

May 10, 1938.

C. JAN DUSSEL

2,117,155

CALCULATING DEVICE

Filed Feb. 10, 1936

Fig. 1.

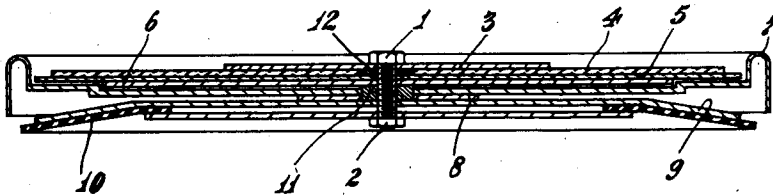
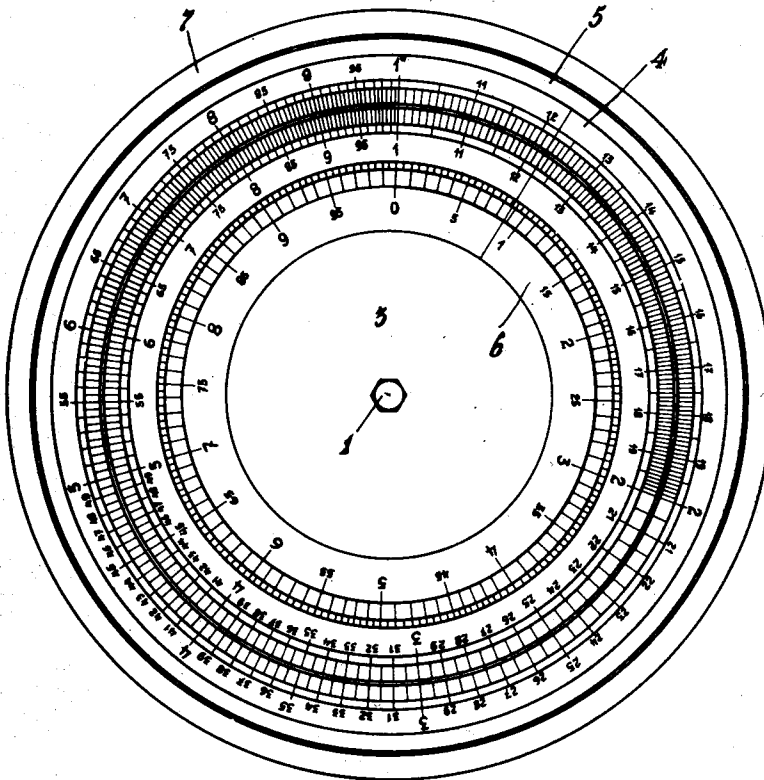


Fig. 2.



C. J. Dussel
INVENTOR

By *Glascock Downing & Leibel*
ATTYS.

UNITED STATES PATENT OFFICE

2,117,155

CALCULATING DEVICE

Cornelis Jan Dussel, The Hague, Netherlands, assignor, by mesne assignments, of one-half to Cornelis Adrianus Jeller, The Hague, Netherlands

Application February 19, 1936, Serial No. 63,243
In the Netherlands February 19, 1935

2 Claims. (Cl. 235—84)

The invention relates to a calculating device.

There are already known several constructions of such devices each of which, however, follows the construction of the straight slide rule in so far as the device is provided with guiding means by which the slide proper is moved, the device being covered by a transparent disc or cursor provided with a marking line. This construction has several faults which render the device inefficient in many ways. In the first place the graduated disc is difficult of access, so that, in order to permit rotation of this disc one has to rely on auxiliary means which introduce structural complications. Moreover, when the cursor disc is rotated, the graduated disc also generally rotates and vice versa. In order to prevent this, the graduated disc and the cursor disc are frictionally restrained against free rotation. This, however, is accompanied by the disadvantage that it is necessary to use both hands in order to manipulate the device, or, alternatively, to make the device heavy enough to prevent bodily displacement of the device on the supporting surface.

The present invention has for an object to provide an improved simple and inexpensive construction in which the above mentioned disadvantages are eliminated.

A calculating device according to the invention comprises a plurality of rotatable and non-rotatable discs strung one above the other on a common central pin, the non-rotatable discs being clamped to said pin by means of collar members and the rotatable discs being freely rotatable on said collar members.

The device according to the invention may include a fixed cover disc, a rotatable transparent cursor disc provided with a marking line, a fixed transparent disc, a fixed graduated disc, a rotatable graduated disc, and a fixed disc or discs forming a base, all of said discs being strung one above the other on the central pin in the order mentioned.

A calculating device constructed in accordance with the present invention is illustrated, by way of example, in the accompanying drawing in which

Fig. 1 is an axial section and Fig. 2 is a plan view.

Referring to the drawing, the several discs 3, 4, 5, 6, 7, 8 and 9 are strung on a central screw-threaded pin 1, provided at its lower end with a nut 2. The discs comprise a fixed metal cover disc 3, a rotatable transparent cursor disc 4, provided with a marking line, a fixed transparent disc 5, a fixed graduated disc 6 accommodated in a dished recess in a graduated rotatable disc 7 of larger diameter than the disc 6, a washer disc 8 and fixed base-forming discs 9 and 10. A collar 12 is mounted on the pin 1

between the fixed cover disc 3 and the fixed transparent disc 5. Another collar 11 is mounted on the pin 1 between the fixed graduated disc 6 and the fixed upper base disc 9. The collars 11 and 12 may have the shape of a solid of revolution, such, for instance, as conical or cylindrical.

When the nut 2 is tightened the discs 3, 5, 6, 8 and 10 are immovably secured to the pin 1 between the nut 2 and the head of the pin 1.

The discs 4 and 7 are rotatable freely on the collars 12 and 11, respectively, which collars serve as journals for said discs 4 and 7. There is no possibility of the disc 7 sharing the movement of the disc 4, or vice versa, since there are provided between the discs 4 and 7 the fixed disc 5 and the fixed disc 6. The discs 5 and 6 may, if desired, be combined to form a single disc.

The disc 7 is provided with an upstanding periphery so as to facilitate rotation of the disc 7.

The base ring 10 is constituted of rubber or the like for non-slipping engagement with a supporting surface. The calculating device may, of course, be so mounted in a box that the device is inclined to the horizontal.

The calculating device may be operated by the use of a single finger only, thus leaving a hand free for manipulation of a pin or pencil.

Furthermore, little or no skill is required in order to dis-assemble and re-assemble the device, so as to permit replacement of damaged or worn part.

It will be understood that the device shown may be structurally modified without departure from the scope of the invention.

By selecting appropriately graduated discs currency and other commercial calculations or technical calculations may be performed.

I claim:

1. A circular calculating device comprising a single center pin, a cover disc fixed to said pin, a rotatable transparent cursor disc provided with a marking line and mounted on said pin below the cover disc, a thin transparent disc fixed to said pin and arranged below said cursor disc, a graduated disc of smaller diameter than the cursor disc disposed below the latter and fixed to said pin, a rotatable graduated disc having a diameter larger than that of the first mentioned transparent disc and arranged below the first mentioned graduated disc, the outer edge of the rotatable disc surrounding the other discs and the rotatable graduated disc having a dished recess receiving the fixed graduated disc.

2. A circular calculating device as claimed in claim 1 characterized in that said thin transparent disc and the fixed graduated disc are constituted by a single transparent disc.

CORNELIS JAN DUSSEL 60

CERTIFICATE OF CORRECTION.

Patent No. 2,117,155.

May 10, 1938.

CORNELIS JAN DUSSEL.

It is hereby certified that error appears in the above numbered patent requiring correction as follows: In the grant, lines 2-3 and 13, name of assignee, for "Cornelis Adrianus Jeller" read Cornelis Adrianus Jelier, as shown by the record of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 9th day of August, A. D. 1938.

Leslie Frazer

Acting Commissioner of Patents..

(Seal)