B. MORGAN.

PARCEL POST CALCULATING DEVICE.

APPLICATION FILED MAY 18, 1914.

1,145,696. Patented July 6, 1915.

Fig. 1.

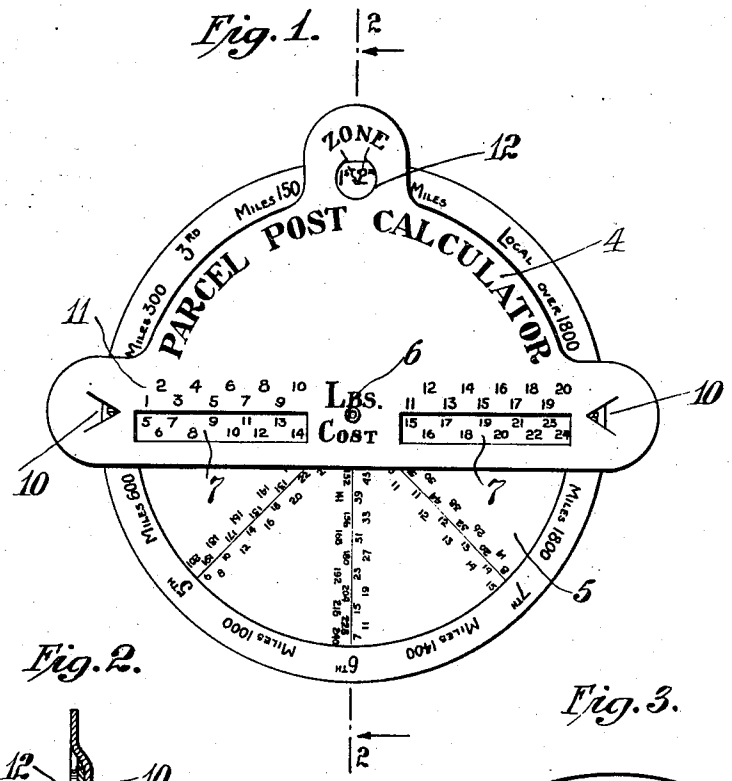


Fig. 2.

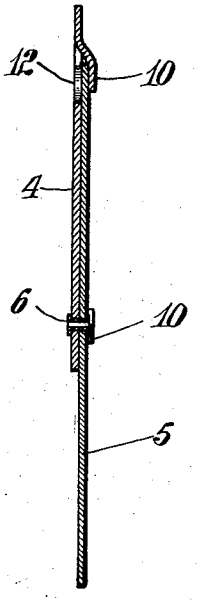
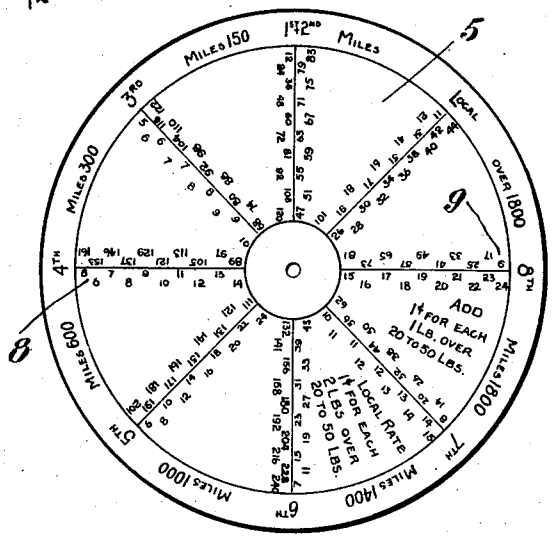


Fig. 3.



Attest:

C. L. Meeske

by

Inventor:

Bernard Morgan

Ralph N. Flint.

Atty

UNITED STATES PATENT OFFICE.

BERNARD MORGAN, OF NEWPORT, RHODE ISLAND.

PARCEL-POST CALCULATING DEVICE.

1,145,696. Specification of Letters Patent. Patented July 6, 1915.

Application filed May 18, 1914. Serial No. 839,409.

To all whom it may concern:

Be it known that I, BERNARD MORGAN, a subject of the King of Great Britain, and a resident of Newport, in the county of Newport and State of Rhode Island, have invented certain new and useful Improvements in Parcel-Post Calculating Devices, of which the following is a specification.

My invention relates to calculating devices of the type wherein a rotatable disk having numerals indicating various values is employed, and which disk is set in various positions when the device is to be used and the values to be ascertained read through an opening in a plate member which overlies the disk; and the object of my invention is to provide a calculating device especially designed to indicate the postage necessary to be paid upon parcel post matter under the regulations applying thereto, the rate and cost of which varies with the distance and is determined by the zone into which the matter is sent; although various of the features of my invention are applicable generally to calculating devices of the type above referred to, irrespective of the kind of calculations which they are intended to facilitate.

With the above and other objects in view, my invention consists in the improved calculating device illustrated in the accompanying drawing, described in the following specification, and claimed in the clauses of the concluding claim, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates.

In the drawing wherein the preferred embodiment of my invention is illustrated, and wherein the same parts are designated by the same reference numerals in the several views; Figure 1 is a view showing my improved calculating device complete and assembled; Fig. 2 is a view showing a section upon a plane indicated by the line 2, 2, Fig. 1; and Fig. 3 is a view showing the rotary disk of my device separate and apart from the other elements thereof.

Referring to the drawing, the reference numeral 4 designates a front plate, and 5 designates a disk pivotally secured to the front plate at 6 and rotatable with reference to said plate. The front plate is substantially semi-circular in form and the lower edge thereof lies a short distance below the pivotal connection 6, whereby a large part of the rotatable disk projects beyond or below the lower edge of the plate, which exposed portion of the disk may be grasped by the fingers in setting the device, as will hereinafter appear. The front plate therefore overlies the upper portion of the disk, and the same is provided with one or more slots through which a portion of the rotary disk may be seen, two such slots as shown at 7, 7 being commonly provided in order to extend the range of the instrument and avoid crowding of the various numbers which indicate the amount of postage necessary in a given case. These slots are located upon opposite sides of the pivotal connection 6, and each extends approximately radially and its ends lie adjacent the center and periphery of the disk when the parts are assembled. The disk 5 is provided with several series of numbers increasing by regular but varying increments, and each of which series, when it is brought into the slots 7, 7 by rotating the disk, begins at the left hand side of the disk and extends across and ends at the right hand side thereof; see the series beginning at the point 8, Fig. 3. The several series are, however, arranged in pairs upon the disk and upon opposite sides of diametrically extending lines, the series above and below a horizontal line beginning at opposite sides of the disk; see the series 8 above referred to, and the series beginning at 9, Fig. 3. The upper edges or sides of the slots 7, 7 coincide, approximately, with a line extending through the pivotal connection 6, and the entire or substantially the entire area of the slots lies below such a line in the form of my invention illustrated. In the position of the parts illustrated, the series 8 is visible within the slots; but the series 9 running parallel therewith but in an opposite direction upon the disk is hidden by the plate. If, however, the disk be rotated through 180° the series 9 will appear within the slots and will read from left to right the same as the series 8 read, while the series 8 will now be hidden by the plate. It will therefore be appreciated that the location of the slots entirely to one side of a line passing through the pivotal connection between the plate and disk permits two series of figures to be placed parallel with one another upon the disk, and along as many diametrically extending lines as may be convenient without crowding at the center of

the disk, and practically doubles the number of series which may be placed upon a disk of a given size.

The plate 4 is provided with a plurality of clips 10 which extend over the edge of the rotary disk 5 and thus hold the plate and disk together at their peripheries and form guides for the disk. These clips are preferably formed integrally with the plate as by cutting portions of the material thereof free except along one side, and striking up or forcing the part thus freed out of the plane of the plate in accordance with well-known manufacturing processes, the clips being properly shaped to hold and guide the disk as will be understood.

Arranged about the outer portion of the disk are characters indicating the zones involved in parcel post calculations; and suitable means are provided for determining the setting or position of the disk so that the numbers appearing in the slots 7 under the weight indicated by the series of figures upon the plate beginning at the point marked 11 will indicate the postage required. In the form of my invention illustrated, an opening 12, in connection with the zone numbers arranged adjacent the periphery of the disk and positioned as shown relative to the several series of numbers extending across the disk, constitutes the means for determining the setting of the disk. Thus, with the parts in the position in which they are shown, the device indicates that the postage required for 3 lbs. in the first and second zone is seven cents, and for 17 lbs., twenty-one cents, etc. If now the disk be rotated to bring the "3" opposite the opening 12, then 10 will lie below 3 in the slot and 38 below 17, thus indicating that the postage required for 3 lbs. in the third zone is ten cents, and for 17 lbs., thirty-eight cents.

My improved calculating device may obviously be made from any suitable material such, for example, as from sheet metal, celluloid, indurated fiber, paper, or other materials which may be formed into thin sheets; and it will be appreciated that the fact that the several clips 10 are all located upon one side of a diametrical line passing through the pivotal connection between the plate and disk permits the parts to be assembled without bending the clips after they are formed; the surfaces of the plate and disk being placed in contact and one being moved sidewise with reference to the other to bring the periphery of the disk beneath the clips, after which the central rivet is put in place. Furthermore, the fact the front plate is preferably of substantially semicircular form provides a device in which nearly one-half of the disk extends below the lower edge of the plate, and a device which may be more readily grasped and set than would be the case if the plate and disk were more nearly coextensive as would be the case if the portion of the disk not covered by the plate was small as compared with the entire area of the disk.

Having thus described and explained my invention, I claim, and desire to secure by Letters Patent:

1. In a calculating device of the class described, a front plate substantially semicircular in form; a rotatable disk the center of which is pivotally secured to and which disk extends below the lower edge of said front plate; and a plurality of clips formed integrally with said front plate and extending over the edge of said disk.

2. In a calculating device of the class described, a front plate; a rotatable disk the center of which is pivotally connected with said front plate; and a plurality of clips formed integrally with said front plate and extending over the edge of said disk and all of which clips engage one only of the two semicircular halves into which said disk may be divided by a line extending through the pivotal connection between said plate and disk.

3. In a calculating device of the class described, a front plate; a rotatable disk the center of which is pivotally connected with said front plate; and a plurality of clips carried by said front plate; and a plurality of clips carried by said front plate and extending over the edge of said disk, two of said clips being located upon opposite sides of and substantially diametrically with reference to the pivotal connection between said plate and disk and the rest of said clips being located all upon one side of a diametrical line extending through said first mentioned clips and pivotal connection.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

BERNARD MORGAN.

Witnesses:
C. W. LAWTON,
A. E. SNYDER.

Correction in Letters Patent No. 1,145,696.

It is hereby certified that in Letters Patent No. 1,145,696, granted July 6, 1915, upon the application of Bernard Morgan, of Newport, Rhode Island, for an improvement in "Parcel-Post Calculating Devices," an error appears in the printed specification requiring correction as follows: Page 2, lines 96–97, strike out the words "and a plurality of clips carried by said front plate;" 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 27th day of July, A. D., 1915.

[SEAL.]

R. F. WHITEHEAD,

Acting Commissioner of Patents.

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[SEAL.]

R. F. WHITEHEAD,

Acting Commissioner of Patents.