

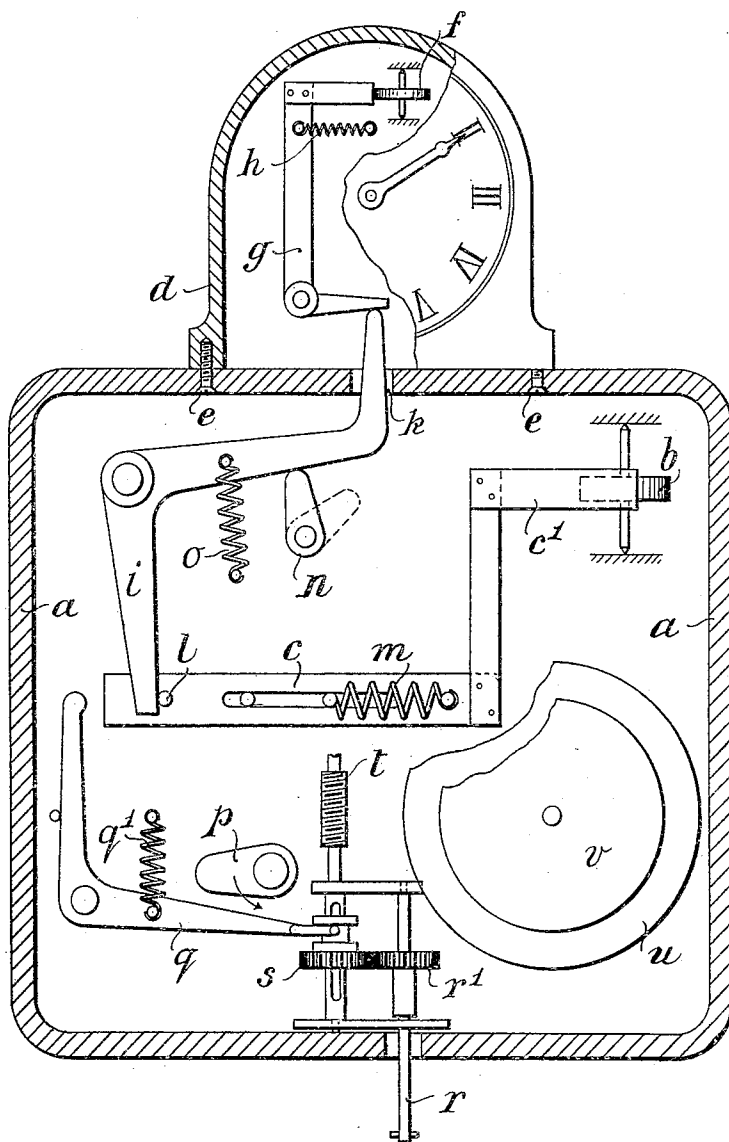
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TAXAMETER.

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931,756.

Patented Aug. 24, 1909.



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TAXAMETER.

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Specification of Letters Patent.

Patented Aug. 24, 1909.

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To all whom it may concern:

Be it known that I, CONRAD HAMMER, engineer, of 38 Sheringham avenue, Manor Park, London, England, have invented certain new and useful Improvements in Taximeters, of which the following is a specification.

This invention relates to breakdown tell-tales, that is to say, apparatus for registering the duration of stoppages of the vehicle occasioned by breakdown of the motor, damaged tires or other accidental conditions. Hitherto such apparatus have consisted of an integrating train fitted in the taximeter itself and arranged to exhibit the required indications through apertures in the apparatus, this registering mechanism being driven by the clockwork of the taximeter itself by means of a special train of wheels fitted in the apparatus and arranged to be driven from the clockwork mechanism of the taximeter through the medium of a coupling pinion which can be thrown into and out of gear.

In order to prevent registration of an increase in the fare by the clockwork drive during a breakdown the taximeter mechanism is likewise driven by the clockwork through the medium of a pinion adapted to be thrown into and out of gear, and which is put out of action when the coupling pinion for communicating the drive to the breakdown tell-tale is put into gear. The application of these arrangements to taximeters involves the employment and fitting of a large number of parts such as levers, coupling pinions and the like and a separate counting or registering train besides necessitating the provision of inspection apertures in the apparatus. A further disadvantage is that the tell-tale registering mechanism is driven by the clockwork of the taximeter itself, which must be specially powerful since it has to drive the fare indicating device. As the delay caused by the breakdown or stoppage may last an hour or more it follows that the powerful clockwork of the taximeter may be running the whole of this time and will therefore require to be wound up more often and sooner than would otherwise be the case.

According to the present invention I use for the breakdown tell-tale an ordinary clockwork train such as can be bought very cheaply on the market and arranged to indicate time in hours and minutes, for ex-

ample, by one or two hands in the known way. This clockwork mechanism is secured on or in the taximeter in a closed casing which is inaccessible from the outside and can only be unscrewed after the taximeter is opened. In the taximeter itself I provide a lever arranged to pivot between two end positions. One arm of this lever extends through the casing of the taximeter into the clockwork mechanism of the breakdown tell-tale and is adapted in the one end position of the lever to stop the balance wheel of this mechanism, and in the other end position to release it. The other arm of the lever is adapted in its one end position to release the balance wheel of the taximeter clockwork and in the other end position to stop the same. For stopping the balance wheel of the taximeter clockwork I utilize the usual balance wheel stop slide or device of the taximeter which serves to stop the taximeter clockwork in the "for hire" position of the taximeter or when the time registering mechanism thereof is in the inoperative position. It will thus be seen that the new apparatus only involves the purchase of a cheap clockwork and the fitting in the taximeter itself of a single lever.

An example of the new apparatus is illustrated in the drawing, only those parts being shown which are necessary for explaining the invention.

The drawing shows a sectional elevation of the invention as applied to a taximeter.

a is the casing of the taximeter, *u* and *v* are the disks for indicating the fare (in dollars and cents for example) these disks being driven in the usual way either from the vehicle wheel according to distance run, or by the clockwork train of the taximeter, according to time occupied in waiting.

The motion from the wheel is imparted in the usual way by a connection, such for instance as a flexible shaft, to the spindle *r* from which, in the working condition of the apparatus, the rotation is communicated through the gear wheels *r' s* to the worm *t* which drives the fare disks *u v* by the ordinary mechanism (not shown).

b is the balance wheel of the taximeter clockwork mechanism, (the rest of which is not shown) which likewise serves to drive the fare disks *u* and *v* through the ordinary mechanism (not shown), in the working condition of the apparatus. The setting of

the taxameter to the registering and inoperative positions is effected by means of an eccentric *p* operated from the outside by the driver. In the drawing the apparatus is in the working position. If the eccentric *p* is turned through 90° in the direction of the arrow, the apparatus is brought into the inoperative position, the distance drive being thrown off, the clockwork stopped and the fare disks *u v* returned to the starting position by any ordinary device (not shown). The throwing off of the clockwork is effected by the eccentric *p* shifting a lever *g* against the action of a spring *q*. The lever *g* slides the toothed wheel *s* out of gear with the toothed wheels *r'*. The lever *g* also moves a slide *c* against the action of a spring *m* so that a flat spring *c'* attached to the slide bears upon the balance wheel *b* of the clockwork and stops the latter.

d is the casing of the breakdown tell-tale clockwork and *e* are screws for fixing the same to the casing *a*.
f is the balance wheel of the breakdown tell-tale clockwork.

g is a lever for stopping the balance wheel *f* and *h* is a spring tending to pull the lever *g* into the position in which it stops the balance wheel *f*.

i is a bell crank lever mounted in the taxameter. One arm of this lever extends through an opening *k* of the casing *a* into the casing *d* and is adapted to move the lever *g* against the action of the spring *h*, while its other arm is adapted to move the balance wheel stop slide *c*.

l is a pin on the stop slide *c* against which one arm of the lever *i* bears.

m is a spring tending to move the stop slide *c* into the position in which it releases the balance wheel *b*.

n is a cam whereby the lever *i* can be moved from the one position to the other against the action of the spring *o*.

In the position shown in the drawing the lever *i* is raised against the action of the spring *o* by the cam *n*. The one arm of the lever *i* has moved the stop lever *g* against the action of the spring *h* so as to release the balance wheel *f* of the tell-tale registering mechanism. The hand or hands of this mechanism will therefore travel forward during the stoppage of the vehicle. The other arm of the lever *i* has moved the slide *c* by means of the pin *l* against the action of the spring *m* so that the balance wheel *b* of the taxameter clockwork is stopped. Consequently the fare indicated by the taxameter will not be increased during the stoppage of the vehicle.

When the cause of the breakdown is removed if the cam *n* be moved into the dotted position, the lever *i* will be pulled by the

spring *o* into its other position whereupon it releases the stop lever *g* and allows the same to be pulled by the spring *h* into the stop position, and on the other hand it leaves the stop slide *c* free to be acted upon by the spring *m*, so that the balance wheel *b* is released. In this position of the cam *n* the amount of the fare increases according to the time occupied in waiting or otherwise, while the hand of the breakdown tell-tale remains in the position to which it has traveled during the stoppage.

The heads of the screws *e* by which the casing *d* of the breakdown tell-tale is secured to the casing *i*, are inside the casing *a* so that the mechanism of the tell-tale can only be got at by opening the taxameter. Intentional shifting of the hand or hands of the tell-tale is thus prevented. The owner of the vehicle has only to subtract from the time indicated by the tell-tale clock (say 6 h. 50) the time indicated by it at the last inspection, in order to ascertain the total duration of stoppages or breakdowns which have occurred since the last check.

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

1. The combination with a taxameter mechanism of a separate breakdown recording clockwork, means whereby the movement of the taxameter recording clockwork may be arrested and the breakdown recording clockwork released, for the purpose set forth.

2. The combination with a taxameter mechanism of a separate breakdown recording clockwork, a closed casing therefor attached to the taxameter casing, means whereby the movement of the taxameter recording clockwork may be arrested and the breakdown recording clockwork released, for the purpose set forth.

3. The combination with a taxameter mechanism, of a separate breakdown recording clockwork, means whereby the movement of the taxameter clockwork mechanism may be arrested and the breakdown recording clockwork released, a separate casing for the breakdown recording clockwork disposed on the outside of the taxameter case, fastening means for said separate casing, said fastening means being only capable of operation from the inside of the taxameter casing substantially as and for the purpose set forth.

4. A breakdown tell-tale apparatus for use in connection with taxameters, comprising the combination therewith of a separate clockwork mechanism disposed in a closed casing and secured to the casing of the taxameter, and a lever adapted to be moved into two positions in one of which it releases the balance wheel of the tell-tale clockwork mechanism and stops the balance

wheel of the taxameter clockwork, and in the other of which it stops the balance wheel of the tell-tale clockwork and releases that of the taxameter clockwork.

5 5. The combination with a taxameter mechanism of a separate breakdown recording clockwork, a lever adapted to be moved into two positions, means whereby in one of said positions the balance wheel of the breakdown recording clockwork mechanism is released and that of the taxameter clockwork is arrested, means whereby in the other position the balance wheel of the breakdown recording clockwork is arrested and that of the taxameter clockwork released.

10 6. The combination with a taxameter mechanism of a separate breakdown recording clockwork mechanism, a lever adapted to be moved into two positions, a stop slide for arresting or releasing the balance wheel of the taxameter clockwork, a stop lever for arresting or releasing the balance wheel of the breakdown recording mechanism, a pivoted lever adapted to engage and actuate said stop slide and stop lever, means for actuating said lever whereby the taxameter mechanism is arrested and the breakdown re-

corded clockwork released or vice versa substantially as and for the purpose set forth.

7. The combination with a taxameter 30 mechanism of a separate breakdown recording clockwork mechanism, a lever adapted to be moved into two positions, a stop slide for arresting or releasing the balance wheel of the taxameter clockwork, a stop lever for 35 arresting or releasing the balance wheel of the breakdown recording clockwork, springs for pressing said stop slide and stop lever out of engagement with the respective balance wheel of the breakdown taxameter 40 clockwork, a pivoted lever adapted to engage and actuate the stop slide and stop lever, means for actuating said pivoted lever whereby the taxameter clockwork is arrested and the breakdown recording clock- 45 work released or vice versa.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

CONRAD HAMMER.

Witnesses:

ROBERT MILTON SPEARPOINT,
D'ARCY MELVILLE.