April 6, 1954 M. H. BERNSTEIN 2,674,410

CALCULATOR

Filed July 29, 1952

3 Sheets-Sheet 1

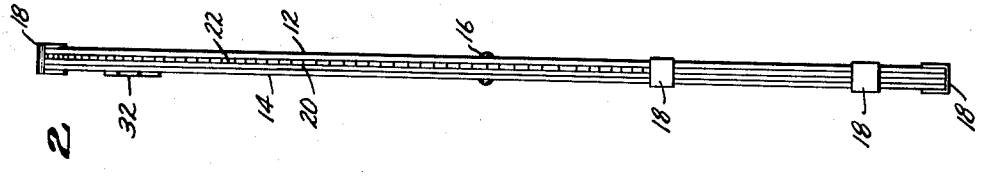


Fig. 2

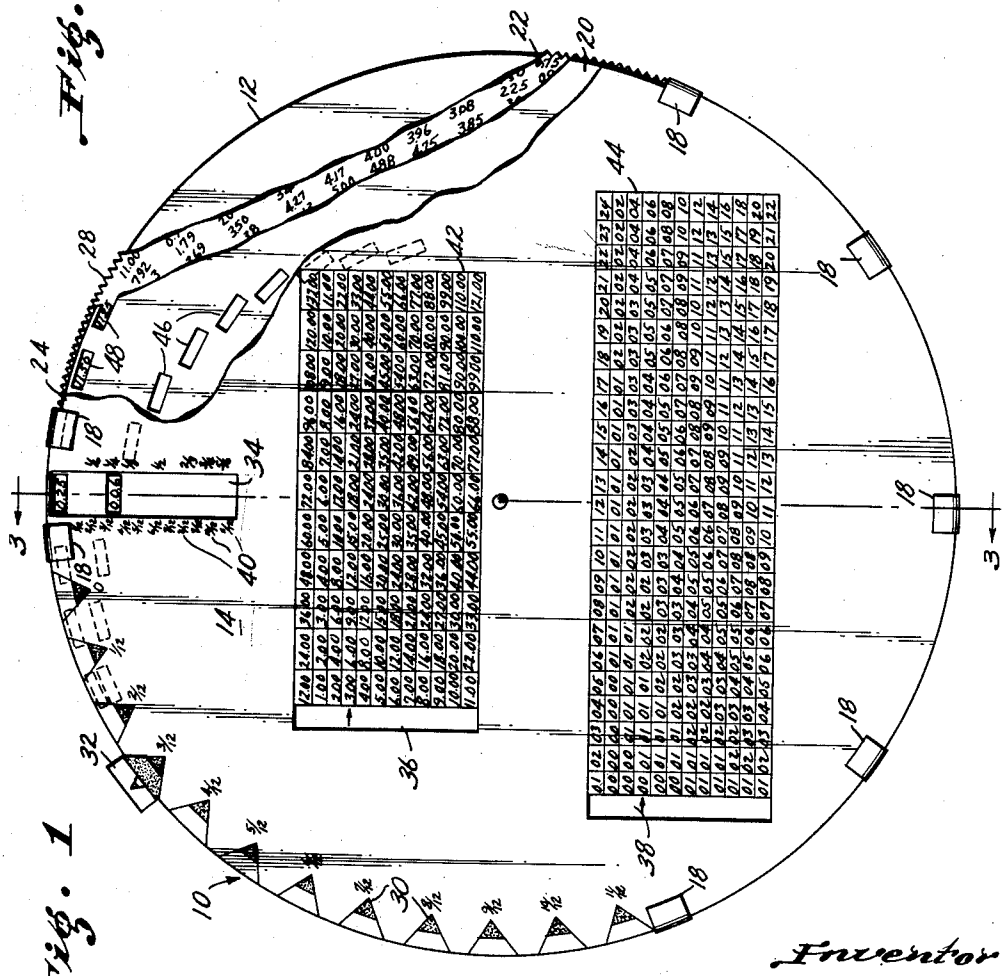


Fig. 1

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Filed July 29, 1952 3 Sheets-Sheet 2

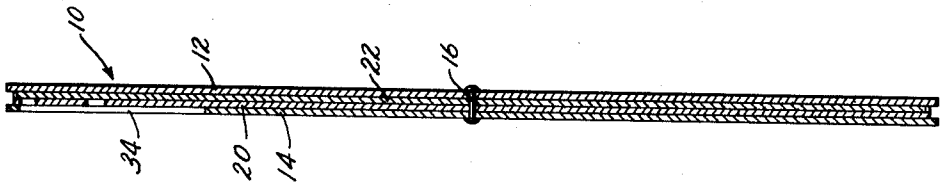


Fig. 3

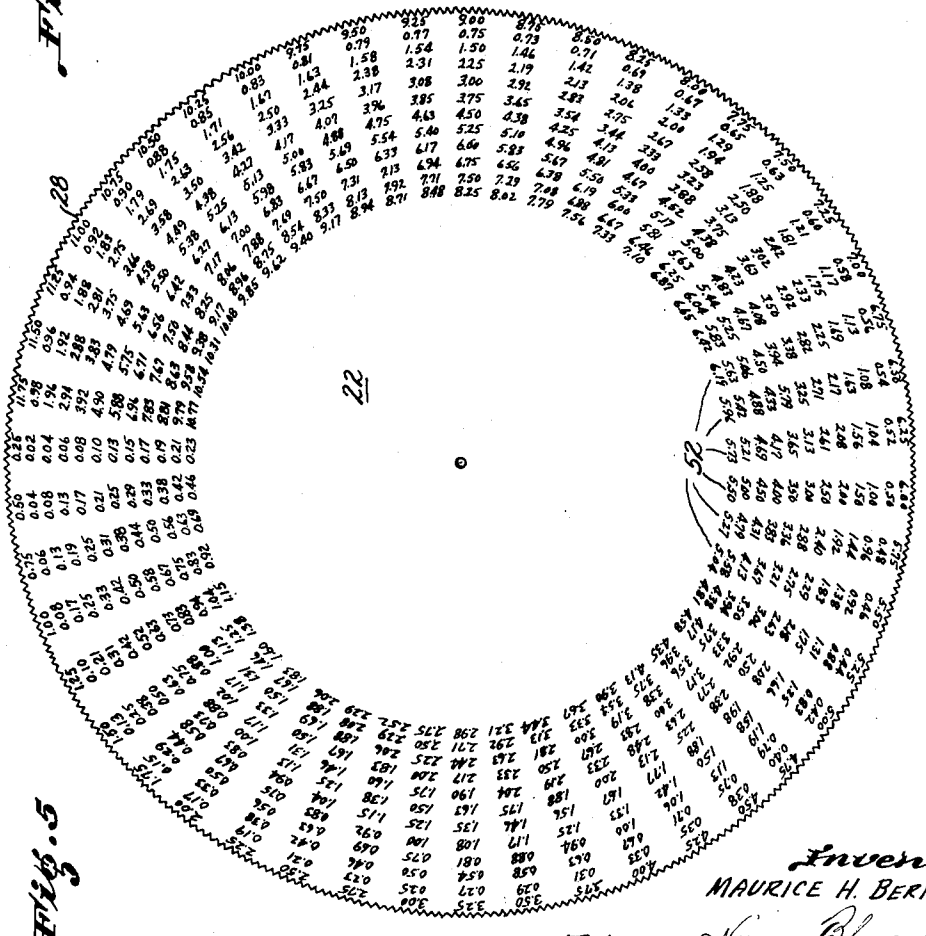


Fig. 5

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CALCULATOR

Filed July 29, 1952 3 Sheets-Sheet 3

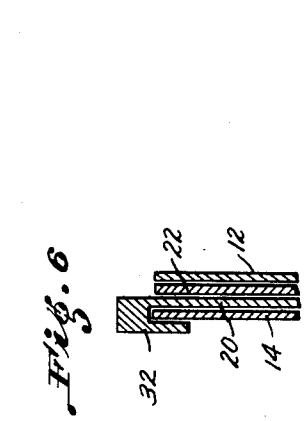


Fig. 6

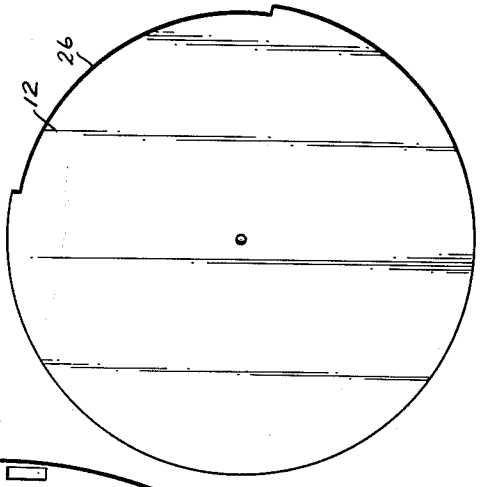


Fig. 7

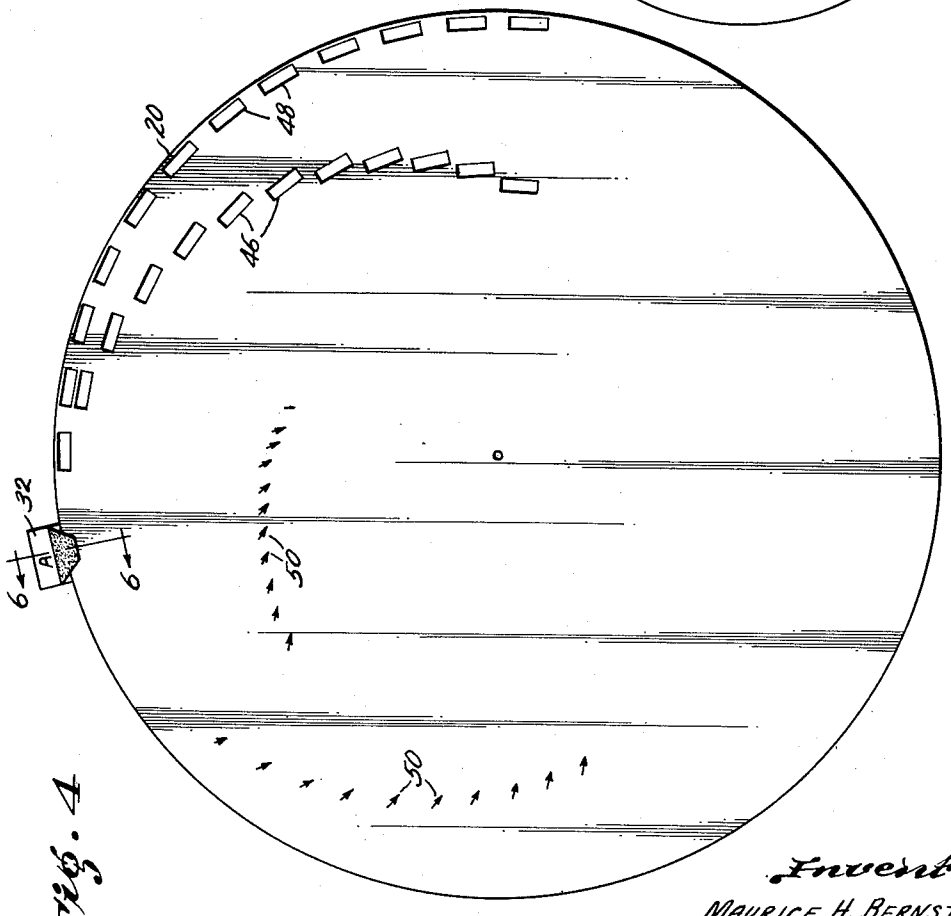


Fig. 4

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UNITED STATES PATENT OFFICE

2,674,410

CALCULATOR

Maurice H. Bernstein, Bronx, N. Y.

Application July 29, 1952, Serial No. 301,507

3 Claims. (Cl. 235—88)

1

This invention relates to the class of mechanical computers and more particularly to a cost calculator.

The primary object of this invention is to provide a simple and effective mechanical calculator from which mathematical results may be obtained for the solution of a problem of determining the cost of a given number of units of an item when the cost per dozen is known.

Another object of this invention resides in the provision of a calculating device which can be cheaply made of any of a number of readily available materials, which has thereon suitable space for advertising matter, and which is very handy and easily used.

These together with the various ancillary objects of the invention which will become apparent as the following description proceeds are obtained by this new and novel calculator illustrated in the accompanying drawing wherein:

Fig. 1 is a top plan view of the calculator partly broken away.

Fig. 2 is a side view of the calculator.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a top plan view of one of the plates of the calculator.

Fig. 5 is a top plan view of another plate of the calculator.

Fig. 6 is a sectional view taken along the line 6—6 of Fig. 4.

Fig. 7 is a top plan view of the back plate.

With reference to the drawings wherein like reference numerals indicate like parts throughout the various figures, reference numeral 10 is used to generally indicate the unit cost calculator comprising the present invention. The calculator 10 comprises a back plate 12 and a frontal plate 14 which are secured on a shaft 16. Suitable fasteners 18 are provided of any suitable configuration and secure the peripheries of the frontal plate 14 to the back plate 12. It is readily apparent that these plates can be manufactured from any suitable material such as paperboard, cardboard, or synthetic plastics and likewise the secondary plate 20 and third plate 22 can be manufactured from the same or like materials.

The secondary plate 20 and the third plate 22 are relatively positioned and secured, that is, journalled on the shaft 16. It is to be noted that the frontal plate 14 and back plate 12 have recessed portions 24 and 26, respectively, which permit the serrations 28 on the third plate 22 to provide readily engageable means to rotate

2

the third plate 22 relative to the frontal plate.

With particular reference now to the frontal plate 14, it will be seen that such plate is substantially circular in shape and is provided with angularly spaced peripherally disposed indicia 30 thereon. These have been formed in the shape of a triangular wedge to cooperate with the trapezoidal shaped marker 32 in a manner which is readily apparent. Each of these indicia are labelled from 0 to $\frac{11}{12}$ in steps of $\frac{1}{12}$. A plurality of elongated slots 34, 36 and 38 are formed in the frontal plate 14. Figures 40 are placed on frontal plate 14 in alignment with the slot 34 and read from $\frac{1}{12}$ to $\frac{11}{12}$ in steps of $\frac{1}{12}$. Other figures 42 and 44 are placed on the frontal plate 14 in alignment with the slots 36 and 38, respectively, and their purpose will be more readily understood during the ensuing description.

It can be seen that marker 32 is secured to the secondary plate 20 and extends over the frontal plate 14 into alignment with the indicia 30. The secondary plate is provided with a series of angularly spaced and radially spaced apertures 46 therethrough. Other outermost apertures 48, angularly spaced, may be provided in the secondary plate 20. In addition radially and angularly spaced designators 50 are marked on secondary plate 20.

Rows of angularly spaced numerals 52 are printed on the third plate 22. The apertures 46 and 48, rows of numerals 52, slots 34, 36, 38 and designators 50 are so aligned that the apertures 46 and 48 are selectively specifically positioned in alignment with the slot 34 and the designators 50 are selectively specifically positioned in alignment with the slots 36 and 38 when the marker 32 is placed in specific alignment with the indicia 30.

In operation the calculator is used to ascertain the cost of a number of units of an item, be it 1, 2, 3 etc. based on the cost per dozen. Thus, if an item costs $68.75 per dozen, the third plate 22 is rotated so that the row of numerals 52 and the number 8.75 at the outermost thereof is in alignment with an aperture 48 and the slot 34. If it is then desired, for example, to determine the cost of seven items, the marker 32 is rotated until it is in alignment with indicia 30 designated $\frac{7}{12}$. A value 5.10 then appears through slot 34 and aperture 46. Designator 50 appears through slot 36. Referring to the column under the value 60.00 of the figures 42 it will be seen that designator 50 has in alignment with it and the column under value 60.00

the value 35.00. Adding this value of 35.00 to the value of 5.10 gives a total of 40.10. This then is the cost of seven items based on a cost of $68.75 per dozen. The slot 38 and the figures 44 are used where the cost per dozen is not an even multiple of .25. Thus, when a cost per dozen is $68.88, for example, it is necessary to use the figures 44 to get the value for the additional $.13 per dozen. It is to be noted that a calculation based on the cost of $68.88 per dozen gives the foregoing figures of 5.10 and 35.00 in addition to that of .08 obtained by reading down under the column headed 13 of figures 44 where it is in alignment with the designator 50 showing through slot 38.

It is, of course, apparent that the spirit of the invention is not to be considered limited to the exact embodiment as heretofore described and as shown in the accompanying drawings but may be changed or varied somewhat without sacrificing the advantages thereof by one skilled in the art within the scope of the appended claims.

I claim:

1. A calculator comprising a frontal plate having angularly spaced peripherally disposed indicia thereon, a plurality of elongated slots in said frontal plate and figures on said frontal plate in alignment with said slots, a secondary plate rotatively secured to said frontal plate having a plurality of angularly and radially spaced apertures therein and a marker secured to said secondary plate extending over said frontal plate, and spaced designators on said secondary plate, said apertures being selectively specifically positioned in alignment with one of said slots and said designators being selectively specifically positioned in alignment with another of said slots when said marker is placed in specific alignment with said peripherally disposed indicia, and a third plate secured to said frontal plate having a plurality of rows of angularly spaced numerals thereon, and means on said third plate for rotating said third plate to selectively specifically place said numerals in alignment with said apertures and said slots.

2. A calculator comprising a frontal plate having angularly spaced peripherally disposed indicia thereon, a plurality of elongated slots therein, and figures in alignment with said slots, a secondary plate rotatively secured to said frontal plate having a plurality of angularly spaced apertures therein, marker means secured to said secondary plate, and spaced designators on said secondary plate, said apertures being selectively specifically positioned in alignment with one of said slots and said designators being selectively specifically positioned in alignment with another of said slots when said means is placed in specific alignment with said peripherally disposed indicia, and a third plate secured to said frontal plate having a plurality of rows of angularly spaced numerals thereon, and means on said third plate for rotating said third plate to selectively specifically place said numerals in alignment with said apertures and said slots.

3. A cost per unit calculator comprising a frontal plate having angularly spaced peripherally disposed indicia thereon, a plurality of elongated slots therein, and figures in alignment with said slots, a secondary plate having a plurality of angularly spaced apertures therein, marker means secured to said secondary plate, and spaced designators on said secondary plate, said apertures being selectively specifically positioned in alignment with one of said slots and said designators being selectively specifically positioned in alignment with another of said slots when said means is placed in specific alignment with said peripherally disposed indicia, a third plate secured to said frontal plate having a plurality of rows of angularly spaced numerals thereon, and a shaft extending through said first plate, said second plate, and said third plate, said first, second and third plates being rotatively mounted on said shaft.

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