

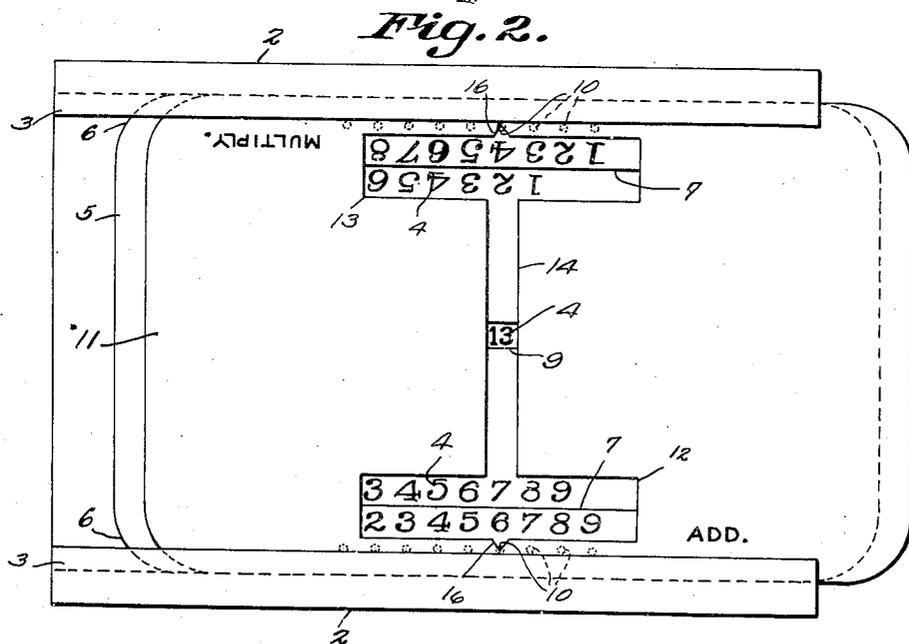
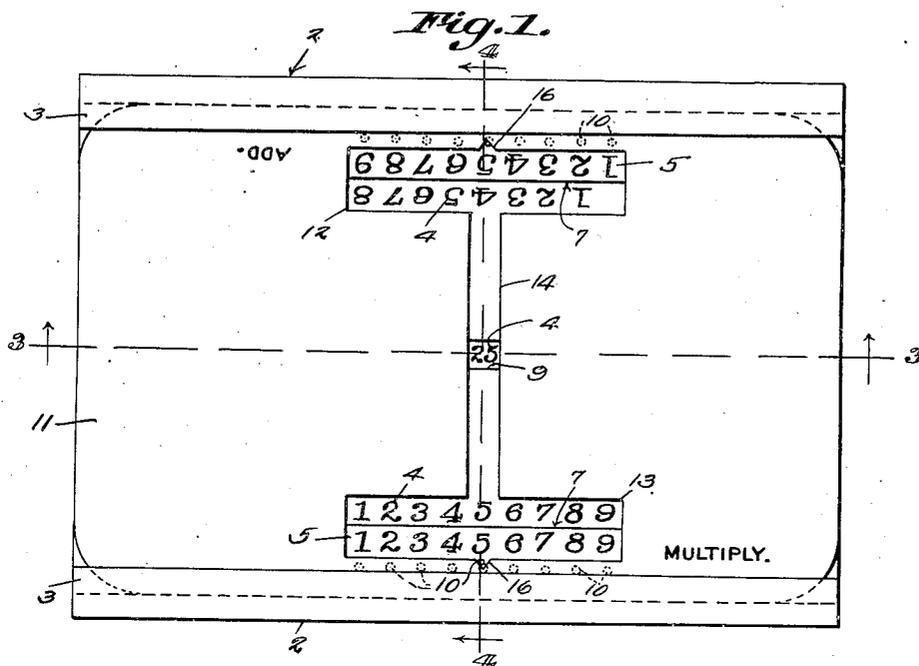
Oct. 25, 1949.

A. F. KIRSCHBAUM
CALCULATOR DEVICE

2,485,892

Filed July 13, 1948

2 Sheets-Sheet 1



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Fig. 3.

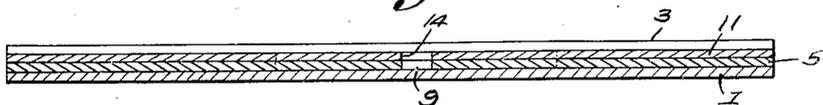
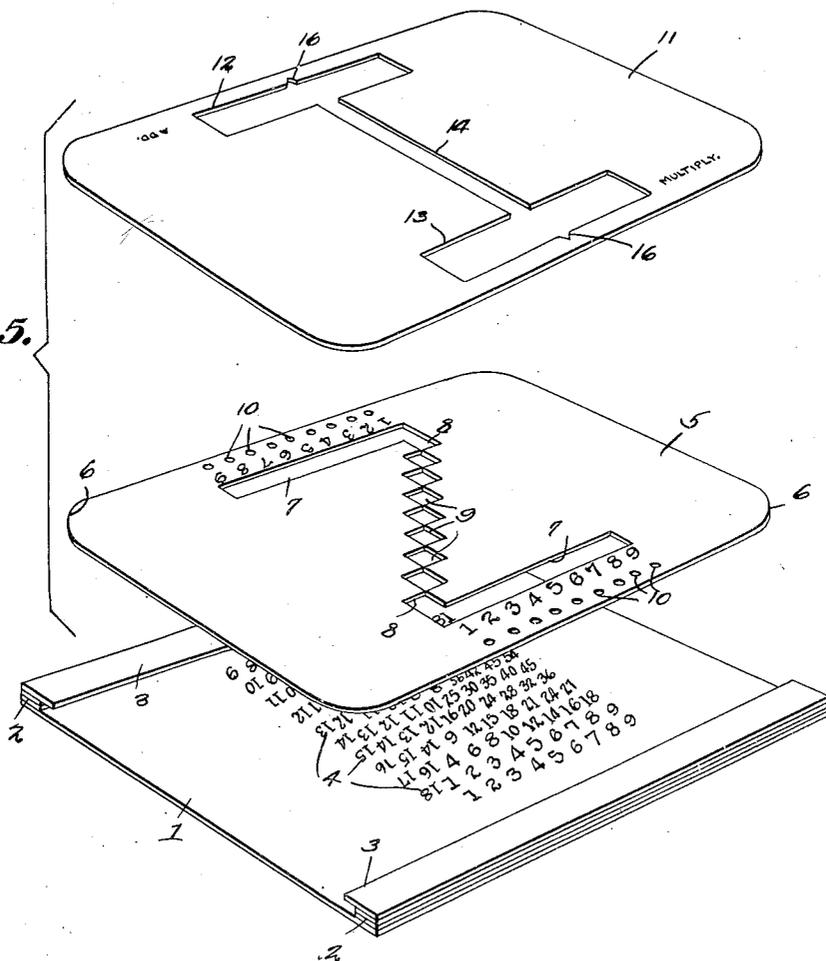


Fig. 4.



Fig. 5.



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UNITED STATES PATENT OFFICE

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CALCULATOR DEVICE

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This invention relates to an improved calculator device.

An object of the invention is to provide an improved calculator device which may be readily manipulated to automatically perform simple arithmetical calculations such as addition and multiplication, division and subtraction.

Another object of the invention is to provide an improved portable calculator device comprising a combined body and guide plate upon which horizontal and vertical rows of numbers are printed or otherwise applied, a longitudinally shiftable computing and answer plate, and a superimposed apertured cover plate which is also longitudinally slidable with respect to the combined body and guide plate and through which the answer to the problem being calculated may be viewed, screening out all but the correct answer.

A further object of the invention is to provide an improved calculator device which will be held in one position while performing simple problems in addition, and will be held in an opposite position while calculating simple problems in multiplication.

A still further object of the invention is to provide an improved portable calculator device which will be highly efficient in operation, and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application:

Figure 1 is a plan view of the improved calculator device shown in position for performing multiplication problems.

Fig. 2 is a plan view of the improved calculator device in position for performing problems in addition.

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

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1.

Fig. 5 is an exploded view showing the three parts which are combined to produce the improved calculator device.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention there is shown and provided an improved calculator device including a combined body and guide plate 1 of substantially rectangular shape, the same being

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flat and formed with upwardly extending guide flanges 2 along its opposite longer sides, and inwardly extending holding or retaining flange strips 3 disposed upon the guide flanges 2 to overlie the upper surface of the guide plate 1 in parallel spaced relation thereto.

Transversely and longitudinally extending rows of numbers 4 are printed or otherwise applied to the upper surface of the combined body and guide plate 1, with the rows of numbers nearest the opposite sides of the body and guide plate 1 reading from 1 to 9 inclusive from left to right, and the remaining numbers being arranged to provide the correct answers to the various problems when computed.

A flat computing and answer plate 5 of substantially rectangular shape and having rounded corners 6 is provided with oppositely disposed viewing slots 7 formed through it adjacent its side edges, with the slots being extended inwardly at their left hand ends as at 8 as viewed when the device is held in position for use. An angularly arranged row of square viewing openings 9 is formed through the plate 5, between the inwardly extending slots 8 for viewing the answers to the problems when being computed.

Indicia digits of from 1 to 9 inclusive, are printed or otherwise applied along the outer edges of the viewing slots 7, and a similar number of small apertures 10 are formed opposite these numbers between the same and the side edges of the computing answer plate 5. This plate 5 is slidably positioned between the guide flanges 2 upon the upper surface of the guide plate 1 for longitudinal adjustment or movement.

A flat cover plate 11 similar in size and shape to the computing and answer plate 5 is provided, and is adapted to be slidably disposed upon the computing and answer plate 5 for longitudinal reciprocable movement between the upwardly extending guide flanges 2 on the guide plate 1. Longitudinally extending slots 12 and 13 are cut through the cover plate 11 adjacent its opposite side edges, being of a width to view the outer row of numbers on the guide plate 1 and the row of numbers or digits 9 on the cover plate 11. A connecting slot 14 is cut through the cover plate 11 transversely of the plate and connects the oppositely disposed side slots 12 and 13, registering with one of the selected square openings 9 through the computing and answer plate 5, and through which the answer to the problem being computed may be viewed.

Angular indicating and positioning notches will be formed in the outer side edges of the slots

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12 and 13 in the cover plate 11 for positioning over the selected small aperture 10 in the computing and answer plate 5 to properly position the plate 5 and cover plate 11 in the correct position when computing a problem.

In operation, the device is supported in position with the side towards the operator, upon which the word "Add" is inscribed when a problem in addition is computed. Conversely, the device is held with the opposite side towards the operator upon which the word "Multiply" is inscribed when a problem in multiplication is computed.

It will be apparent that in either computation, the numbers being computed will appear in the nearer slot through the cover plate 11 opposite the indicating notch 16, and the answer will appear in a square opening 9 in the computing plate 5 and viewable through the transverse connecting slot 14.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

For example, the invention is believed to readily comprehend the use of other than numerical indicia, as for instance, it is quite possible to use chemical symbols or the like, pictorial representations, or other markings in place of the numerals illustrated.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a calculator of the class described, a combined body and guide plate having upwardly extending guide flanges along its side edges, inwardly extending retaining flanges on said guide flanges disposed in parallel spaced relation to the surface of said combined body and guide plate, said body and guide plate having longitudinally and transversely extending rows of indicia thereon, an apertured computing plate reciprocally supported on said body and guide plate with its side edges engageable with said guide flanges on the body and guide plate, an apertured cover plate slidably disposed on said computing plate for reciprocable movement engageable with the guide flanges and retaining flanges on said body and guide, the apertures in said computing plate being disposed longitudinally and inwardly of the side edges of said plate, said

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plate being also formed with an angularly disposed row of square openings between the opposite ends of said first mentioned openings, and said cover plate having oppositely disposed longitudinal slots formed inwardly of the side edges of the plate of wider width than the longitudinal slots in said computing plate and also formed with a transverse connecting slot through which the answer to the problem being computed may be viewed.

2. In a calculator of the class described, a combined body and guide plate having upwardly extending guide flanges along its side edges, inwardly extending retaining flanges on said guide flanges disposed in parallel spaced relation to the surface of said combined body and guide plate, said body and guide plate having longitudinally and transversely extending rows of indicia thereon, an apertured computing plate reciprocally supported on said body and guide plate with its side edges engageable with said guide flanges on the body and guide plate, an apertured cover plate slidably disposed on said computing plate for reciprocable movement engageable with the guide flanges and retaining flanges on said body and guide, the apertures in said computing plate being disposed longitudinally and inwardly of the side edges of said plate, said plate being also formed with an angularly disposed row of square openings between the opposite ends of said first mentioned openings, said cover plate having oppositely disposed longitudinal slots formed inwardly of the side edges of the plate of wider width than the longitudinal slots in said computing plate, said cover plate being also formed with a transverse connecting vent through which the answer to the problem being computed may be viewed, and plate position indicating means formed along the outside edges of said slots in the cover plate.

ABE F. KIRSCHBAUM.

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The following references are of record in the file of this patent:

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