United States Patent

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[54] **PRICE COMPARATOR**
1 Claim, 4 Drawing Figs.

[52] **U.S. Cl.** **235/88**
[51] **Int. Cl.** **G06c 3/00**
[50] **Field of Search** 235/84, 78, 88

[56] **References Cited**

UNITED STATES PATENTS

2,595,299	5/1952	Russell	235/84
2,852,193	9/1958	Vaughen	235/84
2,871,582	2/1959	Frank	235/84X
3,275,235	9/1966	Balch	235/84
3,309,017	3/1967	Koskela	235/78
3,397,838	8/1968	Ostrander et al.	235/70

OTHER REFERENCES

Products: What's Newest . . . Supermarket Slide Rule, Newsweek, July 31, 1961, p. 63.

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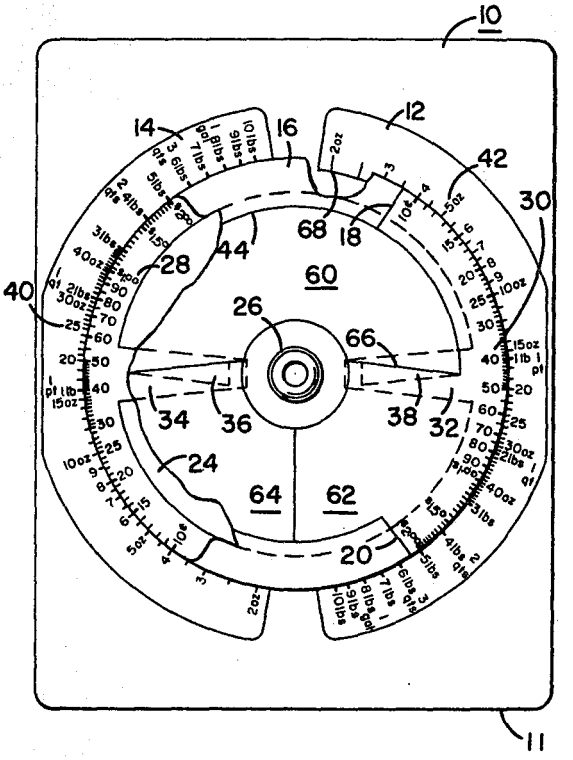
ABSTRACT: A price comparator for comparing unit price-weight ratios of a commodity in different size containers, which comparator has a separate pair of aligned unit-weight and unit-price logarithm scales in which the price and weight of the commodity in a given size container is placed on one of the price-weight scales and the price and weight of the commodity in a second different size container is placed on the other price-weight scale, and an indicator on the price comparator displays which container has the lower price per unit-weight of the commodity.



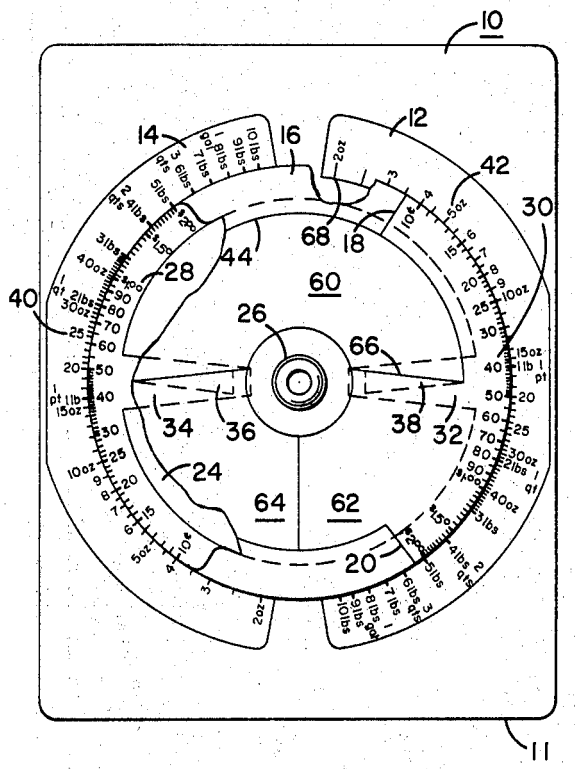


FIG. 3

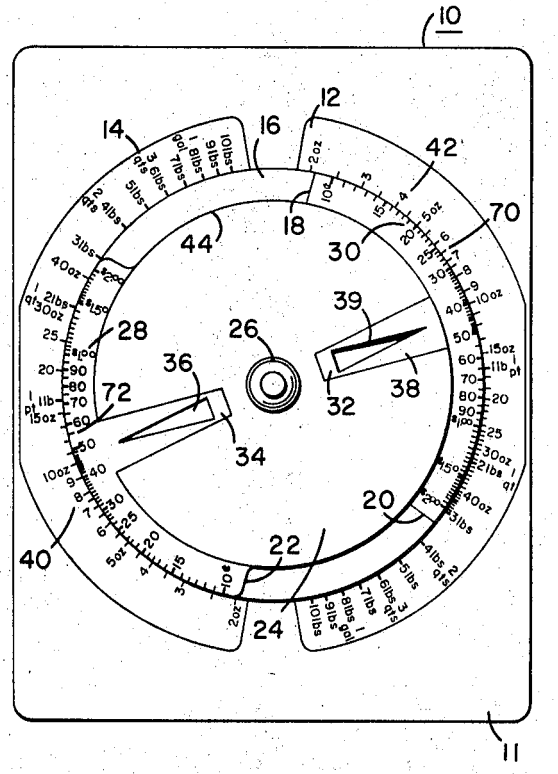


FIG. 4

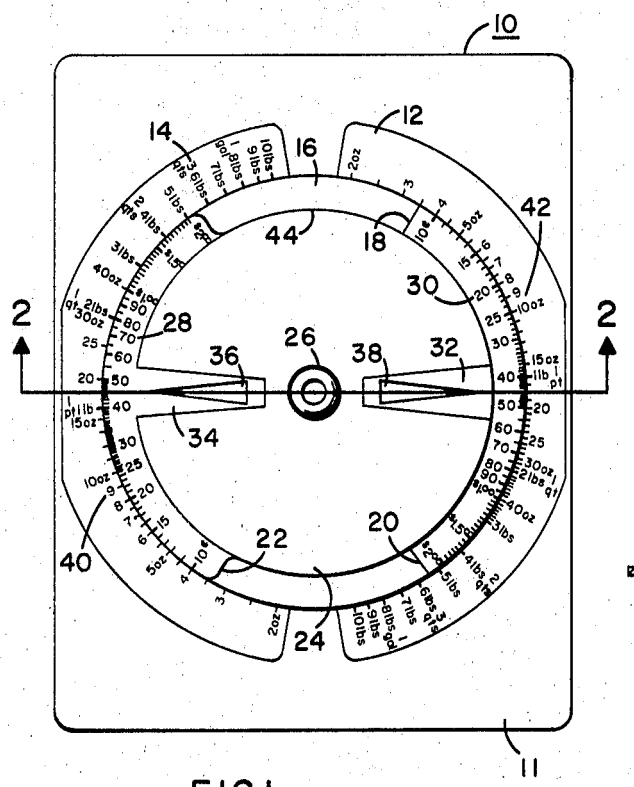


FIG. 1

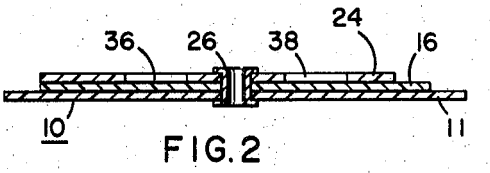


FIG. 2

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PRICE COMPARATOR

BACKGROUND OF THE INVENTION

It is well known that an identical or substantially identical commodity such as food, oil, soap, or any other commodity, is often sold in packages or containers having different sizes and prices. The weight or volume of the commodity in the package or container, as well as the price, is usually listed on the container. So a price-weight comparison can be made. While ostensibly the price for the contents in different size packages or containers is proportional to the unit price-weight of the contents, it is well known that the unit price-weight ratio varies considerable for different size packages or containers of the same commodity. Thus while purchasers would normally assume that for a larger package or container, the unit price-weight ratio would be lower than the unit price-weight ratio of smaller packages, considering the possible added packaging costs, pricing practices are such that this is not always true. So to the consumer, the unit price-weight ratio is an important consideration in making purchases of the same or similar commodities in different size containers.

The making of unit price-weight ratio comparisons normally involves difficult mathematical computations that the consumer is not prepared to make at the time of purchase. This is especially true where housewives are purchasing articles of food in supermarkets and where the weight or volume of similar commodities are alternatively designated in ounces, pounds, fluid ounces, pints, quarts, and like measures. Thus the consumer is often faced with purchasing a larger package or container of a given commodity upon the assumption that the unit price-weight ratio is lower than the unit price-weight ratio of a smaller container, even though the consumer would rather purchase the commodity in the smaller container Further consumers often want to compare unite price-weight ratios of different brands of the same commodity, which different brands are packaged in different size packages.

Thus it is advantageous to have an inexpensive and simple to operate price comparator on which the information relative to unit price-weight or unit price-fluid volume of packaged commodities can be easily and quickly compared and that will immediately display which package is the better buy.

SUMMARY OF THE INVENTION

The price comparator of this invention functions to compare unit price-weight ratios or unit price-fluid volume ratios of different size packages or containers of the same or similar commodities. The price comparator has a first aligned weight scale and price scale and a second weight scale and price scale, on which the unit price-weight ratios of various given packaged commodities can be compared. A base member has a pair of opposed, half circle logarithm scales of units of weight and units of fluid, that together form a circle. Separate first and second circular discs are connected at their centers in layers on the base member. Each of the discs rotate independently of each other and independently of the base member and have smaller diameters than the diameter of the unit weight scales on the base member. The discs each have a unit-price scale that is scaled logarithmically around one side edge and is positioned adjacent one of the two unit weight scales on the base member. Thus one unit price logarithmic scale of one of the discs is positioned adjacent one of the unit weight logarithmic scales on the base member and the unit price logarithmic scale of the other disc is positioned adjacent the other unit weight scale on the base member. The upper disc member or the second disc member has a recessed circumferential edge that opens to view the unit price scale of the intermediate or first disc member. The second disc member has oppositely directed, triangular shaped slots that open to the surface of the first disc The first disc has a given colored surface that covers a substantially semicircular portion of the first disc surface.

In use, the unit price of two packages of a given commodity versus its packaged weight or its fluid content are set in aligned relationship on the first and second adjacent price-weight scales. Should there be a difference in commodity unit price versus weight or fluid content between the commodities in two packages or containers, then the commodity package having the lowest unit price-weight ratio is displayed by a portion of the colored surface on the first disc appearing in the slot in the second disc that is adjacent the corresponding scale.

Thus by quickly aligning the respective unit price-weight listings for the different packages, the lowest unit price-weight package is quickly indicated in the display on the price comparator. Thus it may be seen that the price comparator provides in a simple and effective manner; a quick determination of which package has the lower commodity unit cost.

It is therefore an object of this invention to provide a new and improved price comparator for comparing commodity unit price-weight ratios in different size packages and containers.

It is another object of this invention to provide a new and improved price comparator for comparing unit price-weight ratios of different weights or sizes of packages of a given commodity that is simple in operation, inexpensive to make, and that displays the lowest unit price-weight ratio without requiring mathematical computations.

It is another object of this invention to provide a new and improved price comparator for comparing unit price-weight or fluid content ratio of different size packages or containers in which the weight or fluid content is listed in ounces, pounds, fluid ounces, pints, quarts and like units of measure.

Other objects, novel features and advantages will become more apparent upon a reading of the following detailed specification and an examination of the drawings in which:

FIG. 1 is a top plan view of an embodiment of this invention.

FIG. 2 is a cross-sectional view taken along lines 2–2 of FIG. 1.

FIG. 3 is a top plan view of an embodiment of this invention with portions broken away.

FIG. 4 is a top plan view of an embodiment of this invention illustrating the operation of the invention.

Referring to FIGS. 1 and 2, the embodiment of the price comparator has a rectangular base member 11 with a first circular disc 16 and a second substantially circular disc 24 secured thereto by a known rivet connection 26 that allows independent rotational movement between each of the discs and the base member. The base member 11 and the discs 16 and 24 may be constructed of any suitable materials, such as plastic, paper, metal, or other suitable sheet materials. The base member has a pair of unit-weight logarithm scales 40 and 42 that are illustrated to extend between 2 ounces and 10 pounds. The respective weight scales are circularly arranged on the base member with the increase scale direction being clockwise for each scale. The first disc 16 has a circular shape with a logarithm unit price scale 30. The curved unit price scale 30 has a range of $.10 to $2.00 and is positioned to cooperate with the unit weight scale 42. The outer disc member 24 has an identical unit price logarithm scale 28 that is positioned on the opposite side of the disc 24 in a position to cooperate with the unit weight scale 40. The disc 24 has a slotted or recessed portion around its outer edge 44 that permits viewing of the unit price scale 30 on the disc 16. The second disc 24 also has triangular slots 36 and 38 that pass through the disc structure 24 and permits viewing the surface of the first disc 16.

It should be recognized that the respective price, weight and fluid units used in the embodiment scales are only illustrative of a particular area of purchasing costs of which the majority of the housewife consumers are involved; and any suitable price, weight and fluid ranges can be employed in the logarithm scales.

The price comparator 10 employs colors to effectively improve the use of the comparator and the correlation and display of readings from the price comparator giving an instantaneous display of the best price-weight ratio. For example, the area 12 on the base member 11 may be orange in color

and the area 14 on the base member 11 may be green in color. With this color arrangement, the area 34 on disc 24 is green and the area 32 on disc 24 and the scale area bounded by lines 18 and 20 on disc 16 is orange. The remainder of the upper surface of the disc 16, see FIG. 3, has a green area 64, an orange area 62, and a black area 60. The black area is substantially semicircular with edges 66 that are aligned with the upper edges of the triangular slots 36 and 38, when the triangular slots are positioned in alignment with lines 66. Thus in the normal or first position, the green side 34 has a green color in the opening 36 corresponding to the green section 64 of the upper surface of disc 16. The orange side 32 displays an orange color in slot 38 corresponding to the orange section 62. When the discs 16 and 24 are rotated to align given prices with given weights on the scales, in the manner that will be described in more detail hereinafter, slot 36 or slot 38 will move into the black portion 60 depending upon which of the unit price-weight ratios is the lowest of the commodities compared, and the black color in the slot shows which container has the lowest unit price for the commodity.

In operation, the consumer may for example, be contemplating the purchase of cans of tuna fish. One can of tuna fish has a content weight of 6½ ounces and a cost of $.27 per can. The other can of tuna fish has a contents weight of 12½ ounces and costs $.55 per can. In this example, the consumer would rather buy the smaller can of tuna fish for various reasons, however the purchaser desires to purchase the lower unit price-weight of tuna fish. Accordingly, the purchaser, see FIG. 4, sets the $.27 mark on the orange price scale 30 of disc 16 to the 6½ ounce mark on the orange scale 42 on the base member 11. The purchaser then sets the $.55 mark on the green price scale 28 of disc 24 to the 12½ ounce mark on the green weight scale 40 on base 11. It may be observed that this movement has caused disc 24 to move in a counterclockwise direction relative to disc 16 causing slot 38 to pass into the black portion 60 of the disc 16. Thus the black color 39 in slot 38 immediately displays to the purchaser that the orange side of the scale has the lowest unit price-weight ratio, and thus the price per ounce for tuna fish is lower for the 6½ ounce can than for the 12½ ounce can. The more black area that is displayed in slot 38, the larger the differential in unit price-weight ratio.

It may be understood that similar comparisons can be made between weights involving ounces or pounds or between units of fluid involving fluid ounces, pints and quarts.

I claim:

1. A price comparator for comparing unit price-weight ratios and unit price-fluid volume ratios of commodities in different size containers comprising:

a base member and two circular discs joined in layers and at their centers to rotate independently of each other;

one surface of said base member has units of weight and fluid logarithmically scaled thereon in a pair of identical in size and scale units circularly arranged separate half circular scales that are symmetrically arranged in diametrically opposed positions;

a first one of said discs has a diameter less than the diameter of said units of weight scales and has units of price scaled logarithmically in a first price scale around one side edge that is adjacent to one of said units of weight scales forming a first price-weight ratio designation;

a second one of said discs has a diameter less than the diameter of said units of weight scales and has units or price scaled logarithmically in a second price scale around one side edge that is adjacent to the other of said units of weight scales forming a second price-weight ratio designation;

display means responsive to the relative alignment of said first and second discs as a result of a given first price-weight ratio designation and a given second price-weight ratio designation for displaying the price-weight designation having the lowest price-weight ratio;

said first and second discs have substantially the same circular shape;

the side edge of said second disc opposite said second price scale is recessed around the curved edge to uncover the first price scale of said first disc;

said first price scale on said first disc is identical in size and scale units with said second price scale on said second disc;

said display means comprises spaced slots through said second disc;

one of said slots is positioned adjacent the center of said units of price scale on said second disc and said other slot is positioned on the opposite side of the center of said disc in symmetrical alignment with said one slot;

the surface of said first disc adjacent said second disc has a colored area that solely displays through one of said slots which price-weight ratio designation has the lowest price-weight ratio;

said colored area on said first disc covering substantially a semicircular area with radial edges that are substantially aligned with the upper edges of said slots; and

and whereby any relative movement between said discs causes at least a portion of said colored area to be displayed in one of said slots.