

CLASS 177, WEIGHING SCALES**SECTION I - CLASS DEFINITION**

This class provides for (1) scales that determine the weight of articles or material, (2) the control of the supply of material to, with or without the discharge from, a weigh chamber responsive to accumulation of a predetermined weight of the material in the weigh chamber.

SECTION II - REFERENCES TO OTHER CLASSES**SEE OR SEARCH CLASS:**

- 40, Card, Picture, or Sign Exhibiting, subclass 458 for a changeable exhibitor operated or controlled by a weigher.
- 73, Measuring and Testing, subclass 296 for a weighing type liquid level gauge, and 433+, for specific gravity or density determination with a weighing feature. See the notes to Class 73 for the distribution of measuring and testing art.
- 131, Tobacco, subclasses 280+ for automatic weighers controlling the feed of tobacco to cigar or cigarette machines.
- 137, Fluid Handling, subclasses 161 and 162 for a gravitating vessel controlling a fluid pressure system and subclasses 403+ for a fluid handling system controlled by the weight accumulated fluid.
- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, appropriate subclasses for a weigher-receiver organization with handling in addition to supplying or removing receivers, or treatment subsequent to completion of a weighing phase, particularly subclass 83 for mere determination of weight of contents of a receiver.
- 164, Metal Founding, subclass 155.7 for a metal casting apparatus including control means influenced by a weight sensor.
- 194, Check-Actuated Control Mechanisms, for check controlled weighing scale subclass 339 for the rejection of coins of improper weight.
- 198, Conveyors: Power-Driven, subclass 959 for a conveyor having a weighing feature wherein there is some moving of the material besides that necessary to the weighing operation.
- 209, Classifying, Separating, and Assorting Solids, subclasses 510+, 592+, and 645+ for means for automatically sorting articles by weight, and subclass 239 for sifting with weighing.

- 212, Traversing Hoists, subclass 283 for a traversing hoist with a weighing means which accomplishes more than the mere lifting and weighing of the load.
- 222, Dispensing, subclass 55 for constant feed from a dispenser responsive to the weight of unrestrained material already discharged, subclass 58 for means responsive to the weight of material in a container for controlling its discharge, and subclass 77 for weighing-dispensing combinations involving means to weigh material already dispensed.
- 346, Recorders, subclass 94 for a recorder operated by a weigher wherein there is included only so much of the weigher as is necessary to operate the recorder.
- 366, Agitating, subclass 18 for mortar mixing devices including means for proportioning ingredients by weight, and subclass 141 for agitation with weighing.
- 374, Thermal Measuring and Testing, subclass 14 for thermal gravimetric analysis.
- 406, Conveyors: Fluid Current, subclasses 23+ and 32+ for a fluid current conveyor including a weighing feature wherein there is some movement of the material besides that necessary to the weighing operation.
- 414, Material or Article Handling, subclass 21 for weighing with handling of that class more than that necessary to the weighing operation.
- 700, Data Processing: Generic Control Systems or Specific Applications, subclass 305 for weight responsive computer control system.
- 702, Data Processing: Measuring, Calibrating, or Testing, subclasses 101+ for weight calibration or correction system, and subclasses 173+ for weight measurement system.
- 705, Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, subclass 407, for a postage meter system including (a) a weighing device to determine the weight of an article and (b) an electrical computing arrangement to calculate a postage fee based on the determined weight; and subclasses 414+, for determining the cost per unit weight of a material by an electrical computing arrangement.
- D10, Measuring, Testing, or Signalling Instruments, subclasses 87+ for design of weighing machines.

SUBCLASSES

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| <p>1 PROCESSES:
This subclass is indented under the class definition. Processes.</p> | <p>10 External marker operator:
This subclass is indented under subclass 2. Apparatus wherein the weight record is made by an independently operating operator.</p> |
| <p>2 WITH RECORDER:
This subclass is indented under the class definition. Subject matter including means for making a permanent record of the weighing operation.</p> | <p>11 Recorder element mounted on poise:
This subclass is indented under subclass 10. Device wherein an element of the recorder is mounted on a slidable poise.</p> |
| <p>SEE OR SEARCH CLASS:
346, Recorders, subclasses 9+ and 40 for a recorder for a weigher.</p> | <p>12 Responsive to timer, or completion of weighing operation:
This subclass is indented under subclass 2. Apparatus wherein the recorder is actuated by timing means or means sensing the completion of the weighing operation.</p> |
| <p>3 With computing or totalizing means:
This subclass is indented under subclass 2. Apparatus including means for totalizing the amount measured or for producing a record in units other than of mass or force.</p> | <p>13 Weigher sets type:
This subclass is indented under subclass 2. Apparatus including weigher operated means setting record printing type.</p> |
| <p>4 With recording of a factor additional to weight:
This subclass is indented under subclass 2. Apparatus wherein a record other than of the weight value is produced.</p> | <p>14 SELECTIVELY PRESET CYCLE FLOW TERMINATOR:
This subclass is indented under the class definition. Apparatus provided with means to limit the number of filling and discharging cycles of the weigher.</p> |
| <p>5 Weight identification:
This subclass is indented under subclass 4. Apparatus wherein the additional record is of other information associated with the material weighed.</p> | <p>15 WITH TOTAL REGISTER:
This subclass is indented under the class definition. Apparatus including a counting or totalizing device.</p> |
| <p>6 Of both gross and tare on one record receiver:
This subclass is indented under subclass 2. Apparatus whereby records of tare and gross weight are associated.</p> | <p>SEE OR SEARCH THIS CLASS, SUBCLASS:
3, for totalizing and recording.</p> |
| <p>7 Responsive to means sensing removal of material:
This subclass is indented under subclass 2. Apparatus wherein the recorder is actuated by means sensing removal of the weighed mass or its weigh chamber.</p> | <p>16 Integrator of steadily flowing fluent material:
This subclass is indented under subclass 15. Apparatus wherein the quantity of material flowed over a weigher is totalized by a means relating the continuous weigher reading to the material stream length.</p> |
| <p>8 With record receiver advance:
This subclass is indented under subclass 2. Apparatus including means whereby the record receiver is advanced through the recorder.</p> | <p>17 Of distinct successive loads:
This subclass is indented under subclass 15. Apparatus including means for adding together successive distinct weight value indications.</p> |
| <p>9 By weigher:
This subclass is indented under subclass 8. Apparatus wherein the means is the weigher.</p> | |

- 18 Cycle totalizer:**
This subclass is indented under subclass 15. Apparatus which is responsive to the number of times the weigher is operated.
- 19 Single totalizer operated by plural weighers:**
This subclass is indented under subclass 18. Apparatus wherein the totalizer is responsive to each of a plurality of weigh chambers.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
17, for totalizing the weight value of successive loads.
- 20 By preliminary translation of rotary weighers:**
This subclass is indented under subclass 19. Apparatus wherein operation of the totalizer is preceded by preliminary translation of the weighing chambers in a rotary type weigher.
- 21 By intermittently used one of plural weighers:**
This subclass is indented under subclass 19. Apparatus wherein the totalizer is responsive to one of a plurality of weigh chambers said one being intermittently involved in a plurality of weighing operations.
- 22 Weigh beam operated:**
This subclass is indented under subclass 18. Apparatus operated by the oscillations of a weigh beam.
- 23 Discharge valve operated:**
This subclass is indented under subclass 18. Apparatus operated by movement of a weigh chamber discharge valve.
- 24 Weigh chamber operated:**
This subclass is indented under subclass 18. Apparatus operated by movement of a weigh chamber.
- 25.11 Computer:**
This subclass is indented under the class definition. Apparatus comprising means which gives the result of a mathematical operation involving the weight evaluator.
- SEE OR SEARCH CLASS:
700, Data Processing: Generic Control Systems or Specific Applications, subclass 305 for weight control.
702, Data Processing: Measuring, Calibrating, or Testing, subclasses 101+ for calibration of weight measurement data or apparatus, subclass 129 for article count or size distribution by weight and subclasses 173+ for a generic weight measurement system.
705, Data Processing: Financial, Business Practice, Management, or Cost/Price Determination, subclass 407, for a postage meter system including (a) a weighing device to determine the weight of an article and (b) an electrical computing arrangement to calculate a postage fee based on the determined weight;and subclasses 414+, for determining the cost per unit weight of a material by an electrical computing arrangement.
- 25.12 Electrical:**
This subclass is indented under subclass 25.11. Apparatus where the mathematical operation is performed by an electrical or electronic devices.
- 25.13 Digital:**
This subclass is indented under subclass 25.12. Apparatus where the electrical or electronic devices performs the mathematical operation using discrete data, (e.g., by means of a microprocessor or other electronic calculating means, acquired through an analog to digital conversion means).
- 25.14 Multiplying or dividing scales:**
Apparatus under 25.13 where the mathematical operation includes multiplying or dividing the results of a weighing operation by user determined input(s).
- 25.15 Price:**
This subclass is indented under subclass 25.14. Apparatus where the user input is unit price information, used to determined the total cost of the material being weighed (e.g., grocery store or postage scales).

- 25.16 Calorie counting:**
This subclass is indented under subclass 25.14. Apparatus where the user input is information relating to the caloric content of food stuffs being weighed.
- 25.17 Counting:**
This subclass is indented under subclass 25.14. Apparatus where the user input is unit weight information to enable the number of articles being weighed to be determined from the total weight of the articles.
- 25.18 Combinatorial scales:**
This subclass is indented under subclass 25.13. Apparatus where increments of weight are determined by one or more weighers, deposited in hoppers and combined in various ways to obtain a combination which most closely approaches a target value.
- 25.19 Weight history:**
This subclass is indented under subclass 25.12. Apparatus where the device maintains a memory of previous weight value for an individual, object, class of objects or a sum of serial increments of fluent material.
- 26 Computer and weigher independently operated by common load holder:**
This subclass is indented under subclass 25.11. Apparatus wherein a load holder is connected to evaluating structure optionally operable to separately weigh or to separately give a computed value of the load.
- 27 Weighing beam dial and computing beam dial with separate poises:**
This subclass is indented under subclass 26. Apparatus including separate slidable poises on diversely calibrated balance beams.
- 28 Separately pivoted beams:**
This subclass is indented under subclass 27. Apparatus wherein the weighing dial and the computing dial are on separate beams having separate pivots.
- 29 Tabular-type computer:**
This subclass is indented under subclass 27. Apparatus wherein the calibrations on one of the diversely calibrated beams comprises a chart.
- 30 Ancillary weigher:**
This subclass is indented under subclass 25.11. Apparatus in which a weight responsive structure, additional to the weigher, positions a datum scale relative to the path of the weight evaluating member of the weigher or modifies the response of the indicator elements to the weight evaluator.
- 31 Independent computer scale and index:**
This subclass is indented under subclass 25.11. Apparatus comprising a datum scale and index independent of the weigher scale and index.
- 32 With adjustable linkage to weight offsetting means:**
This subclass is indented under subclass 31. Apparatus having an adjustable structure driving the computer reading structure from the load force offsetting means.
- 33 Coaxial pointers:**
This subclass is indented under subclass 32. Apparatus in which the driven computer reading structure includes a pointer that is mounted coaxially with a weigher pointer.
- 34 Tabular-type computer:**
This subclass is indented under subclass 25.11. Apparatus comprising a plurality of diverse datum scales showing results calculated from certain data including a weight evaluation.
- 35 Slidable poise moves table:**
This subclass is indented under subclass 34. Apparatus wherein a slidable poise portions the chart.
- 36 Weigher moves table:**
This subclass is indented under subclass 34. Apparatus wherein the chart is moved by the weight sensor.
- 37 Rotatable drum:**
This subclass is indented under subclass 36. Apparatus in which the chart is in the form of a rotatable drum.
- 38 With manually operated reading assistance:**
This subclass is indented under subclass 37. Apparatus including a member moved manually over the face of the chart to pick out or expose a section thereof.

- 39 With additional reading window in drum housing:**
This subclass is indented under subclass 37. Apparatus including oppositely disposed reading windows in the drum casing.
- 40 Encased disc:**
This subclass is indented under subclass 36. Apparatus wherein the chart is a flat circular plate enclosed in a housing.
- 41 Externally movable table:**
This subclass is indented under subclass 34. Apparatus wherein the chart is externally movable relating to the path of the pointer of the weigher.
- 42 Axially rotatable:**
This subclass is indented under subclass 41. Apparatus wherein the chart is rotatable about a longitudinal axis.
- 43 Calibrated index arm:**
This subclass is indented under subclass 34. Apparatus wherein the chart is traversed by a weigher driven arm having calibrations correlated with datum scales on the chart.
- 44 Table integral with balance beam:**
This subclass is indented under subclass 34. Apparatus in which the chart extends along a balance arm carrying a slidable poise.
- 45 WITH ALARM OR SIGNAL:**
This subclass is indented under the class definition. Apparatus with means to audibly or visually convey information in addition to that of the regular weigher indicator.
- SEE OR SEARCH CLASS:
40, Card, Picture, or Sign Exhibiting, subclass 458 for a changeable exhibitor operated or controlled by a weigher.
340, Communications: Electrical, subclass 666 for a weight operated electrical alarm.
- 46 In unbalance:**
This subclass is indented under subclass 45. Apparatus wherein a signal or indicator is given when the load differs from the desired datum or preset i.e., just before the balance of a beam overload.
- 47 In balance:**
This subclass is indented under subclass 45. Apparatus which indicates the attainment of the desired datum or preset.
- 48 Electric:**
This subclass is indented under subclass 47. Apparatus wherein the signal or indication is given electrically.
- 49 Of additional counterpoise:**
This subclass is indented under subclass 45. Apparatus relating to the operative presence of additional counterpoise.
- 50 WITH TESTING:**
This subclass is indented under the class definition. Apparatus wherein a test is performed.
- 51 Coin size:**
This subclass is indented under subclass 50. Apparatus having a size gauging structure.
- SEE OR SEARCH CLASS:
73, Measuring and Testing, subclass 163 for miscellaneous coin testing and see the search notes in the definition of that subclass.
- 52 WITH CONVEYING MEANS HANDLING SUCCESSIVE RECEIVERS:**
This subclass is indented under the class definition. Apparatus having means by which the movement of a series of removable containers relative to a filling and weighing station is correlated with the weighing operation.
- SEE OR SEARCH CLASS:
141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 129+ for handling successive receivers in a relation other than correlated with a weighing operation.
209, Classifying, Separating, and Assorting Solids, subclasses 510+, 592+, and 645+ for means for automatically sorting articles by weight.
414, Material or Article Handling, subclass 21 for material handling devices wherein there is some moving of the

material besides that incidental to the weighing operation.

- 53 Receiver presence responsive:**
This subclass is indented under subclass 52. Apparatus wherein a receiver in filling position on the conveying means controls operation of the weigher.
- 54 Rotary:**
This subclass is indented under subclass 52. Apparatus wherein a rotary conveyor transports the receivers to the filling means.
- 55 Separate weigh chamber:**
This subclass is indented under subclass 54. Apparatus wherein the receiver on the conveyor is subsequently filled from a distinct priorly operated weigh chamber.
- 56 Separate weigh chamber:**
This subclass is indented under subclass 52. Apparatus wherein the receiver on the conveyor is subsequently filled from a distinct priorly operated weigh chamber.
- 57 Simultaneously operated weigh chambers:**
This subclass is indented under subclass 56. Apparatus wherein a plurality of weighing means operate simultaneously.
- 58 PLURAL WEIGHERS ON ROTARY SUPPORT:**
This subclass is indented under the class definition. Apparatus having a plurality of weighers carried in a circular path by rotating supporting means.
- 59 DISCHARGE FROM WEIGHER TO RECEIVER:**
This subclass is indented under the class definition. Apparatus including means for delivering a load from a weigh chamber to a removable container.
- 60 WEIGHER RESPONSIVE MATERIAL CONTROL:**
This subclass is indented under the class definition. Apparatus wherein a weigh chamber actuates material supply control means.
- 61 Translatable among plural sources:**
This subclass is indented under subclass 60. Apparatus wherein a weigh chamber is translated among a plurality of feeding sources.
- 62 Remote discharge station:**
This subclass is indented under subclass 60. Apparatus wherein a discharge station is remote from the filling station.
- 63 With additional material-presence responsive means:**
This subclass is indented under subclass 60. Apparatus including additional means responsive to the presence of material, e.g., regulators.
- 64 Controlling feed:**
This subclass is indented under subclass 63. Apparatus wherein the additional means controls feed means.
- 65 To alternating weigh chambers:**
This subclass is indented under subclass 64. Apparatus wherein the feed is directed to each of alternating weigher chambers.
- 66 And discharge:**
This subclass is indented under subclass 64. Apparatus also controlling discharge means.
- 67 Overload removal:**
This subclass is indented under subclass 66. Apparatus also controlling overload removal means.
- 68 Flow terminator requiring external reset:**
This subclass is indented under subclass 60. Apparatus which terminates flow of material in response to movement of the weigh chamber
- SEE OR SEARCH CLASS:
137, Fluid Handling, subclasses 403+ for liquid level control by weight of accumulated liquid.
209, Classifying, Separating, and Assorting Solids, subclasses 510+, 592+, and 645+ for means for automatically sorting articles by weight.
222, Dispensing, subclass 58 for a dispenser having means responsive to the weight of material in the supply container for controlling its discharge.

- the necessary reestablishment of flow being initiated by an external operator.
- 69 Plural feed, simultaneous cutoff:**
This subclass is indented under subclass 68. Apparatus wherein a plurality of feeding sources are cut off simultaneously.
- 70 Sequential feeding, plural ingredients:**
This subclass is indented under subclass 68. Apparatus wherein a plurality of feeding sources with different ingredients are used sequentially.
- 71 Feed and discharge:**
This subclass is indented under subclass 68. Apparatus controlling both the feed to and discharge from the weigher.
- 72 Manually initiated discharge:**
This subclass is indented under subclass 71. Apparatus provided with manually actuated means controlling discharge from the weigh chamber.
- 73 Receiver operated reset:**
This subclass is indented under subclass 68. Apparatus wherein the external reset is incidental to placement of a receiver in feeding position on the weigher.
- 74 Latch release:**
This subclass is indented under subclass 68. Apparatus wherein the movement of the weigh chamber causes the release of a latch.
- 75 Sequential latch release:**
This subclass is indented under subclass 74. Apparatus having a plurality of latches released in sequence.
- 76 With magnetic operator:**
This subclass is indented under subclass 74. Apparatus wherein the latch is released by a magnetic operator.
- 77 With serially connected switch:**
This subclass is indented under subclass 76. Apparatus wherein the release of the latch causes actuation of a switch in series circuit with the magnetic operator.
- 78 Reciprocating closure:**
This subclass is indented under subclass 74. Apparatus wherein the latch controls a reciprocating closure member.
- 79 Holding magnet:**
This subclass is indented under subclass 68. Apparatus wherein movement of the weigh chamber controls an electric circuit to a magnetic holding coil.
- 80 With external intercontrol:**
This subclass is indented under subclass 60. Apparatus correlated with an additional distinct control means.
- 81 Initial partial charge:**
This subclass is indented under subclass 80. Apparatus wherein an initial partial charge is fed to the weigh chamber prior to a finishing feed and one of the feeds is controlled by external means.
- 82 Overload removal:**
This subclass is indented under subclass 60. Apparatus controlling discharge from the weigh chamber of material in excess of the desired predetermined weight.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
67, for additional material-presence-responsive means controlling the overload.
- 83 Rotary:**
This subclass is indented under subclass 60. Apparatus wherein the weigh chamber is mounted for unidirectional rotation.
- SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 217+ for a rotary tank type of volume or rate of flow meter.
- 84 Power-driven:**
This subclass is indented under subclass 83. Apparatus wherein an external energy source moves the weigh chamber.

- 85 Electromagnetic latch release:**
This subclass is indented under subclass 83. Apparatus wherein the movement of the rotary weigh chamber is controlled by an electromagnetically actuated latch release.
- 86 With preliminary translation:**
This subclass is indented under subclass 83. Apparatus wherein the translation of the axis under the load received in the weigh chamber controls its turning.
- 87 Initiates feed control operation:**
This subclass is indented under subclass 86. Apparatus in which the translation also controls feed.
- 88 By cam on weigh chamber:**
This subclass is indented under subclass 87. Apparatus wherein the feed control is achieved by cam structure mounted on the rotary weigh chamber.
- 89 Stationary weigh chamber:**
This subclass is indented under subclass 60. Apparatus wherein the load is carried and controlled by movement of the floor or discharge gate of the weigh chamber, the body of the weigh chamber having no movement.
- 90 Alternating weigh chambers:**
This subclass is indented under subclass 60. Weighers wherein the weighing operation occurs alternately in two weigh chambers.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
65, for additional material-presence-responsive means related to alternating weigh chambers.
- 91 Divided unit:**
This subclass is indented under subclass 90. Weighers in which the weigh chambers are compartments of a chamber divided by a partition.
- 92 With relatively oscillating partition:**
This subclass is indented under subclass 91. Weighers wherein the partition oscillates relative to the weigh chamber.
- 93 Pivoted feed diverter:**
This subclass is indented under subclass 92. Weighers wherein the alternation of feed to the weigh chamber is controlled by a diverter pivotally mounted on the partition.
- 94 Oscillating:**
This subclass is indented under subclass 91. Weighers wherein the alternation is by oscillation.
- 95 Valve means correlated with weigh chamber:**
This subclass is indented under subclass 94. Weighers including valve means.
- 96 Opened by gravity:**
This subclass is indented under subclass 95. Weighers opened by gravity.
- 97 Mounted externally of weigh chamber:**
This subclass is indented under subclass 95. Weighers wherein the valve means is relatively fixedly mounted externally of the weigh chamber.
- 98 Feed diverter:**
This subclass is indented under subclass 90. Weigh chambers wherein the lowering of one weigh chamber actuates a diverter located within or at the discharge end of a feed hopper to direct material to another weigh chamber.
- 99 With discharge valve:**
This subclass is indented under subclass 98. Weigh chambers wherein the diverter is correlated with discharge valves of the weigh chambers.
- 100 Valved discharge:**
This subclass is indented under subclass 90. Weigh chambers wherein the discharge of the weighed material is through valve means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
99, for a discharge valve correlated with a feed diverter.
- 101 Siphon discharge:**
This subclass is indented under subclass 90. Weigh chambers wherein the discharge is accomplished by siphon means.

- 102 Oscillating:**
This subclass is indented under subclass 90. Weigh chambers wherein the weigh chambers are oscillated.
- 103 Plural chambers:**
This subclass is indented under subclass 60. Apparatus including a plurality of weigh chambers.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
90+, for alternating weigh chambers.
- 104 With simultaneous discharge:**
This subclass is indented under subclass 103. Devices so related that they discharge simultaneously.
- 105 Discharge valve or gate:**
This subclass is indented under subclass 60. Apparatus which discharges by the opening of a discharge valve or gate.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
23, for a weigher having a cycle totalizer, discharge valve operated.
- 106 Opening initiated by feed terminator:**
This subclass is indented under subclass 105. Weighers wherein a feed valve at closed position starts mechanism which opens the discharge valve.
- 107 Closing initiates feed:**
This subclass is indented under subclass 105. Device, on closing, starts mechanism to open feed valve means.
- 108 Power actuated:**
This subclass is indented under subclass 105. Weigher operated by the power of a source outside the weigher.
- 109 Clutched:**
This subclass is indented under subclass 108. Weigher with structure connectable between the outside power source and the valve.
- 110 Magnetically operated:**
This subclass is indented under subclass 109. Apparatus of the magnetic type.
- 111 Mechanically interconnected with feed valve:**
This subclass is indented under subclass 105. Device mechanically interconnected to a feed valve so that as one valve opens the other closes.
- 112 With linkage operator:**
This subclass is indented under subclass 105. Device operated by a linkage mechanism associated with the weigh chamber.
- 113 Latch release:**
This subclass is indented under subclass 105. Device held in closed position by a latch which is released by the weigh chamber.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
74, for an externally reset feed terminator latch released by the weigh chamber.
- 114 Correlated feed and discharge:**
This subclass is indented under subclass 60. Apparatus wherein discharging from the weigh chamber is correlated with feeding.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
87+, for a weigher in which a translation of a rotary weigh chamber controls feed.
99, for a feed controller diverting feed between alternating weigh chambers correlated with a discharge valve.
106, for a weigher in which the actuation of the feed flow terminator opens a discharge valve or gate.
107, for a weigher in which the closing of the weigh chamber discharge valve or gate initiates feed.
111, for mechanically interconnected feed and discharge valves.
- 115 Oscillating weigh chamber:**
This subclass is indented under subclass 114. Weigher wherein the weigh chamber oscillates between a filling position and a position where the weighed material spills over the edge of the weigh chamber.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
102, for alternating chambers that discharge by tilting.
- 116 Feed:**
This subclass is indented under subclass 60. Apparatus relating to the supply of material to the weigh chamber.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
64+, for control of feed responsive to additional material presence.
68+, for manually initiated feed with weigh chamber responsive cutoff.
98+, for a feed diverter controlling flow to alternating weigh chambers.
107, for initiation of a feed valve by closing of a discharge valve.
111, for a feed valve mechanically interconnected with a weigh chamber discharge valve or gate.
114, for correlated feed and discharge of a weigh chamber.
- SEE OR SEARCH CLASS:
222, Dispensing, subclass 55 for a controller that effects the discharge of a dispenser responsive to weight of unrestrained material to secure uniformity of discharge from the dispenser.
- 117 Weigh chamber placement initiates flow:**
This subclass is indented under subclass 116. Apparatus wherein the filling operation is initiated responsive to application of the weigh chamber to the weigher.
- 118 With receiver retainer:**
This subclass is indented under subclass 116. Apparatus including means to clamp a bag or other receiver in feed position.
- 119 Conveyer:**
This subclass is indented under subclass 116. Apparatus including a device advancing material by a continuous application of force additional to gravity.
- 120 With feed cutoff:**
This subclass is indented under subclass 119. Apparatus with feed cutoff means.
- 121 Variable speed:**
This subclass is indented under subclass 119. Apparatus operable at different speeds.
- 122 Sequentially actuated flow control means:**
This subclass is indented under subclass 116. Apparatus in which the feed control means responds first to a partial load in the weigh chamber to reduce the feed rate and then to a full load to cut off the feed.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
75, for a flow terminator requiring external reset including latch means sequentially operated.
121, for a feed conveyor operating at reduced speed near the end of the feed operation.
- 123 Distinct controllers:**
This subclass is indented under subclass 122. Apparatus comprising a plurality of distinct controllers.
- 124 WITH LOCK OR SEAL:**
This subclass is indented under the class definition. Apparatus including lock or seal means which prevents unauthorized use or adjustment.
- 125 CHECK CONTROLLED:**
This subclass is indented under the class definition. An immobilized weigher rendered operative by the use of a coin or substitute therefor.
- SEE OR SEARCH CLASS:
194, Check-Actuated Control Mechanisms, for check-controlled weighing devices. See section IV of the Class 194 definition.
- 126 COLLAPSIBLE, FOLDABLE, KNOCK-DOWN:**
This subclass is indented under the class definition. Apparatus constructed to be moved relatively from operative position to form a compact inoperative unit.

- 127 With carrying case:**
This subclass is indented under subclass 126. Apparatus with a container or having structure forming the collapsed weigher elements into a unit enclosed by an outer covering.
- 128 WITH REPAIR OR ASSEMBLY MEANS:**
This subclass is indented under the class definition. Apparatus including means for repairing, removing, replacing or aiding in assembling or removing an element of a weigher assembly.
- 129 CONVERTIBLE:**
This subclass is indented under the class definition. Device in which by reorientation or by rearrangement or omission or addition of a part, there is obtained a second character or different kind of device having a different mode of operation.
- 130 Hand truck:**
This subclass is indented under subclass 129. Apparatus in which a weigher is converted to a hand truck by means disabling the weigher.
- 131 Hand manipulatable load pickup device:**
This subclass is indented under subclass 129. Apparatus in which a weigher is converted to a handling load holder such as a scoop or fork by means disabling the weigher.
- 132 STRUCTURAL INSTALLATION:**
This subclass is indented under the class definition. Apparatus with (1) means performing an operation external to the subject matter of this class (2) combined with a static construction installation, or (3) specifically related to a particular geos:graphic feature, wherein there is included only enough structure foreign to this class to associate it with the apparatus.
- 133 Geographic:**
This subclass is indented under subclass 132. Apparatus in which a weigher part is arranged relative to the earth.
- 134 Pit:**
This subclass is indented under subclass 133. Apparatus wherein the weigher part is installed in a cavity in the earth.
- 135 With guard or shield:**
This subclass is indented under subclass 134. Apparatus with means between movable weigher elements and the pit enclosure for preventing the entrance of undesirable material into the pit.
- 136 Vehicle:**
This subclass is indented under subclass 132. Apparatus in which the weigher is structurally related to vehicular load carrier.
- 137 Running gear springs:**
This subclass is indented under subclass 136. Apparatus wherein a vehicle load is indicated by means responsive to the yielding of the vehicle running gear springs.
- 138 With indicator disconnect means:**
This subclass is indented under subclass 137. Apparatus wherein the yield indicating means may be disconnected from the running gear.
- 139 Unitary load transferrer and weigher:**
This subclass is indented under subclass 136. Apparatus in which the load carrying section of the vehicle is supported from frame structure by weight responsive weigher elements in such a manner that release or disconnection of such elements will transfer such section onto the frame.
- 140 Hand truck:**
This subclass is indented under subclass 136. Apparatus provided with handle means for propulsion by an attendant.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
130, for a weigher convertible to a hand truck by the locking of the weight responsive elements.
- 141 Hydraulic weigher:**
This subclass is indented under subclass 136. Apparatus in which the weigher is of the hydraulic type.
- 142 Building:**
This subclass is indented under subclass 132. Apparatus in which the weigher is installed in or on a part of a building.

- 143 Refrigerator:**
This subclass is indented under subclass 132. Apparatus in which the weighing means is a part of a refrigerator.
- 144 Furniture or room fixture:**
This subclass is indented under subclass 132. Apparatus in which the weigher is installed in an article of furniture or in a room fixture or fitting.
- 145 WITH WEIGHER LOADING OR UNLOADING MEANS:**
This subclass is indented under the class definition. Apparatus including structure which transports a load relative to a load holder.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 52+, for the coordinated filling and conveying of successive receivers.
- 62, for a weigh chamber movable to a remote discharge station.
- 119+, for a weigh chamber responsive conveyor feeding the weigh chamber.
- SEE OR SEARCH CLASS:
- 198, Conveyors: Power-Driven, subclass 959 for a conveyor having a weighing feature wherein there is some moving of the material besides that necessary or incidental to the weighing operation.
- 406, Conveyors: Fluid Current, subclasses 23+ and 32+ for a fluid current conveyor including a weighing feature wherein there is some movement of the material besides that necessary or incidental to the weighing operation.
- 414, Material or Article Handling, subclass 21 for a material handling device including a weighing feature wherein there is some moving of the material besides that necessary or incidental to the weighing operation.
- 146 Jack:**
This subclass is indented under subclass 145. Apparatus comprising a unitary, portable, base supported weigher having structure by which the load holder may be moved upwardly to engage and lift the load.
- 147 Hoist:**
This subclass is indented under subclass 145. Apparatus including means by which a suspended weighing device lifts the load.
- SEE OR SEARCH CLASS:
- 212, Traversing Hoists, subclass 283 for a traversing hoist in combination with a weighing means which accomplishes more than the mere lifting and weighing of the load.
- 148 Hand manipulatable weigher:**
This subclass is indented under subclass 145. Apparatus including a unitary, portable material handling weigher having means by which it is manually moved as a whole in loading or unloading the load holder.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
- 131, for a hand manipulatable device convertible to a weigher by the release of means immobilizing the weigher.
- 149 Container type:**
This subclass is indented under subclass 148. Apparatus wherein the device is a container such as a bucket or scoop.
- 150 EQUAL-ARM BEAM TRANSFER MECHANISM:**
This subclass is indented under the class definition. Apparatus having mechanism by which the support of the beam of an equal arm weigher is transferred from the pivot to a non-weighing holder.
- 151 LOAD-HOLDER TRANSFER MECHANISM:**
This subclass is indented under the class definition. Apparatus having mechanism by which the support of the load holder is transferred from the transmission mechanism to a non-weighing support.
- 152 Unitary with weigher:**
This subclass is indented under subclass 151. Apparatus wherein the transfer mechanism includes elements of the load holder transmission.

- 153 Transmission disconnect means:**
This subclass is indented under subclass 152. Apparatus wherein the transfer is accomplished by means effecting the disconnection of transmission elements of the load holder.
- 154 MEANS HOLDING LOAD-DRIVEN ELEMENT AGAINST MOTION:**
This subclass is indented under the class definition. Apparatus securing a load responsive weighing element against motion.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
124, for a weigher having a lock or seal.
125, for a check released immobilized weigher.
130, for a weigher convertible to a hand truck by the locking of the weight responsive elements.
131, for a hand manipulated load pickup device with means immobilizing the weight responsive elements.
- 155 Separates bearing parts:**
This subclass is indented under subclass 154. Apparatus including means to hold bearing elements from engagement.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
150, for the separation of the bearing parts of an equal arm type weigher.
151+, for structure transferring the weight of a load holder from the weigher bearings.
- 156 At transmission mechanism:**
This subclass is indented under subclass 154. Apparatus wherein the holding device engages the load responsive element acting between the load holder and the weight indicating means.
- 157 Balance beam:**
This subclass is indented under subclass 154. Apparatus including structure for engaging and preventing movement of the beam of a beam type weigher.
- 158 Plural beams:**
This subclass is indented under subclass 157. Apparatus including a plurality of counterweight beams each provided with its own holding means.
- 159 At indicator:**
This subclass is indented under subclass 154. Apparatus wherein the holding device is located at the reading structure.
- 160 SACK SUPPORT:**
This subclass is indented under the class definition. Apparatus engaging and holding open the mouth of a sack.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
118, for a sack retainer with weight responsive material feed control.
- 161 LOAD GUIDE:**
This subclass is indented under the class definition. Apparatus including structure upon which the load may be moved to or from its supported position upon the weigher.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
59, for a weigher that discharges to a receiver.
- 162 Chute:**
This subclass is indented under subclass 161. Apparatus including an inclined trough.
- 163 Rail:**
This subclass is indented under subclass 161. Apparatus including a rail.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
134, for a weigher installed in a pit.
- 164 PRESET:**
This subclass is indented under the class definition. Apparatus in which the change in position of a first weigher element between balanced unloaded and balanced loaded position is a measure of the load and having (1) an additional element for adjusting the balance or zeroizing the weigher in its initial position or (2) means for setting weigher structure to coor-

- dinate the change of position of the first element with the load value.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
25.11+, for a computing type of preset.
- 165 Responsive to load receiver:**
This subclass is indented under subclass 164. Apparatus responsive to the weight or presence of a load receiver.
- 166 Ancillary pointer:**
This subclass is indented under subclass 164. Apparatus with a dial and pointer and including a second pointer adjustably connected to the first pointer.
- 167 Fixed index or dial:**
This subclass is indented under subclass 164. Apparatus in which the preset is of the fixed indicator element along which the weight indicative element is moved during the weighing operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
41+, for similar structure in which the fixed indicator element is a tabular type computer chart.
- 168 Spring support:**
This subclass is indented under subclass 164. Apparatus wherein the fixed end of a load offsetting spring is adjustable.
- 169 Effective length of spring:**
This subclass is indented under subclass 168. Apparatus including means for adjusting the length of the elastic section of the spring.
- 170 Lever:**
This subclass is indented under subclass 168. Apparatus in which the fixed end of the spring is mounted on an adjustable lever.
- 171 Lever balance-type beam:**
This subclass is indented under subclass 164. Apparatus immediately associated with a beam which is substantially level in both the balanced loaded and balanced unloaded conditions.
- 172 Load-arm length:**
This subclass is indented under subclass 171. Apparatus wherein the preset is of the load arm length of the beam.
- 173 Indicator structure:**
This subclass is indented under subclass 164. Apparatus wherein the preset is of the indicator or its immediate drive.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
32+, for a computing type indicator having an adjustable drive.
- 174 Rack connection:**
This subclass is indented under subclass 173. Apparatus wherein the presetting is accomplished through means connecting an indicator rack to its drive.
- 175 In transmission:**
This subclass is indented under subclass 164. Apparatus in which the presetting means is an element of or is carried by the structure transmitting force from the load holder.
- 176 Counterweight:**
This subclass is indented under subclass 175. Apparatus wherein the presetting element is a weight.
- 177 ILLUMINATED:**
This subclass is indented under the class definition. Apparatus including a light source.
- 178 Projected:**
This subclass is indented under subclass 177. Apparatus wherein light is directed through or by a movable part of the weigher to give a reading.
- SEE OR SEARCH CLASS:
353, Optics: Image Projectors, subclasses 40+ for an image projector in combination with a nominally claimed weighing scale.
- 179 WITH BEARING SHIELD:**
This subclass is indented under the class definition. Apparatus including a protective covering member immediately associated with a bearing.

- 180 WITH CASING CLOSURE OR SHIELD:**
This subclass is indented under the class definition. Apparatus comprising an external casing having an opening protected by a seal, shield or removable section.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
127, for a carrying case for a collapsible weigher.
135, for a guard or shield for platform openings of a pit type weigher.
- 181 Transparent:**
This subclass is indented under subclass 180. Apparatus in which the closure is transparent.
- 182 Lens:**
This subclass is indented under subclass 181. Apparatus in which the transparent section includes a magnification lens.
- 183 LUBRICATOR:**
This subclass is indented under the class definition. Apparatus having means for lubricating the weigher.
- 184 SHOCK ABSORBER, DAMPER:**
This subclass is indented under the class definition. Apparatus having means to damp mechanism or protect it from shock.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
139, for a vehicle mounted weigher protected from shock by immobilizing or relieving means.
150, for an equal arm type weigher protected from shock by beam transfer mechanism.
195+, for an equal arm weigher inherently damped by spring means.
- SEE OR SEARCH CLASS:
188, Brakes, subclasses 297+ for a fluid-resistance shock absorber or damper of general utility.
- 185 Electrical or magnetic:**
This subclass is indented under subclass 184. Apparatus wherein damping is accomplished by an electrical or magnetic field.
- 186 Indicator mechanism:**
This subclass is indented under subclass 184. Apparatus directly associated with the indicator or its immediate drive.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
159, for means holding an indicator against motion.
- SEE OR SEARCH CLASS:
73, Measuring and Testing, subclass 430 for instrument mechanism damping means of general application.
- 187 Load-holder transmission mechanism:**
This subclass is indented under subclass 184. Apparatus which acts on an element of the load force transmitting linkage connected to the load holder.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
156, for a means at the load holder transmission for holding it against motion.
- 188 Fulcrumed lever:**
This subclass is indented under subclass 187. Apparatus wherein the element is a rocking lever.
- 189 Load holder:**
This subclass is indented under subclass 184. Apparatus mounted for cooperation with the load holder.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
151+, for means transferring a load holder to a nonweighing support.
- 190 EQUAL ARM TYPE:**
This subclass is indented under the class definition. Apparatus comprising a beam balance with the fulcrum thereof located at the mid-point between connections supporting a load and a counterweight holder.
- 191 With counterweight manipulating means:**
This subclass is indented under subclass 190. Apparatus with means for handling a counterweight.

- 192 Elongated flexible counterweight:**
This subclass is indented under subclass 191. Apparatus wherein the counterweight is a flexible chain.
- 193 With indicator tower:**
This subclass is indented under subclass 190. Apparatus with a structure rising above the beam to house a weight indicator.
- 194 With bias toward balance:**
This subclass is indented under subclass 190. Apparatus having means imposing a position restoring force to the beam proportional to the deflection of the beam from its position of balance.
- 195 By spring:**
This subclass is indented under subclass 194. Apparatus wherein the position restoring force is supplied by a spring.
- 196 Torsion bearing type:**
This subclass is indented under subclass 195. Apparatus wherein the spring serves as a bearing.
- 197 With longitudinally movable poise:**
This subclass is indented under subclass 190. Apparatus having structure supporting a slidable poise.
- 198 With check link:**
This subclass is indented under subclass 190. Apparatus having linkage maintaining the attitude of the load or counterweight holder.
- 199 PLURAL DISTINCT LOAD HOLDERS WITH COMMON EVALUATOR:**
This subclass is indented under the class definition. Apparatus having a plurality of load holders operative with a common load evaluator.
- 200 Load comparing type:**
This subclass is indented under subclass 199. Apparatus operating to compare the load on one holder to that on another.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
30, for a computing type weigher having an ancillary load holder effecting the response of the weigher to the load on the main load holder.
190+, for an equal arm type weigher.
- 201 SELF-POSITIONING:**
This subclass is indented under the class definition. Apparatus in which weigher elements assume a balanced position or condition indicative of load value in response to the application of the load.
- 202 Offsets over or under load:**
This subclass is indented under subclass 201. Apparatus wherein the indication is of both the valve and direction of unbalance of an even balance type weigher.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
194+, for an equal arm type of weigher biased toward balance.
- 203 Supplemental weight offsetting means:**
This subclass is indented under subclass 201. Apparatus having an additional load force counterbalancing means combined with the self positioning indicating elements.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
194+, for an equal arm type weigher with a bias toward balance.
200, for a load comparing weigher with plural distinct load holders.
- 204 Transferred responsive to self-positioning means:**
This subclass is indented under subclass 203. Apparatus responsive to a movement of the self positioning offsetting means.
- 205 Remote indicator:**
This subclass is indented under subclass 203. Apparatus with remote reading structure interconnected with supplemental means.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
49, for a weigher with a signal indicating the use of a supplemental counterweight.

- and subclass 47 for a resistor responsive to force.
- 206 Slidable weight:**
This subclass is indented under subclass 203. Apparatus wherein the means is a slidably mounted weight.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
176, for similar structure zeroizing the weigher.
- 207 Buoyancy type:**
This subclass is indented under subclass 201. Apparatus which employs the lifting effect of a fluid on a float.
- 208 Fluid transmission to pressure gauge:**
This subclass is indented under subclass 201. Apparatus wherein fluid pressure proportional to weight is communicated to a device responsive to pressure.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
141, for a hydraulic weigher installed on a vehicle.
- 209 Interconnected load-supporting expandible chamber:**
This subclass is indented under subclass 208. Apparatus wherein the pressure is developed by the action of the load holder on a plurality of interconnected expandible chambers.
- 210 Electrical current generating or modifying:**
This subclass is indented under subclass 201. Apparatus wherein an electric current is generated or modified and the value of such current is taken as the weight value.
- SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 763+ for a stress or strain testing device of the current generating or modifying type.
200, Electricity: Circuit Makers and Breakers, subclass 85 for a weight controlled switch.
324, Electricity: Measuring and Testing, subclass 71.1 for the determination of nonelectrical properties in general by measuring electrical properties.
338, Electrical Resistors, subclasses 2+ for a strain gauge type electrical resistor
- 211 Strain gauge:**
This subclass is indented under subclass 210. Apparatus wherein the strain of a deformable member is measured.
- 212 Repositioning in response to deflection under load:**
This subclass is indented under subclass 201. Apparatus including means responsive to a movement of a weigher element under load actuating a device tending to restore the element to its original position.
- 213 Electrically actuated poise:**
This subclass is indented under subclass 212. Apparatus wherein the balance of a beam is brought about by a poise slidable thereon and actuated by electrical means responsive to the deflection of the beam.
- 214 With indicator of poise position:**
This subclass is indented under subclass 213. Apparatus wherein an indicator is correlated with the poise.
- 215 Speed control of poise:**
This subclass is indented under subclass 213. Apparatus wherein the speed of the poise in its movement along the beam is varied.
- 216 Pendulum:**
This subclass is indented under subclass 201. Apparatus wherein a suspended poise is arranged to swing in proportion to the load applied.
- SEE OR SEARCH CLASS:
73, Measuring and Testing, subclasses 836 and 862.381+ for a push or pull force measuring device of the pendulum type.
- 217 Plural opposed:**
This subclass is indented under subclass 216. Apparatus including two pendulums mounted on coaxial or parallel pivots and which swing in opposite directions in counter-balancing the load.

- 218 Translatable:**
This subclass is indented under subclass 217. Apparatus in which the pivots translate as the poises swing.
- 219 Tape-driven:**
This subclass is indented under subclass 217. Apparatus wherein the swing of the poises is produced by pull through a flexible member.
- 220 Drives indicator through transmission mechanism:**
This subclass is indented under subclass 216. Apparatus including an independently mounted indicating element driven by the pendulum.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
13, for a recording type indicator set by a weigher.
36, for a tabular type indicator chart driven by a weigher.
- 221 Flexible member:**
This subclass is indented under subclass 220. Apparatus including a flexible pull member.
- 222 Gearing:**
This subclass is indented under subclass 220. Apparatus including a gear.
- 223 Rectilinear rack:**
This subclass is indented under subclass 222. Apparatus including a straight rack and a pinion.
- 224 Pointer fixed to pendulum:**
This subclass is indented under subclass 216. Apparatus having a pointer fixed to the swingable poise.
- 225 Spring:**
This subclass is indented under subclass 201. Apparatus having an elastic body arranged to yield in proportion to the load applied.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
137+, for vehicle running gear springs used for weighing.
168+, for a preset means for a spring support.
- 195+, for an equal arm weigher biased toward balance by a spring.
- 226 Temperature compensator:**
This subclass is indented under subclass 225. Apparatus including means to compensate for temperature changes.
- 227 Modifies leverage:**
This subclass is indented under subclass 226. Apparatus effective to change the distance between the pivot points of a lever located in the force train between a load holder and a spring.
- 228 Acts on spring:**
This subclass is indented under subclass 226. Apparatus acting on or built into the spring.
- 229 Cantilever:**
This subclass is indented under subclass 225. Apparatus comprising a projecting elastic member supported at one end and loaded at the other.
- 230 Force modifier connects spring and load-holder:**
This subclass is indented under subclass 225. Apparatus including means for delivering a force from the load holder to the spring proportional to, but changed in direction or intensity from, the direct gravity force of the load.
- 231 Load-holder steadying structure and spring carried by casing:**
This subclass is indented under subclass 225. Apparatus wherein an external casing supports one end of the spring and carries structure limiting tilting movement of a load holder acting on the other end of the spring.
- 232 Coil spring in sleeve casing:**
This subclass is indented under subclass 225. Apparatus comprising a helical coil spring within a casing having a constant cross sectional area in its spring enclosing section corresponding to that of the spring.
- 233 With vertical pointer slit:**
This subclass is indented under subclass 232. Apparatus wherein the casing has a longitudinal slit within which a weight indicator moves in response to load.

- 234 Magnified indication of spring deformation:**
This subclass is indented under subclass 225. Apparatus including a reading device moved by the deformation of the spring an amount greater than, but proportional to, such deformation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
211, for a weigher in which the deformation is measured electrically.
- 235 Counterweight type:**
This subclass is indented under subclass 201. Apparatus relating to counterweight type.
- 236 Variable fulcrum:**
This subclass is indented under subclass 235. Apparatus wherein the imposition of the load shifts the fulcrum point of a balancing load and counterweight to a position at which the load and counterweight moments are equal.
- 237 Progressive counterweight pickup:**
This subclass is indented under subclass 235. Apparatus wherein weight units are progressively lifted from a support.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
204, for the pickup of capacity changing weights of a self balancing weigher.
- 238 WITH CASING:**
This subclass is indented under the class definition. Apparatus with an enclosing member, fixture, or attachment to protect the device or part thereof from soil, contamination, injury, theft or loss; or to protect persons or things from injury through contact with the weigher or part thereof.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
127, for a collapsible foldable knockdown weigher with carrying case.
179, for a bearing shield.
180+, for a casing closure or shield.
231, for a load holder steadying structure and spring carried by casing.
232+, for a coil spring in a sleeve casing.
- 239 Base:**
This subclass is indented under subclass 238. Apparatus wherein the casing forms a bottom structure enclosing and supporting weigher elements.
- 240 With standard:**
This subclass is indented under subclass 239. Apparatus with an upright support carried by the bottom structure.
- 241 Carrying additional housing:**
This subclass is indented under subclass 240. Apparatus with an additional housing supported on the standard.
- 242 Access opening in cylindrical wall:**
This subclass is indented under subclass 241. Apparatus wherein the housing is cylindrical and has an external opening in the cylindrical wall.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
181+, for a closure or shield for a casing opening comprising a transparent section or lens.
- 243 Penetrated by load-holder support:**
This subclass is indented under subclass 239. Apparatus wherein a load holder is supported by a member projecting through a wall of the housing.
- 244 ASSEMBLY SUPPORT:**
This subclass is indented under the class definition. Apparatus provided with a support for an entire weighing assembly.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
131, for a hand manipulatable load pickup device convertible to a weigher.
148+, for a hand manipulated weigher.
- 245 COMBINED:**
This subclass is indented under the class definition. Apparatus combined with a device or structure having (1) a function other than weighing or (2) serving to perfect such apparatus for its intended primary purpose.

SEE OR SEARCH CLASS:

- 40, Card, Picture, or Sign Exhibiting, subclass 458 for a changeable exhibitor operated or controlled by a weigher.
- 209, Classifying, Separating, and Assorting Solids, subclass 239 for a sifting means associated with a weigher.
- 356, Optics: Measuring and Testing, subclass 54 for egg candlers combined with weighing scales having no novel structure.

246 BEAM:

This subclass is indented under the class definition. Apparatus comprising a lever and fulcrum upon which load force and a counterweight means may be directly balanced against each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 44, for a beam computing table.
- 171, for a beam with presetting means.
- 190+, for a beam weigher of the equal arm type.
- 202, for a balancing beam type weigher with an over or under load offsetting means.
- 235+, for a self balancing weigher of the counterweight type.

247 Coarse and fine sliders:

This subclass is indented under subclass 246. Apparatus wherein one counterweight is adjustable along a beam slide and another lighter counterweight is adjustable along another slide.

248 Plural counterweight pickup:

This subclass is indented under subclass 246. Apparatus having plural counterweights with related structure to place one or more of them on the beam from a stored position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 191+, for counterweight manipulating means installed on an equal arm type weigher.
- 204, for the supply or removal of a capacity changing weight on a self positioning weigher.

216+, for self positioning counterweights of the pendulum type.

235+, for other self positioning counterweights.

249 Transmission interconnected with slidable counterweight:

This subclass is indented under subclass 246. Apparatus including transmission between a slidable poise and other structure interconnecting them for actuation of one by the other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 35, for a computing table driven by poise movement.
- 213+, for a poise actuated in response to beam unbalance.

250 Counterweight retention:

This subclass is indented under subclass 246. Apparatus with means to retain a counterweight in set position with respect to the beam.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 154+, for means holding a load driven element against motion.

251 Adjustable load-arm connection:

This subclass is indented under subclass 246. Apparatus wherein the distance along the beam between the fulcrum and the load connection may be changed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 172, for a beam having adjusting preset means for the load arm length.
- 236, for a counterweight type device that balances itself by shifting the fulcrum in response to load.

252 Plural counterweights:

This subclass is indented under subclass 246. Apparatus in which more than one counterweight may be used to balance the load.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 27+, for a computing type weigher or using plural counterweights.

- 158, for plural counterweights on separately pivoted beams having individual beam latches.
- 171, for a preset beam type weigher.
- 247, for coarse and fine sliders.
- 253 LOAD HOLDER:**
This subclass is indented under the class definition. Device that sustains the load.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 60+, for a load holder with material flow control means.
- 151+, for a load holder having both a weighing and nonweighing support.
- 154+, for means for holding a load holder against motion.
- 160, for a load holder comprising a sack support.
- 161+, for a guide positioning a load on a load holder.
- 189, for a load holder with shock absorbing means.
- 254 Fluid transmission:**
This subclass is indented under subclass 253. Apparatus wherein the load sustaining means includes fluid transmission structure.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 208+, for a fluid transmission connected with a pressure gauge.
- SEE OR SEARCH CLASS:
- 60, Power Plants, subclasses 325+ for a fluid transmission, per se.
- 255 Sway or tilt prevention:**
This subclass is indented under subclass 253. Apparatus limiting horizontal or tilting motion of the load holder.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 198, for a check link structure in an equal arm type weigher.
- 231, for a load holder steadying structure combined with a casing mounted spring.
- 256 Pivottally interconnected transmission levers:**
This subclass is indented under subclass 253. Apparatus including separate levers pivottally interconnected to transmit force to each other or to a separate transmission element.
- 257 Integrated force delivered by lever extension from interconnection:**
This subclass is indented under subclass 256. Apparatus wherein an extension for a plurality of load holder carrying levers beyond their interconnection serves to deliver a single combined force from the load.
- 258 Separate lever loaded by load-holder levers:**
This subclass is indented under subclass 256. Apparatus wherein two load holder carrying levers load a separate force delivering lever.
- 259 With additional serially connected lever:**
This subclass is indented under subclass 258. Apparatus wherein the separate force delivering lever applies the force to an additional lever.
- 260 Adjusting means:**
This subclass is indented under subclass 253. Apparatus including means for adjusting a connection within transmission or between the load holder and the transmission.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
- 175+, for a presetting adjustment of a transmission that prepares the weigher for a load evaluation operation.
- 251, for a load evaluating adjustment of the load arm connection.
- 261 Movably mounted pivot:**
This subclass is indented under subclass 253. Apparatus wherein a lever bearing is so mounted that it provides for movement of the bearing additional to its rotation.
- SEE OR SEARCH CLASS:
- 384, Bearings, subclass 2 for a beam or lever bearing, per se.

262 Scale pan:
This subclass is indented under subclass 253.
Subject matter comprising a load holder for a portable or small counter type scale.

263 Suspended:
This subclass is indented under subclass 262.
Subject matter relating to means to suspend the load holder.

264 MISCELLANEOUS:
This subclass is indented under the class definition. Subject matter not otherwise classifiable.

END