(No Model.)

A. W. TUCKER.

CALCULATING DEVICE.

No. 331,264. Patented Nov. 24, 1885.

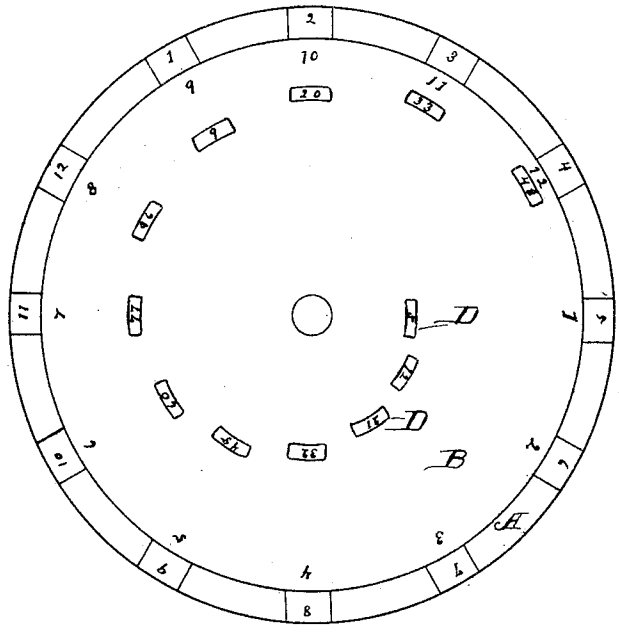


Fig. 1

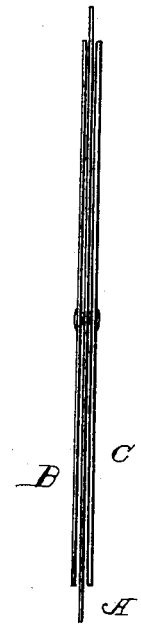


Fig. 3.

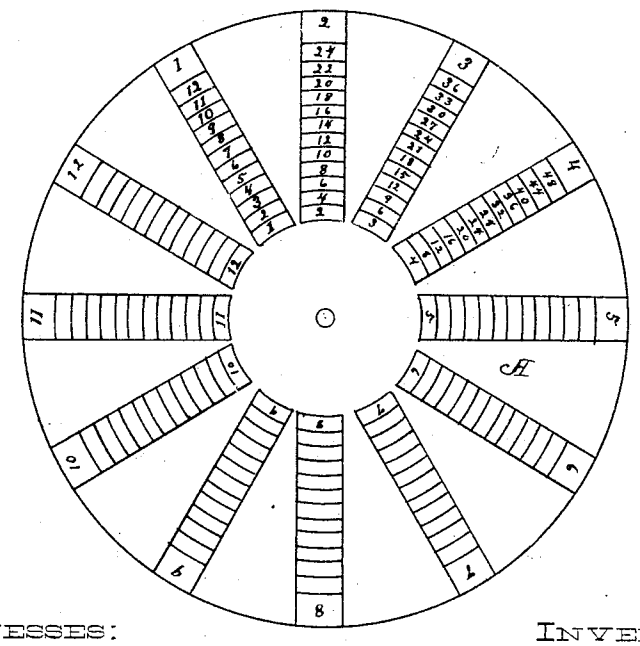


Fig. 2.

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UNITED STATES PATENT OFFICE.

ARGYLE W. TUCKER, OF MIDLOTHIAN, ASSIGNOR OF ONE-HALF TO WILLIAM T. STEWART, OF BIG SPRINGS, TEXAS.

CALCULATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 331,264, dated November 24, 1885.

Application filed April 13, 1885. Serial No. 161,996. (No model.)

To all whom it may concern:

Be it known that I, ARGYLE W. TUCKER, of Midlothian, in the county of Ellis and State of Texas, have invented a new and useful Improvement in Calculating Devices, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a face view of the calculating device. Fig. 2 is a view of the central disk, and Fig. 3 is an edge view of the device.

The object of my invention is to provide a simple and efficient calculating device, either for use in schools or for computing interest, or calculating measures of any kind for mill or factory use, or any of the operations requiring a quick and accurate knowledge of figures in multiplication, addition, division, or subtraction; and to this end it consists in having a central disk provided on each side with a disk somewhat smaller, the three being pivoted centrally, so that the smaller disks on the sides may be rotated independently of the central disk. The central disk has twelve or more marginal figures on each side, equidistant from each other, and a column of figures extending inwardly from each marginal figure. The smaller disks have twelve or more apertures eccentrically arranged around the disk, but each aperture is arranged on a direct line between the center of the disk and one of the twelve marginal figures on the inner disk, so that the only figure exposed through the aperture is that figure which is the multiple of the marginal figures, all of which will now be set forth in detail.

In the accompanying drawings, A represents the main or central disk, and B C the disks of smaller size pivoted on opposite sides so as to be capable of rotation independently of the central disk. The central disk, A, as shown more fully in Fig. 2, has on its margin, on both faces, the figures from one to twelve. These figures are equidistant from each other, and instead of being limited to twelve may exceed that number. This disk, it will be observed, has twelve columns of radiating figures, the column designated by the figure 1 in the margin has the figures from 1 to 12 successively, and the second column, designated by 2, has the figures from 2 to 24, and so on, the figures in all the columns being multiples of the figures in the margin. (See Fig. 2.)

The outer disk, B, is sufficiently small to expose the marginal figures on the central disk, as shown in Fig. 2. The outer disk, B, has also on its margin twelve figures equidistant from each other, and in the event of the central disk having a greater number than twelve, it is necessary for this disk to have the same number. The disk B has a series of apertures or openings, D, spirally arranged. There are also twelve of these apertures, and, as shown, they are so located that each aperture is directly in the path of the radiating line from the center to one of the marginal figures on the outer disk. Thus, the inner aperture D in the disk B corresponds with or is on a line between the marginal figure 1 and the center, and as the disk B is rotated the aperture will successively expose the concentric row of figures 1 2 3 4 5 and so on in the different radiating columns. The next aperture is located one remove or number both outwardly from the center and also around the disk, exposing the figure 12 in column 6 of the center disk. Since this side of the calculator is for multiplying purposes, the marginal figures on the two disks serve as the multiplier and multiplicand, and the product is shown or exposed through the apertures D. The disk C on the opposite side is constructed and arranged in the same general way, although it may be arranged on this plan with an interest-table, or with the figures of suitable denominations to add instead of multiplying. In short, the disks can be adapted for an infinite variety of uses in the way of calculating, and since it is cheap and simple in construction and occupies but little space, it can be made of great service for the purposes set forth.

What I claim as new is—

1. In a calculating device, a central disk having a series of radiating columns of figures, all the figures in each column being multiples of the marginal figure, in combination with a smaller disk rotating on the central disk, having on its margin the same number of figures as on the margin of the central disk, and also

provided with a series of apertures equal in number to the marginal numbers spirally disposed in the face of the disk, only one aperture being in line between the center and each marginal number, substantially as herein set forth.

2. In a calculating device, the central disk, A, having a certain number of marginal figures on each side and a radiating column of figures to correspond with each marginal figure, in combination with smaller disks B C on each side centrally pivoted, each disk having marginal figures and spirally-arranged apertures for exposing the figures in the columns of the central disk, the whole arranged as and for the purpose substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 21st day of March, 1885, in the presence of witnesses.

ARGYLE W. TUCKER.

Witnesses:
J. S. ZERBE,
ROBERT I. KER.