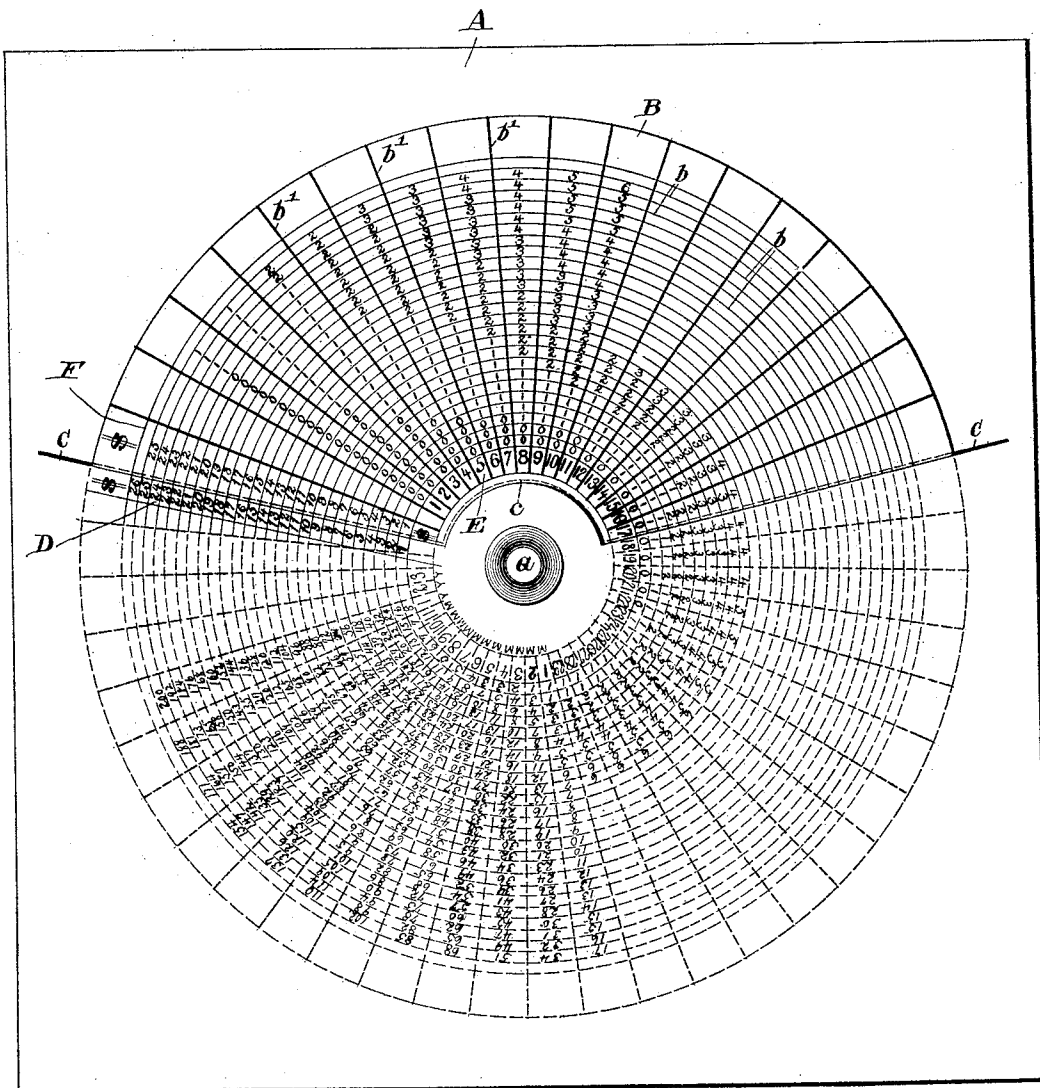


(No Model.)

R. LOOMIS & W. H. PHILLIPS.
CALCULATOR.

No. 532,383.

Patented Jan. 8, 1895.



Witnesses

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UNITED STATES PATENT OFFICE.

ROMIE LOOMIS AND WILLIAM HASTINGS PHILLIPS, OF CHATTANOOGA,
TENNESSEE.

CALCULATOR.

SPECIFICATION forming part of Letters Patent No. 532,383, dated January 8, 1895.

Application filed February 21, 1894. Serial No. 500,984. (No model.)

To all whom it may concern:

Be it known that we, ROMIE LOOMIS and WILLIAM HASTINGS PHILLIPS, citizens of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Calculators; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in tabular calculators for computing interest, insurance, taxes, &c., and for multiplying sets of figures and performing other numerical operations, the object of the invention being to provide a simple and cheap device capable of performing this work in a satisfactory manner, and it therefore consists in the construction, arrangement and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawing illustrating our invention we have represented a plan view of our improved calculator.

A denotes a stiff sheet of card-board, wood, or any other substance which constitutes the main frame or backing of our improved calculating device. This frame A is provided with two slots C C radiating from the point *a*, and connected together by the curved connecting slot *c*, all of said slots being cut in the board A, as shown. A rotary disk B is situated mainly beneath the board or frame A, but has a segment thereof projecting through the slots C so as to lie above the board, its pivotal point being at *a*. Thus the disk B is arranged so that it can rotate within the slots and thereby gradually expose its whole surface to view.

One or the other or both of the slots C C has its edge on frame A provided with a series of numbers representing dollars and running from 1 upward as high as may be desired, the number 1 being nearest the pivot *a*. This column of ascending numbers is represented by the reference letter D.

The rotary disk B is provided with a series of concentric circular lines *b b* which are struck from pivot *a* as a center and are concentric with slot *c* and which also are in align-

ment respectively with the figures in column D, so that as the disk B rotates whatever may be marked thereon the circular lines *b* will be brought into close juxtaposition to the several numbers in column D. Also the disk B is provided with a series of radial lines *b' b'*, which cross the circular lines *b b* and divide the surface of the disk B into small blocks substantially as shown. In these blocks figures are marked to assist in the calculation for which the calculator has been prepared. The circular series of blocks next to the slot *c*, and therefore at the center of the disk B contain a series of figures running from 1 to 29. These indicate days. This series is marked E. The next block after 29 contains the figure 1 and that begins a new series running from 1 to 11 and indicating months. The letter M may be placed adjacent to these figures for convenience in showing that they refer to months. The next block after the series of months contains the figure 1 and the letter Y may be placed beneath it for convenience in showing that it refers to a year. Beginning with the figure 1, is a new series of figures referring to years and this series can run as high as there is room for figures in the circular space. Of course the figures in the month series and the day series may be made as small as desired, to accommodate as many year series as may be needed. The idea of this arrangement is to have the central portion of the disk which is at the foot of the several radial columns provided with a circular line of figures denoting the days of the month from 1 to 29, the months of the year from 1 to 11, and also a series of years from 1 upward. If desired, one of the radial columns in disk B, may have a series of figures representing dollars, as shown at F, and similar to the dollar column D. This column will be found useful in many calculations.

The radial columns between the lines *b' b'* are filled with figures which are placed between the circles *b b* so as to be in line with the dollar numbers. These numbers in these radial columns denote interest percentages calculated for the number of dollars which may be denoted in the dollar column opposite each interest percentage and for the time

specified at the base of the radial column in which the interest percentage is located. At least this is the explanation of the particular arrangement of figures given in the present calculator. Other calculations than interest may obviously be made with our calculator, but in the present example it is intended to present means for readily obtaining the interest on any specified number of dollars for any specified length of time, the calculation being made at eight per cent. For instance, suppose it be desired to find out what the interest on fifteen dollars will be for eight months at eight per cent. The disk B will be rotated until the designation for eight months is adjacent to the dollar column D. Then by glancing along said column it will be seen that 81 is opposite the 15. Hence eighty-one cents will be the interest on fifteen dollars for eight months at eight per cent.

It will be observed that the lines on the disk B are simply for the purpose of keeping the figures in proper alignment so that the latter may be more readily read and the results more accurately perceived, and hence said lines may be omitted if desired.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a calculating device, the combination of a board provided with slots C which are cut on radial lines extending from center *a*, with a curved connecting slot *c* between the inner ends of slots C, its curvature having *a* for its center, substantially as shown, the

edges of the slots C being marked with series of numbers, and the pivoted rotary disk lying mainly beneath the board, but having a segment thereof projecting through the slots so as to lie above the board, its pivotal point being at the center of the curved slot *c* and said disk having circular series of numbers marked thereon which series are concentric with the curved portion of the slot and are brought into alignment with the numbers at the edges of the slots, substantially as described.

2. In a calculator, the combination of the board or backing A, provided with slots C C radiating from point *a* and connected together at their inner ends by the short curved slots *c* having point *a* for the center of curvature, said slots C having along their edges series of numbers running from 1, which is nearest pivot *a*, upward, the rotary disk B, supported by a pivot at *a*, said disk being provided with circular lines concentric with slot *c* and radial lines struck from the center *a* to provide places for series of figures which series are concentric with the curved portion of the slot and are brought into alignment with the figures at the edges of the slots by rotating the disk B, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ROMIE LOOMIS.

WILLIAM HASTINGS PHILLIPS.

Witnesses:

ROBERT F. CRAIG,

JOHN A. MOORE.