficient to depress the scale beam, a contact is formed at the finger 83 and the mercury in the mercury switch cup 105. This closes the circuit to the electro-magnet, the first action of which is to retract the trigger plate 61 which is the armature of the electro-magnet This may be swung to the extreme position shown in dotted lines in Fig. 7. The retraction spring 65 then tends to return the trigger to its first or initial position however by this time the assembly of the tilting rail having the arm 30 and the detent assembly 40 have shifted from the position shown in full lines in Fig. 3 to that of the full line position of Fig. 5 due to the rail

overbalancing the assembly. The tilting rail is thus partly depressed and in a position to immediately recede further downwardly when the weight of the eggs comes on the rail portion 26. This moves the arm assembly 30 to the dotted line position of Fig. 5, the egg then being discharged and guided to a receiving bin. Then as soon as the weight of the egg allows the free reaction of the tilting rail 26, the spring 49 lifts the arm and forcibly brings the keeper pin into contact with the upper edge 42 of the detent lever plate 41. This reaction swings the whole assembly until the lever plate 41 strikes the web 50 shown dotted in Fig. 6. This allows sufficient clearance for the trigger 60 to return to its original position and on the slight reverse swing of the arm 30 and the detent lever 40 to their first positions, due to the unbalance of the arm 30, the dumping rail assembly is again latched. This construction it will be seen develops a quick action in dumping the eggs and returning the dumping rail to its original position with a quick reaction of the unlatching and again latching the arm and having the assurance that when the trigger 60 unlatches the dumping assembly for moving, that it cannot again accidently within a time period or reaction again exert its latching function until the dumping rail and the assembled parts have returned to the original first position.

Various changes may be made in the details of the construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. In a device as described having means to discharge articles by dumping the same, the combination of a first and a second oscillatable device, a latching trigger to retain both devices in a first position, a spring interconnecting the two devices, means to limit the movement of the second device when both are released from the trigger at a second position, the first device moving from a first to a second position on such release, the first device being adapted to move from a second to a third position due to the action of dumping an article and thereby tension the spring, the spring being adapted to return the first device from its third to its first position and means engaging the first and the second devices to return the second device from its second to its first position and means to actuate the trigger for both devices to be restrained by the latch.

2. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of a pivoted arm connected to the discharge device and a lever with their pintles in alignment, the arm being movable from a first to a second position and in dumping an article from a second to a third position the lever having a movement from a first to a second limiting position, a spring engaging the lever and arm, a latch with means engaging the arm and lever to retain both in a first position, means to release the latch, the arm and the lever being movable by a gravity action from their first to their second positions, the arm being adapted to move from the second to its third position in dumping an article and thereby tension the spring, the said spring being adapted on release of the article to return the arm from its third to its first position and means to react between the arm and the lever to return the lever from its second to its first position and means to actuate the latch to again latch the arm and the lever in such first position.

3. In a device as described having means for passing articles over a dumping track having at least one movable rail, the combination of a pivoted arm operatively connected to the dumping rail, a pivoted detent lever, a spring connecting the arm and the lever, a trigger, means interconnecting the trigger with both the arm and the lever to hold the track in a first position for transference of articles, means to release the trigger, a stop means for the lever, the arm and the lever rotating as a unit due to an overbalance, the arm then moving to a second position, the weight of an article on the dump rail then being adapted to move the arm to a third or extreme position and at the same time tension the spring, such spring after dumping the article urging the arm to its original position and means interacting between the arm and the lever to return the lever to its original position and means to shift the trigger to again latch the arm and the lever.

4. In a device as described in which articles passing over a rail or the like are discharged by the weight of the articles depressing the rail, the combination of a pivoted arm having a connection to the rail, a detent lever mounted on a pintle aligned with that of the arm, a keeper pin on the arm to engage the lever, a spring interengaging the lever and the arm, a trigger to engage the keeper pin, means to actuate the trigger to release the keeper pin, the said arm and lever being overbalanced to move from a first to a second position, a stop to engage the lever at said second position, the weight of the article then being adapted to move the arm to a third position and tension the spring, the spring after dumping the article rotating the arm and causing the keeper pin to strike the lever and move the lever and keeper pin past the initial position and means to reengage the trigger with the keeper pin on the return of the arm, the lever and the keeper pin to the original position by the action of gravity balance.

5. In a machine for grading eggs by weight having an egg dumping device released by the operation of a weighing scale actuated by the egg, the combination of the dumping device having a pivoted arm, a pivoted detent lever, a retraction spring connected between the lever and the arm to return the arm to its initial position after dumping an egg, an impact means between the arm and the detent lever to swing such lever on its pivot and a release trigger to engage the arm and retain the arm in its initial position.

6. A machine for grading eggs by weight having a track on which eggs roll, a weighing scale forming part of the track, a dumping track having a fixed rail and a dumping rail combined with a pivoted arm connected to and forming a connecting support for the dumping rail, a pivoted detent lever, a retraction spring between the detent lever and the arm, an electrically operated latch trigger to engage the arm and retain the dump track in its normal position for passing eggs along the track, the said dump rail when the said arm is released by the trigger being adapted to swing on its pivot due to the weight of an egg, the said spring being adapted to swing the detent lever from a first to a second position and the return action of the arms under the action of the spring causing a striking blow of part of the arm on the said lever returning both the lever and the arm to the position to be latched

by the trigger and a spring means to shift the trigger into its latched position.

7. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of a pivoted arm connected to the discharged device, a pivoted detent lever, a retraction spring between the lever and the arm, a keeper pin connected to the arm and engaging the lever, a trigger engaging the keeper pin and normally retaining the pin, the arm and the lever in a first position, means to unlatch the trigger, means urging the trigger from its unlatched to its latching position, means to shift the arm, the lever and the trigger pin in a first movement when unlatched by the trigger, the keeper pin having means to engage the trigger and retain the trigger in its unlatched position, a stop means for the lever, the arm and trigger pin being adapted for a further movement on discharging an article, the spring being adapted to return the arm and trigger pin to its original position and the trigger pin return the lever to its original position and disengage the trigger to again latch the keeper pin.

8. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of an arm mounted on a pivot between its ends, one end having a connection to the discharge device, the other end having a keeper pin, a detent lever pivoted axially to the pivot of the arm, a retraction spring between the lever and the arm, a keeper pin on the arm to engage the lever, a trigger having a movement parallel to the axis of the pivot and normally engaging the keeper pin and retaining such pin, the arm and the detent in a first and latched position, means to move the trigger to a second and unlatched position, the arm and lever being balanced to move to a second position, means urging the trigger to a latching position, the keeper pin engaging the trigger and restraining the same from latching, the arm being adapted to move by the action of an article to a third position, means restraining the lever at its second position thereby tensioning the spring, the spring being adapted to return the arm to its first position and in so doing the keeper pin engaging the detent lever and moving such lever to its first position and in the same action releasing the trigger for return of the trigger to its latching position.

9. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of an arm having a connection to the discharge device and mounted on a pivot, a keeper pin connected to the arm, a detent lever having a pivotal mounting to oscillate in a plane parallel to that of the arm having an edge engaged by the keeper pin, a retraction spring between the arm and the detent lever, the keeper pin being adapted to engage the arm when in its initial latched position, a trigger engaging the keeper pin in a latched position, means to unlatch the trigger and means to urge the trigger to a latched position, the arm and detent lever being balanced when unlatched to shift to a second position and means restraining the detent lever in such second position, the arm being adapted for further movement due to the pressure of an article on a discharge device to move the arm to a third position and thereby tension the spring, the spring being adapted to return the arm to its first position and the trigger pin engaging the detent lever and shifting such lever to its first position, the keeper pin restraining the trigger in its unlatched position in the movement of the arm from its first to its second and third position and again releasing the trigger on returning to the first position of the arm.

10. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of a shiftable arm having one portion connected to the discharge device for passage of articles when the arm is held in a first position, a movable detent lever, an energy storing device connecting the arm and the lever, a latch restraining the arm and lever in a first position, means to shift the latch to an unlatching position, means to move the arm and lever to a second position with a stop means engaging the lever, the arm then being free to move due to the pressure of an article on the discharge device to a third position and thereby energize the energy storing device, such device on discharge of the article being adapted to return the arm to its second position, a striker means on the arm engaging the detent lever with a blow-like action, the momentum of the arm carrying the arm and the detent lever at least to the first position and means to move the latch to a latching position to again restrain the arm and lever in the first position.

11. In a device as described having means for discharging articles by pressure of an article on a discharge device, the combination of a pivoted arm connected to the discharge device, a movable detent lever, an energy storing means interconnecting the arm and the lever, a trigger retaining the arm and the lever in a first position for passage of articles, means to release the trigger, means to move the arm and lever to a second position when released from the trigger with a stop means for the lever, the arm being adapted to move to a third position due to the pressure of an article on the discharge device thereby storing up energy in the energy storing means, such means returning the arm to its second position, a striker device on the arm to forcibly engage the lever and move the lever and arm by momentum at least to the first position and means to shift the trigger to a latching position to again latch the arm and lever in the first position.

WILLIAM CHESTER WYLAND.