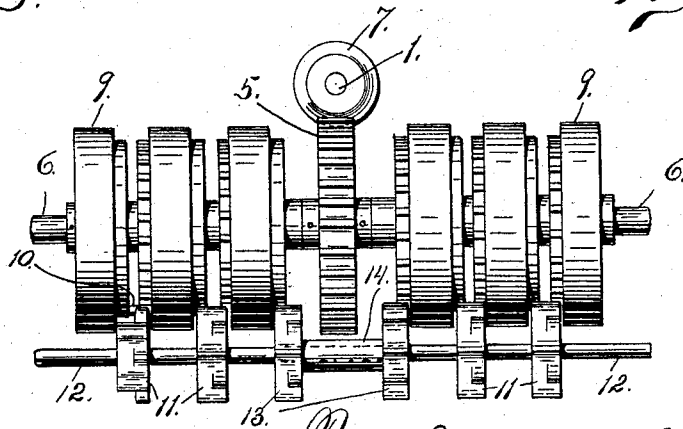
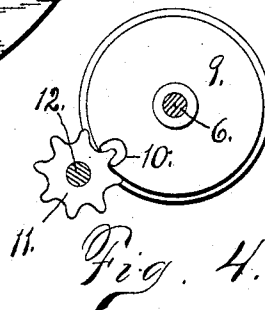
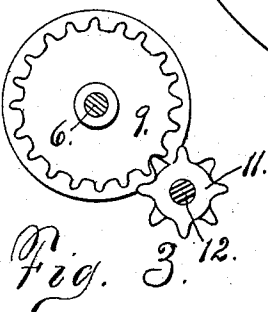
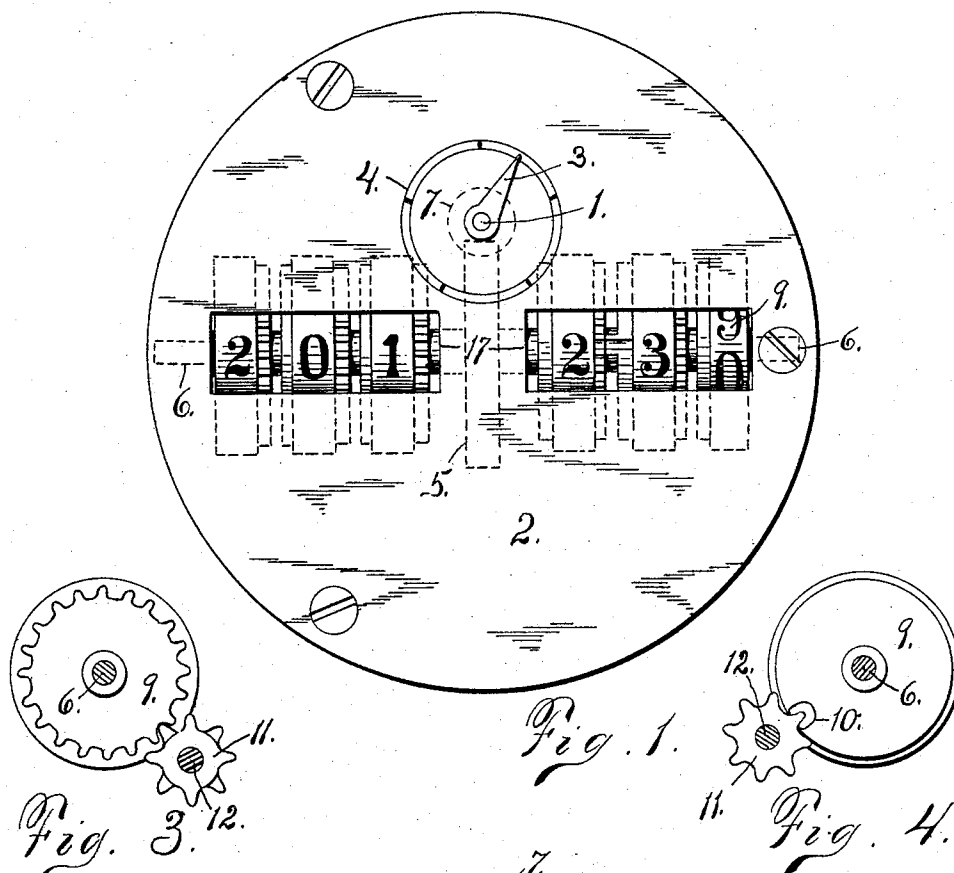


(No Model.)

G. B. BASSETT.
REGISTERING OR COUNTING DEVICE.

No. 567,288.

Patented Sept. 8, 1896.



Witnesses:
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Geo. Adair

Inventor:
George B. Bassett

UNITED STATES PATENT OFFICE.

GEORGE B. BASSETT, OF BUFFALO, NEW YORK.

REGISTERING OR COUNTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 567,288, dated September 8, 1896.

Application filed January 14, 1896. Serial No. 575,528. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. BASSETT, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Registering or Counting Devices, of which the following is a specification.

This invention relates to improvements in straight-reading registers or counting devices, and more particularly to that class of straight-reading registers in which fractions as well as whole numbers are indicated. Its object is to produce a register of the above class which is compact in form, conveniently assembled, positive in its operation, and legible to the uninitiated, and in which the smaller numbers or fractions, or both, may be indicated separately from the larger or whole numbers, for on many machines to which the register may be attached it is desirable to read the smaller numbers or fractional parts only when very accurate readings are made for testing purposes, at other times the larger or whole numbers alone being read.

To that end my invention consists in an arrangement of figured disks, all but the first being loosely mounted upon a shaft journaled in a suitable frame, said disks being provided with toothed and notched peripheral edges, through which the disks are successively connected by particularly cut pinions loosely mounted on an adjoining shaft, the initial disk receiving its motion through a worm-gear which engages with a worm mounted on another shaft, to the upper end of which is attached a hand which indicates the fractional parts. This latter shaft may also form the connecting-shaft of the register.

My invention further consists in the details of its construction and combination of parts, all of which I will now proceed to more definitely describe, and then point out in the claims what I believe to be novel.

In the drawings, Figure 1 is a top plan view of my improved register. Fig. 2 is a reversed view of Fig. 1 with the frame removed, and Figs. 3 and 4 are face views showing opposite sides of one of the figure-disks and pinions employed.

Referring to the drawings, let 1 be the connecting-shaft, upon the lower end of which

either a chain, ratchet, or gear-wheel (not shown) may be mounted, or such other device as will be best suited for connecting the machine to be registered to the register. Shaft 1 projects through face-plate 2 and has indicator-hand 3 secured at its upper end, so as to indicate the full or partial revolutions of shaft 1 on dial 4 marked on the face-plate. 5 is a worm-gear rigidly mounted on shaft 6 and engaging and receiving motion from worm 7, rigidly mounted on shaft 1. Rigidly secured to shaft 6, at the extreme right in Fig. 1 or the extreme left in Fig. 2, is the initial figure-disk 9, which is thus made to travel in synchronism with worm-gear 5. On the inner edge of disk 9 is arranged a notched projection 10, which engages with the teeth of pinion 11, loosely mounted on shaft 12. Pinion 11 also engages with the toothed edge of the adjoining disk. In this manner the disks are all successively connected with each other, the worm-gear 5 being spanned by the double pinion 13, provided with sleeve 14.

In the register shown, which reads from "0" to "1,000,000," face-plate 2 is provided with two equal elongated openings, one on each side of worm-gear 5, and each showing three of the figure-disks. This arrangement brings the fractional indicator in a central position and the worm-gear 5 in the pointing-off space between hundreds and thousands periods, thus making this form of the register both symmetrical and convenient to read.

In operation we will assume that the worm-gear 5 is divided by twenty teeth, and the toothed edges of the figure-disks are also divided by twenty teeth, and their peripheries divided into ten equal spaces which are numbered successively from "0" to "9," inclusive. We will also assume that the fractional dial 4 is divided into five equal parts. Figure-disk 9 being placed in position so as to expose the character "9" through the openings 17 in the face-plate, it will be seen that worm-gear 5, and with it disk 9, will travel two teeth before registering one figure, and as each revolution of shaft 1 and worm 7 moves worm-gear 5 one tooth, a complete revolution of the indicator-hand 3 indicates one-half of a whole number, and each successive point upon the dial indicates one-tenth of a whole number.

Just as the figure-disk 9 has completed a full revolution its recessed projection 10 engages with the teeth of pinion 11 and turns pinion 11 the distance of two teeth. Pinion 11 being also engaged with the toothed edge of the adjoining disk, said disk is also made to travel the distance of two teeth or the space of one figure.

About one-half of every other tooth of pinion 11 is cut away, so that the two adjoining teeth will rest upon the periphery of figure-disk 9, and the intervening half-tooth being engaged with the teeth of the adjoining disk locks that disk rigidly in place until the pinion is moved and permitted to travel two teeth by the notched projection 10. As the projection and teeth on all the figure-disks and pinions are similar and as there is but one notched projection on each figure-disk, it will require throughout the series of figure-disks a full revolution of each disk to move its succeeding disk one-tenth of a revolution, or the space of one figure.

I do not wish to confine myself to specific construction shown and described, as various details may be modified without departing from the spirit of my invention. For instance, the initial figure-disk may be numbered from "10" to "90," inclusive, in which case each of the spaces marked on fractional dial 4 would indicate "1."

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a register the combination with a series of figure-disks mounted on a shaft, of a worm-gear mounted on the same shaft between two of said figure-disks, said worm-gear being connected with the initial disk to rotate the same; and pinions for communicating motion from each figure-disk to the next, the pinion for transmitting motion from the figure-disk on one side of the worm-gear to that on the other side thereof having two rows of teeth between which the worm-gear

works and being of sufficient width to span said gear, substantially as described.

2. In a register the combination with a series of figure-disks mounted on a horizontal axis, of a worm-gear mounted on the same axis between two of said disks, said worm-gear being connected with the initial disk to rotate the same; pinions mounted on an axis parallel to that of the figure-disks for communicating motion from each figure-disk to the next, the pinion for transmitting motion from the figure-disk on one side of the worm-gear to that on the other side thereof having two rows of teeth between which the worm-gear works and being of sufficient width to span said gear, and a vertical shaft located to one side of the figure-disks carrying a driving-gear at one end and having thereon a worm meshing with the worm-gear, substantially as described.

3. In a register the combination with a face-plate, of a series of disks mounted on a horizontal axis, a worm-gear mounted on the same axis between two of said disks, said worm-gear being connected with the initial disk to rotate the same, pinions for communicating motion from each figure-disk to the next, the pinion for transmitting motion from the figure-disk on one side of the worm-gear to that on the other side thereof having two rows of teeth between which the worm-gear works and being of sufficient width to span said gear, a vertical shaft located to one side of the figure-disks projecting at its upper end through the face-plate, a pointer on said projecting end adapted to move over a dial on the face-plate, and a worm on the shaft engaging the worm-wheel, substantially as described.

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

GEORGE B. BASSETT.

Witnesses:

GEO. ADSIT,

M. E. WARWICK.