Sept. 8, 1925. 1,553,100

J. K. OLSEN

ODOMETER ALIGNING AND CLEANING DEVICE

Filed July 12, 1922 2 Sheets-Sheet 1

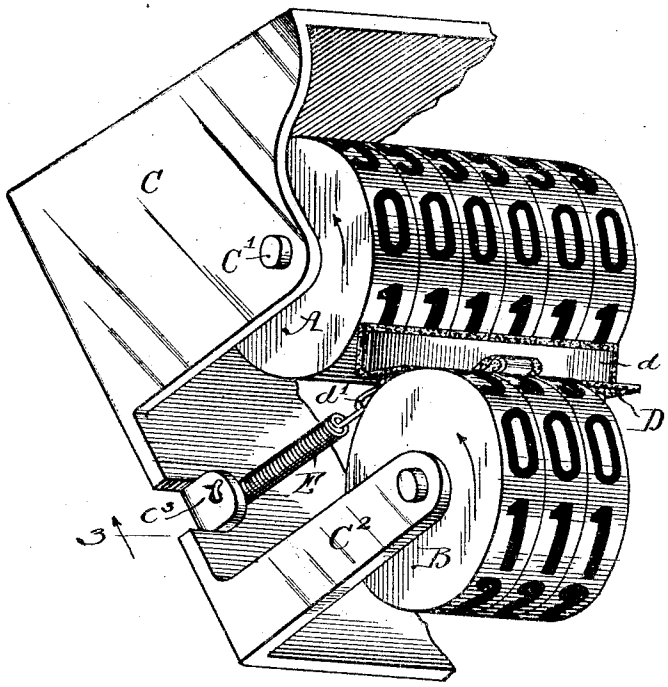


Fig. 1

Fig. 2

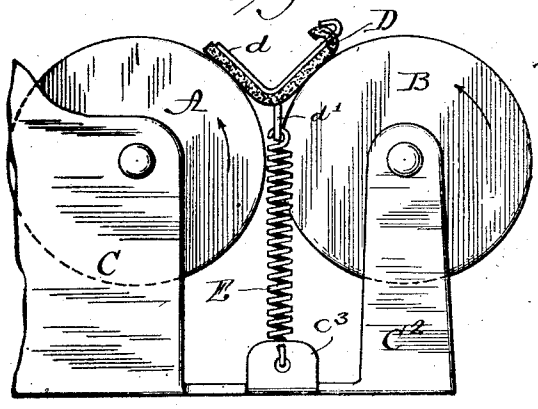
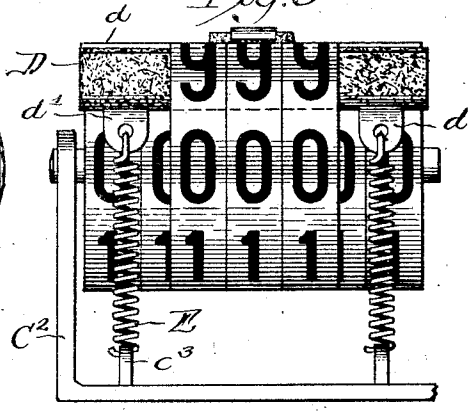


Fig. 3



Witness.
Chas. R. Koursh.

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John K. Olsen,
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Fig. 5

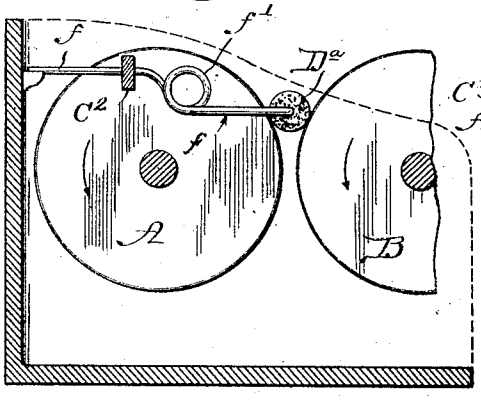


Fig. 4

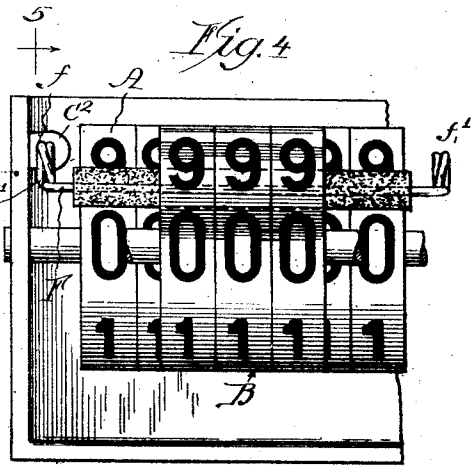


Fig. 6

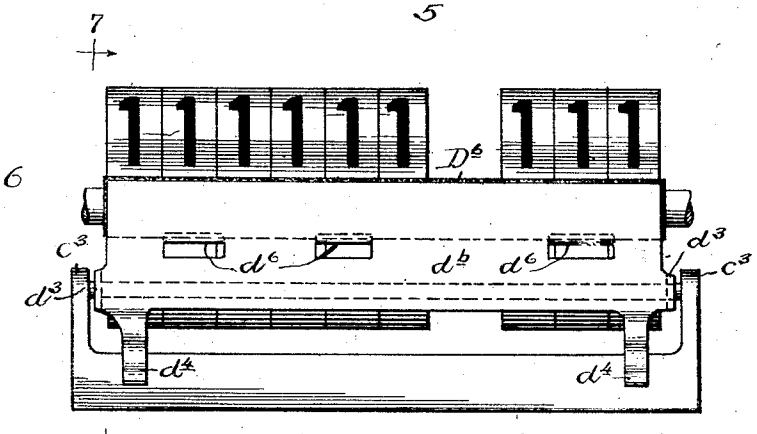
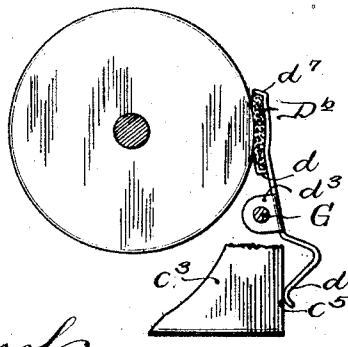


Fig. 7



Witness.
Chas. R. Kousch.

Inventor,
John K. Olsen,
By Burton Burton & Kirby Attys.

Patented Sept. 8, 1925. 1,553,100

UNITED STATES PATENT OFFICE.

JOHN K. OLSEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO STEWART-WARNER SPEEDOMETER CORPORATION, OF CHICAGO, ILLINOIS, A CORPORATION OF VIRGINIA.

ODOMETER ALIGNING AND CLEANING DEVICE.

Application filed July 12, 1922. Serial No. 574,524.

To all whom it may concern:

Be it known that I, JOHN K. OLSEN, a citizen of the United States, residing in the city of Chicago, in the county of Cook and the State of Illinois, have invented certain new and useful Improvements in Odometer Aligning and Cleaning Devices, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide an improvement in odometers for the purpose of preventing the misalignment of the dial markings which is liable to result from momentum overthrow taking up the slack in the train, and for the purpose, which is accomplished simultaneously, of cleaning the graduated areas of the dials. It consists in the elements and features of construction shown and described, as indicated in the claims.

In the drawings:—

Figure 1 is a perspective view of a portion of an odometer comprising the dials of trip train and season train, and a fragment of the supporting frame, the dials being equipped with this invention.

Figure 2 is a detail elevation transverse to the dials of the two trains and the aligning and cleaning device.

Figure 3 is a view looking in the direction of the arrow, 3, on said Figure 1.

Figure 4 is a view similar to Figure 3, showing a modification of the form of the wiper and aligning device.

Figure 5 is a section at the line, 5—5, on Figure 4.

Figure 6 is a front elevation of a form of the device particularly suited for an instrument having only one row or group of dial wheels.

Figure 7 is a section at the line, 7—7, on Figure 6.

In the structure shown in the drawings, the dial wheels of the continuous or season trains are shown at A, the dials of the trip train at B, the two trains being paraxial according to a common form of construction. C represents a part of the frame comprising bracket bearings, C^1, in which the shaft of the season train is journaled, and bracket bearings, C^2, in which the shaft of the trip train is journaled. Extending longitudinally of the two, and parallel thereto between the same in the form of the device shown in Figures 1, 2, and 3, there is positioned the aligning and wiping device which comprises a metal member, *d*, folded parallel to its longitudinal edges, V-shaped in cross section, and a facing or covering, D, of felt or like soft material secured upon the inner or protruding side of the angular form, for lodgement against the graduated peripheries of faces of the dial wheels, A and B. This friction brake and wiper is held normally in yielding contact with both sets of dial wheels by springs, E, connected to lugs, d^1, struck out of the member, *d*, and lugs, c^3, struck and folded out of the frame member, C, in such position with respect to the journal bearings, C^1 and C^2, that the stress of the springs, E, will be in the same plane transverse to the plane of the axes of the dial wheel trains.

The brake action of the device, D, *d*, upon both sets of dial wheels is to retard their advance, or plus movement; and thereby the purpose of the device is accomplished by preventing the momentum overthrow of the dial wheels which unavoidable slack of the train renders possible and liable to occur, particularly in the case of vary rapid operation.

At the same time, it will be seen that the felt covering, D, operates as cleaner and wiper, keeping the dial wheels at all times cleared of oil and dirt which tends to interfere with instant reading of the indication.

In Figures 4 and 5, there is shown a modification of the device in which for the V-shaped device, D—*d*, there is substituted a cylindrical wiping device, D^a, mounted on a wire member, F, which performs the function of both the part, *d*, and the spring E, of the preceding figures, the wire being bent in U-form, the wiping and brake member, D^a, being mounted upon the middle or neck of the U, and the limbs *f*, *f*, being extended past the ends of the dial train, A, and secured in lugs, c^2, projecting from the journal standards, C^1, said limbs being each coiled at f^1 to increase their spring action for holding the cylindrical wiper and brake, D^a, yieldingly on the faces of both sets of dial wheels. A minor advantage of this form over the preceding form consists in the feature of easy adjustability of the cylindrical wiper and brake member, D^a, by turning

it about the wire on which it is mounted to present new portions of its surface to the dial wheels.

In Figures 6 and 7 there is shown a modification of the device, particularly convenient to be applied in the case of an odometer having both trains of dial wheels mounted upon the same shaft, or co-axially. In such an instrument a wiper or brake member having to press in only one direction or toward only one surface in order to perform its function, may be simplified as seen in Figures 6 and 7, so as to consist of a simple strip of felt, or the like, D^b, mounted upon a metal plate, d^b, d^b, having lugs, d^3, folded toward the side upon which the felt member, D^b, is mounted. For pivoting the device a pivot rod, G, is mounted in lugs, c^3, projecting from the frame at opposite ends of the same, the plate, d^b, having spring fingers, d^4, which are bent as seen in Figure 7, to give them better elastic reaction, and which have their free ends stopped against the frame, as seen at c^5 on Fig. 7. It will be understood that the spring fingers are initially flexed so as to cause the wiper and brake member D^b, to press adequately the graduated peripheral faces of the dial wheels. Said felt member, D^b, is conveniently held to the carrying member, d^b, by means of lugs, d^6, struck out from the member, d^b, and similar lugs, d^7, for projecting from the upper longitudinal edge of said member, d^b, and folded over inward to embrace the upper margin of the brake and wiper, D^b.

I claim:—

1. In an odometer and the like, in combination with coaxial dials having peripheral graduations to be read in paraxial alignment, a wiper for cleaning the graduated areas of the dials, and means for pressing the wiper yieldingly against said dials; whereby there is caused frictional retardment of the dials preventing rattle and momentum overthrow and misalignment of the graduations.

2. In the construction defined in claim 1, foregoing, the odometer comprising two paraxial groups of dials,—as for season and trip indications respectively,—the dials of the two groups revolving in opposite directions at their proximate sides, the wiper being positioned between the two groups, and the yielding pressure means being connected for stressing the wiper toward the common plane of the two axes; whereby both groups of dials are retarded in the direction for preventing misalignment of the dials by momentum over-throw.

3. In the construction defined in claim 1, foregoing, the odometer comprising two paraxial groups of dials, revolving in opposite directions at their proximate sides, the wiper being a cylindrical element paraxial with and tangent to the two dial groups, the yielding pressure means being connected for stressing said cylindrical wiper toward the common plane of the axes of the two dial groups.

In testimony whereof, I have hereunto set my hand at Chicago, Illinois, this 7th day of July, 1922.

JOHN K. OLSEN.