S. E. SELLECK.

TIMER.

APPLICATION FILED MAR. 17, 1920.

1,399,366.

Patented Dec. 6, 1921.

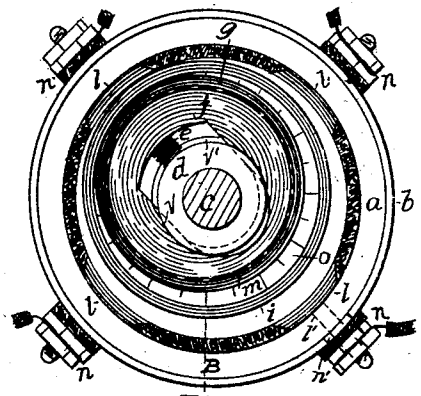


Fig. 1

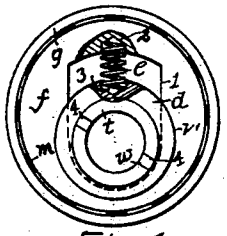


Fig. 4

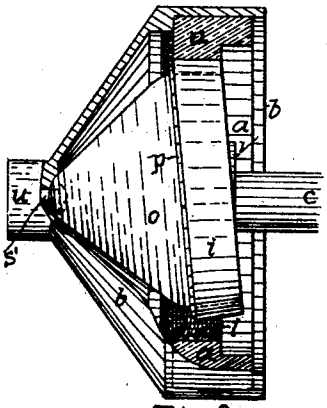


Fig. 2

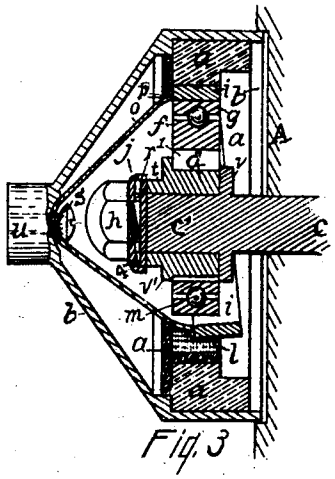


Fig. 3

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UNITED STATES PATENT OFFICE.

SILAS E. SELLECK, OF COLD SPRING, NEW YORK, ASSIGNOR OF ONE-THIRD TO THEODORE J. SELLECK, OF COLD SPRING, NEW YORK.

TIMER.

1,399,366. Specification of Letters Patent. Patented Dec. 6, 1921.

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To all whom it may concern:

Be it known that I, SILAS E. SELLECK, a citizen of the United States, and resident of Cold Spring, in the county of Putnam and State of New York, have invented certain new and useful Timers, of which the following is a specification.

This invention relates to the distribution of currents from magnetos and other devices from which electric currents are intermittently taken; and it has for its object means for making contacts that shall be smooth running, free from vibrations, and free from the wear that results in most rolling and rubbing contacts. The objects are attained by the means set forth in this specification and the accompanying drawings, in both of which like letters and numerals refer to similar parts. The invention belongs to the class of current distributers known as timers.

Referring to the drawings, Figure 1 is a front elevation of the timer. Fig. 2 is a side elevation of the timer partly in section. Fig. 3 is a longitudinal section through the line B in Fig. 1. Fig. 4 is a front elevation of the eccentric, partly in section.

This invention is shown as applied to a well known form of automobile magneto in which the timer is attached to the end of the magneto shaft, which end is housed in a casing attached to the magneto, the casing embodying current distributing contact points. The casing is represented in the drawings at *b*, and in Fig. 3 it is represented as attached to a magneto plate A. *b* represents the casing having a ring *a* of insulating fiber inserted therein, as in Figs. 1 2 3. Set in the fiber are metal contact plates *l* that have insulated screw extensions as at *l'* to the outside of the casing, with nuts *n* thereon for the attachments of distributing wires. The screw extension is shown by broken lines at *l'*, Fig. 1, and the insulation through the rim of the casing at *n'*. The other features to be described are the features that constitute this invention.

In Fig. 1 it will be observed that a floating ring *i* has a rolling contact with the interior of the fiber ring *a*, which ring includes the contact plates *l*, the rolling impelled by a revolving eccentric *f* that is thrust against the ring. A side view of the floating ring is shown in Fig. 2, and a longitudinal section of the ring in Fig. 3. The ring *i* is supported on a conical cup *o*, the flanged edge *p* of the cup being fast to the ring. At the apex of the cup it is perforated to receive a stud or screw, as *s*, Fig. 3. The screw holds the cup in place but admits of the cup swinging loosely on the screw as a pivot. The ring is slightly conical so that in any of its contacting positions it will present parallel faces to the other elements, as shown in Figs. 2 and 3.

The shaft *c* is the magneto shaft and extends into the casing *b* and has an extension *c'* with a shoulder *v*, and the screw-nut *h* on the end of the extension, the extension designed for the attachment of contact trailers. Instead of the usual trailers, there is shown an eccentric *f*, of which a detailed elevation is given in Fig. 4, a reverse elevation in Fig. 1, and a transverse section in Fig. 3. The eccentric is slotted to receive a block *d*, the block applicable to the shaft extension. The eccentric is slidable on the block in the direction of the length of the slot, and is held between the shoulder *v* on the shaft and a flange *v'* on the block. A hub *t* on the block is notched as at 4 4, Figs. 3 and 4, and a pin *r* through the shaft and the notches secures the eccentric in position with respect to proper "timing," and the block is further secured by the screw-nut *h*. The cup-washer *j* secures the pin *r* from displacement. Between the outer end of the slot 1 in the eccentric, and the outer end of the block, a spring *e* is applied, the ends of the spring engaging with recesses 2 and 3, Fig. 4. Balls *m* and a ring *g* inclose the eccentric *f* and give to the eccentric a ball-bearing periphery.

When the ring *i* is in place and the eccentric is inserted within it, the spring *e* forces contact between the eccentric and the ring, and forces the ring *i* against the fiber ring *a*, as shown in Fig. 1. Revolving the eccentric moves this point of contact between the rings all around the circle of the ring *a* with a rolling motion. An electric current coming in through the shaft would pass through these devices and out through the contact plates in the fiber ring. The ball-bearing surface ring on the eccentric makes all the movements rolling motions, and there is no rubbing of any of the contacts. The motions are smooth and uniform, and not only obviate uneven wearing of parts, but they practically eliminate wear.

The cup *o* may be held with a round pivot,

as at *s* in Fig. 3, or it may be held loosely by a square stud, as at *s'* in Fig. 2. There is very little inclination of the ring to rotate.

While this invention is herein described in connection with a part of a "timer" that is common, it is to be understood that it is not to be so limited, and that the "casing" feature can be a frame of a very different description.

What I claim and desire to secure by Letters Patent, is—

1. In a current distributer the combination with a frame, a circular insulator in the frame and contact points in said insulator, with a floating ring, a cup attachment to the ring and a pivot in the apex of the cup, a shaft extension within the frame, an eccentric, a block fitting a diametral slot in the eccentric, the block fast on the shaft, the eccentric being slidably adjustable on the block, a spring between the block and the eccentric in the slot space, and a ball-bearing peripheral ring on the eccentric.

2. The combination with an insulated ring and contact points in said ring, of a floating ring, cup means for retaining the floating ring in place, a shaft, a block on the shaft, a slotted eccentric adjusted on the block and slidable in a diametral direction, a spring between the block and the eccentric in the slotted space, and a ball-bearing peripheral ring on the eccentric.

SILAS E. SELLECK.