March 12, 1929. H. JONES 1,705,018

ODOMETER RESET

Filed Jan. 4, 1926

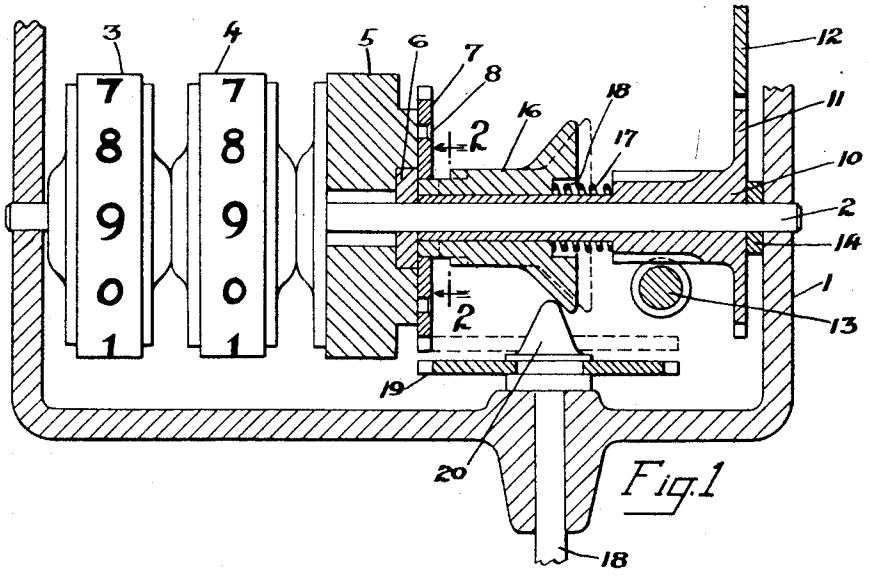


Fig. 1

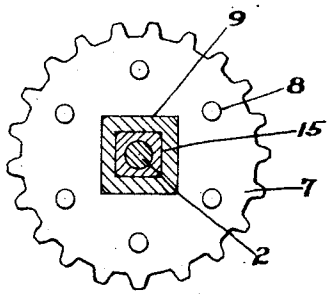


Fig. 2

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ODOMETER RESET.

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This invention contributes to the art of registering machines, and is designed especially for vehicle speedometers. It is directed to the provision of improved means for resetting a registering or a numbering wheel to its zero reading or to any other desired reading. The invention aims specifically to make an improved reset for the "trip" series of number wheels, the drive for the "season" set of wheels being undisturbed when resetting.

An object of the invention is to provide manually operable means to declutch the wheel of lowest denomination in the trip set from the driving means.

A further object is to provide means on the spindle of a reset shaft to engage for rotation means on the wheel of lowest denomination simultaneous with the declutching operation.

With the above and other objects in view, a single embodiment of the invention is herein disclosed and shown in the drawing. In the drawing, Figure 1 is a sectional view of a part of an odometer showing the reset device applied. Figure 2 is a section on line 2—2 Figure 1.

Referring to the drawing, numeral 1 represents a portion of the casing which encloses the speedometer and the odometer. Only a portion of that casing and a part of the odometer is illustrated. Numeral 2 is a shaft mounted in the casing and upon which the trip odometer wheels 3, 4 and 5 are mounted to rotate. It will be understood that suitable provision is made use of for driving wheel 4 from wheel 5 and wheel 3 from wheel 4. Inasmuch however, as this is no part of my invention no showing is made of this mechanism.

Into a recess on the face of wheel 5, which will obviously be the wheel of lowest denomination, is fixed a bearing block 6 having a circular opening rotatably engaging the shaft 2. Secured upon the face of wheel 5 is a gear 7, rivets 8 being shown as a convenient means of fastening the gear to the wheel. This gear has an opening which is angular in shape, Figure 2 showing the opening to be square, as at 9. Rotatably mounted on the shaft 2 is a worm gear member 10. At one end this worm gear member is constructed in the form of a spur gear 11. This spur gear 11 in engagement with a second spur gear 12 for the purpose of delivering power to a "season" series of number wheels. The worm gear 10 is driven by a worm as shown at 13. A comparatively long extension of reduced size is formed on worm gear 10 and in abutment with the block 6 as shown in Figure 1. The worm gear 10 is positioned at its other end by a spacer 14 between the casing and the spur gear 11. The extended end of worm gear 10 is square in cross section as shown at 15 in Figure 2. Slidable upon this square extension is a cam clutch member 16. The end of this cam clutch member engages the square opening in gear 7 under the influence of a spring 17. This spring is seated in a recess in the end of the cam as at 18 and also is in abutment at its opposite end with the worm gear 10. For the purpose of releasing the driving connection between the worm gear 10 and the fractional number wheel 5 there is provided a reciprocating reset spindle 18. This reset spindle moves into the case at right angles to shaft 2. Within the case 1 the reset spindle is provided with a gear 19 and with a conical cam 20. Under manual operation the reset spindle 18 may be pushed inwardly, whereupon its cam 20 engages the cam member 16 and pushes it to the right, as shown in Figure 1, against the compression of spring 18. The cam clutch 16 is under these circumstances disconnected from gear 7 and the fraction number wheel 5. Also as shown by the dotted lines in Figure 1, the gear element 19 on reset spindle 18 engages the gear 7. In this position of the parts rotary movement of 18 makes it possible to turn the fraction number wheel 5 as desired.

With the arrangement described above it will be seen that a very simple clutch device is arranged wherein the clutch engagement is with the fractional number wheel. The reset gearing is also in direct engagement with the fraction number wheel, thus avoiding any intermediate gearing elements.

I claim:

1. In a device of the class described and in combination with a support having oppositely arranged side portions, and a shaft the two ends of which are supported by said side portions; a plurality of number wheels rotatable upon said shaft and arranged at one end thereof and constituting a trip odometer; a driving member located at the other end of said shaft and rotatable thereupon, and which member is extended along said shaft and terminates adjacent the inner one of said number wheels, and acts to prevent movement of said wheels along the shaft afore-

said; a gear carried by the inner one of said number wheels; a combined cam and clutch member slidable along but non-rotatable upon the extended part of said driving member, and the inner end of which member and said gear have engaging and disengaging parts which form a clutch; a spring acting to force said cam and clutch member toward the inner one of said number wheels; a rotatable and reciprocating resetting spindle slidable in a bearing in said support, in a direction substantially at right angles to the shaft aforesaid, and the inner end of which has a cam adapted to engage the cam part of said combined cam and clutch member to disengage the inner end thereof from the gear aforesaid when said resetting spindle is moved along its axis; and a second gear upon the inner end of said resetting spindle adapted to mesh with said first mentioned gear to reset said number wheels.

2. The combination defined in claim 1 and wherein the inner number wheel has a recess in which a bearing block is contained, and against which block the inner extremity of the extended portion of said driving member abuts; and in which said first mentioned gear is made separate from the inner number wheel and is fastened to the inner side thereof, and acts also to hold said bearing block in its recess.

In testimony whereof I affix my signature.

HERMAN JONES.