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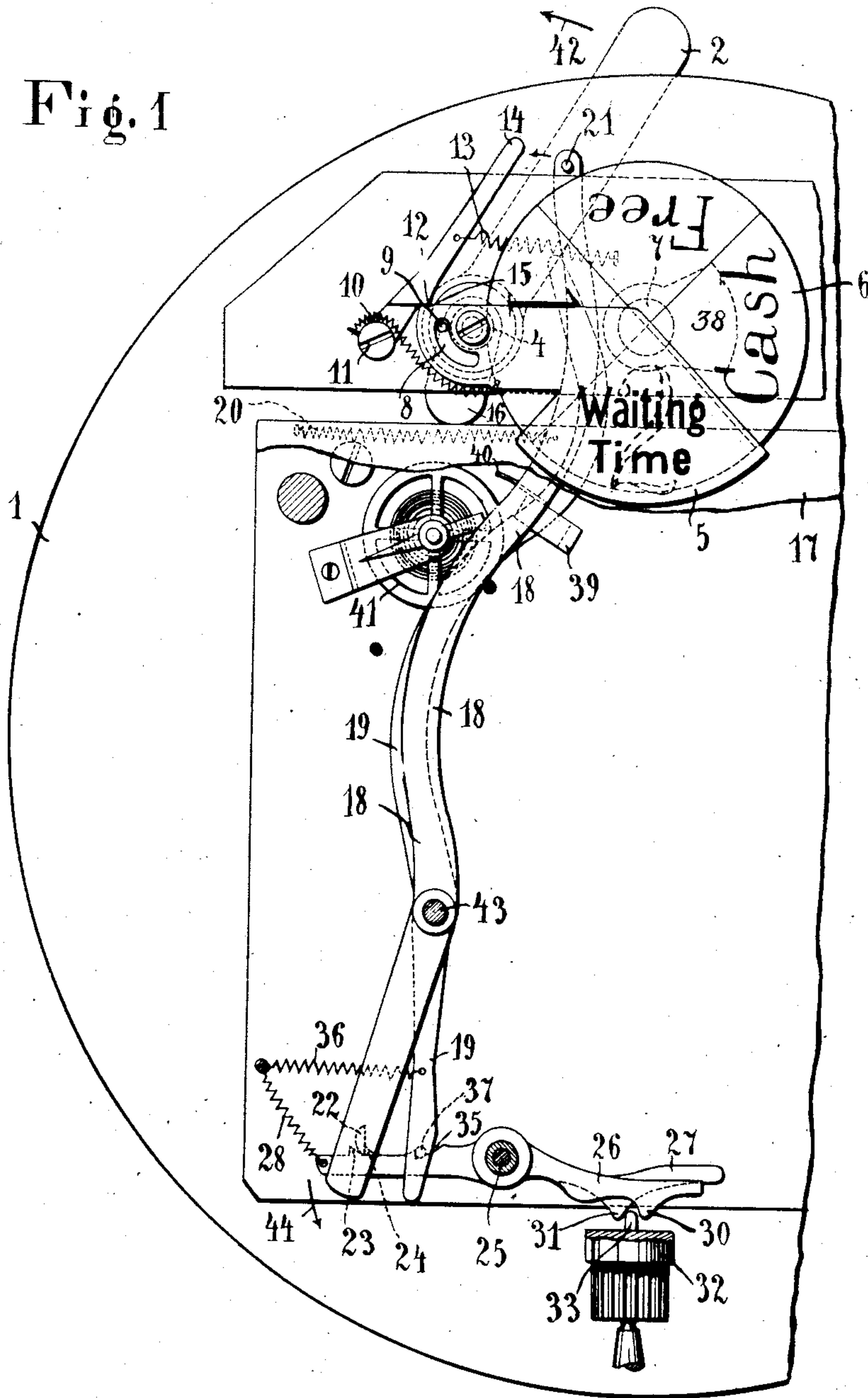
PATENTED OCT. 8, 1907.

B. SCHNEIDER.  
FARE INDICATOR.

APPLICATION FILED SEPT. 14, 1906.

3 SHEETS--SHEET 1.

Fig. 1



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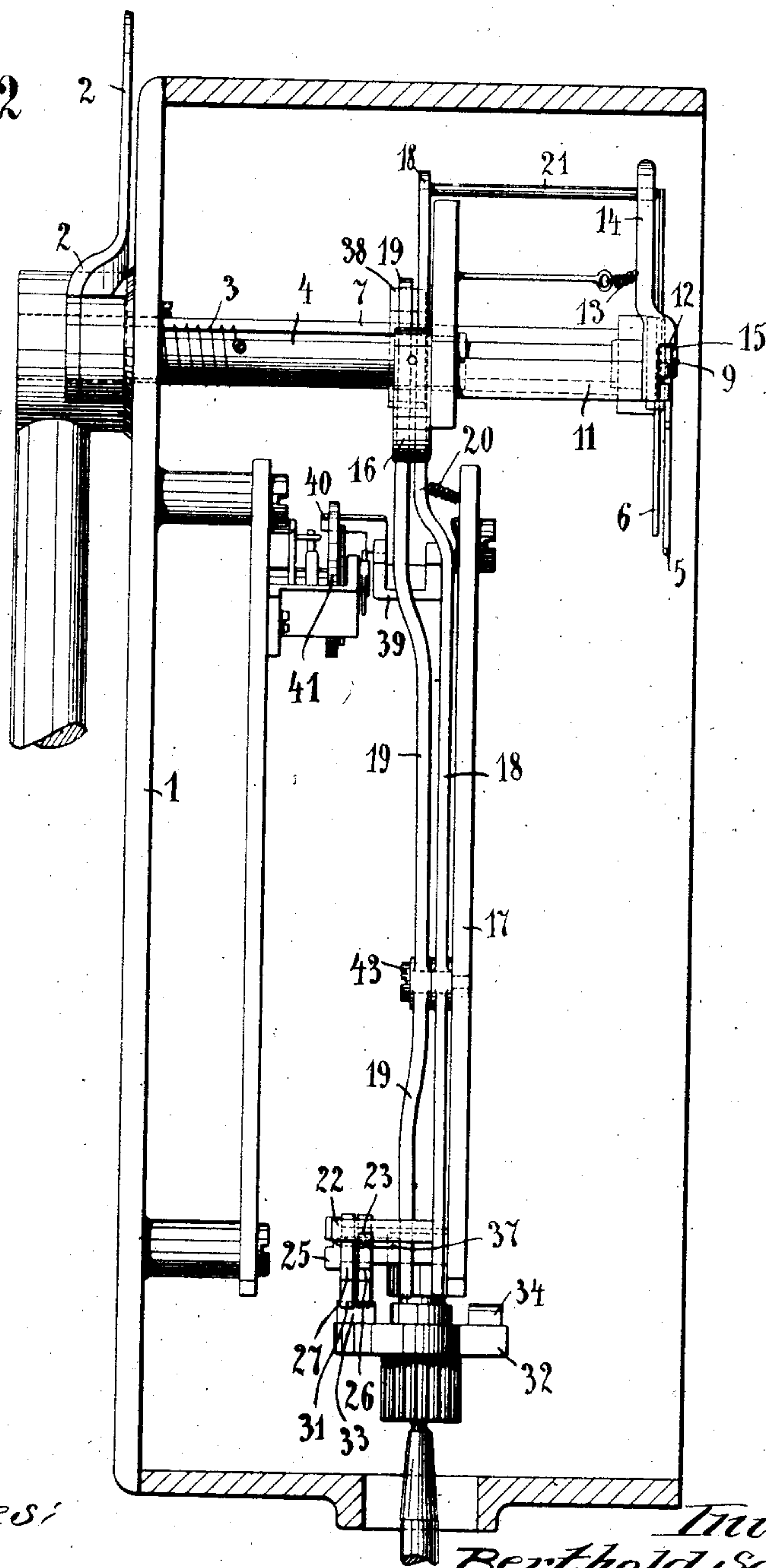
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3 SHEETS—SHEET 2.

Fig. 2



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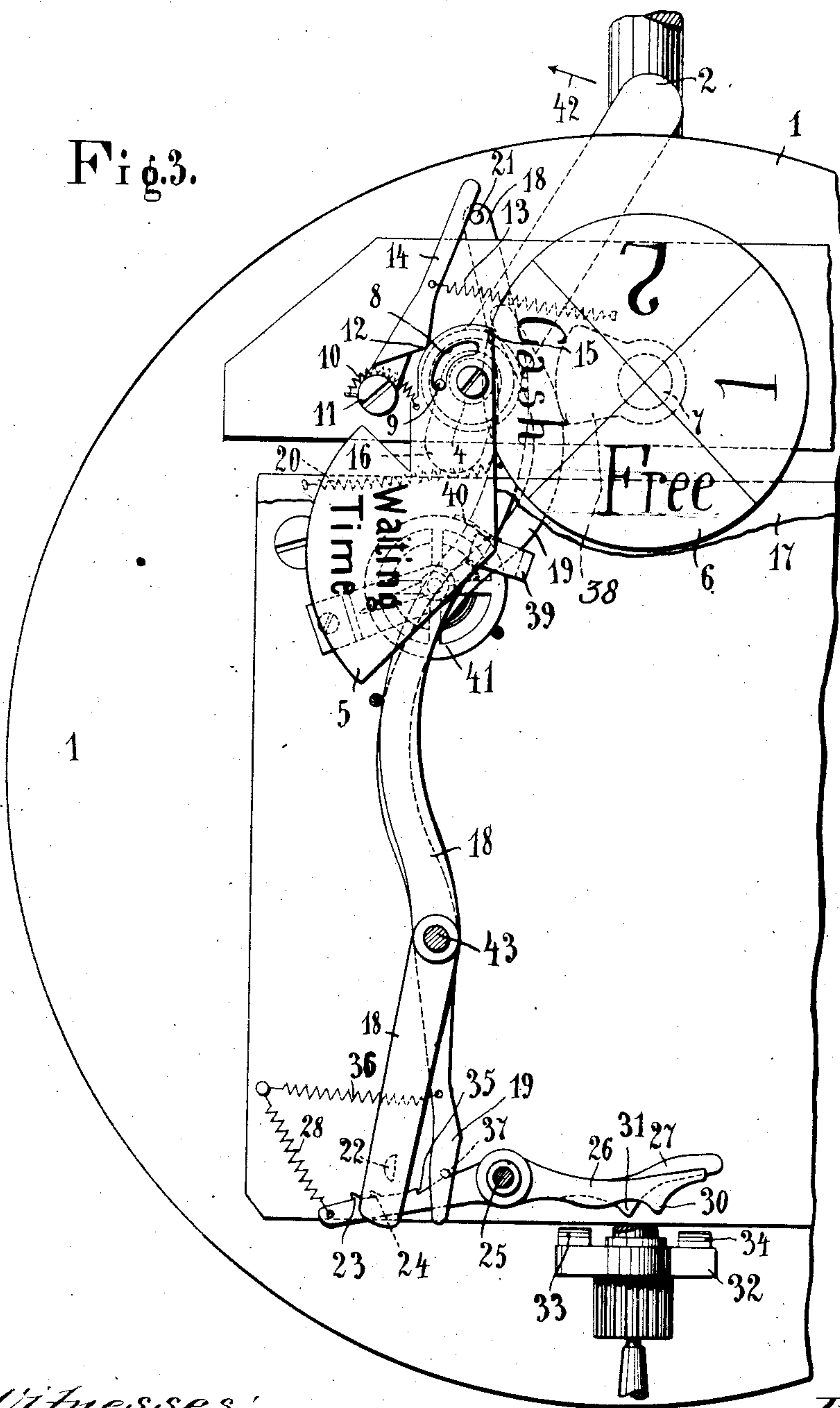
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SHEETS—SHEET 3

Fig. 3.



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# UNITED STATES PATENT OFFICE.

BERTHOLD SCHNEIDER, OF BERLIN, GERMANY.

## FARE-INDICATOR.

No. 867,609.

Specification of Letters Patent.

Patented Oct. 8, 1907.

Application filed September 14, 1906. Serial No. 334,656.

*To all whom it may concern:*

Be it known that I, BERTHOLD SCHNEIDER, engineer, a citizen of the Empire of Germany, and a resident of 101/102 Bernauerstrasse, Berlin, Germany, have made certain new and useful Improvements in Fare-Indicators, of which the following is a specification.

Fare-indicators, as heretofore usually constructed, are provided with apparatus for measuring time and distance, herein respectively referred to as the watch and the odometer, that are so arranged in relation to each other that the stopping of the odometer automatically sets the watch going while the starting of the odometer stops the watch, with the result that the watch continues to run not only when the vehicle moves very slowly or stops intentionally for a considerable period, but also when the stoppages are short and unintentional, for instance, when traffic is held up; and that the passenger has to pay for the time consumed by these stoppages.

Now the object of the present invention is to obviate this defect and to this end the watch is put into operation by means of a special lever, actuated by the driver, only when the passenger has to pay for the time consumed in stoppages, while it is automatically put out of engagement, upon the starting of the vehicle or the adjustment of the indicator to "Cash"; short unintentional stoppages consequently remaining unindicated. Whenever the watch is set going by means of the special lever, a disk bearing a suitable inscription, such, for instance, as "Waiting", which until then has been concealed from the passenger, comes in sight in front of the disk indicating the different fares and the like, and remains visible until the vehicle starts or the apparatus is adjusted to "Cash", whereupon it automatically disappears.

The accompanying drawings illustrate a fare indicator in accordance with this invention, satisfying the above mentioned requirements and wherein the adjustment for the different fares, for "Cash" and "Empty" is effected by means of the flag shaft.

Figure 1 is a front elevation of such parts of a fare indicator in accordance with the invention as are requisite for the proper understanding thereof in the positions they assume when the watch is going. Fig. 2 is a corresponding side-elevation, and Fig. 3 is a front elevation showing the watch stopped and the odometer out of engagement.

The shaft 4, which is provided with a handle 2, a hand-wheel or the like, and is subject to the action of a spiral spring 3, that is coiled round it and tends to maintain it and its handle 2 in their initial positions, is rotatably mounted in the rear plate 1 of the fare indicator casing. On the shaft 4 there is rotatably mounted a segmental disk 5, which bears a suitable inscription, such, for instance, as "Waiting time" and which is so arranged that it can be moved in front of

the disk 6, on which the fares and the like is indicated and which is rigidly attached to the flag shaft, so as to cover a suitable portion of this latter disk. The disk 5 has formed in it concentrically to the shaft 4 a slot 8 which serves as a guide and stop for a pin 9 attached to the shaft 4; and this disk is normally maintained by means of a spring 10 in the disengaged position, in which position it is concealed by the casing of the fare indicator. Upon a stud 11 there is mounted to oscillate a lever 14, which is subject to the action of a spiral spring 13, and which when the watch is in engagement engages by means of a detent 12 with a corresponding projection 15 on the disk 5 and by this means retains this disk in the raised position. Upon the rotation of the shaft 4, a cam 16 mounted thereon sets upon two levers of the first order 18 and 19 which are pivoted on a common stud 43 on the bedplate 17. The lever 18 is subject to the action of a spiral spring 20, and when the upper end of this lever is moved laterally to the left a rod 21 attached thereto presses against the lever 14, and thereby disengages its detent 12 from the projection 15 on the disk 5, and allows this disk to assume the position in which it is invisible.

To the lower end of the lever 18 there is attached a laterally projecting catch 22 which, when the lever 18 is oscillated, engages with the projections 23 and 24 on the arms of two levers of the first order 26 and 27, that are subject to the action of springs 28 and 29 and are pivoted on a common stud 25 on the bed plate 17. The other arms of these levers 26, 27 are provided with projections 30, 31 which, when the watch is in engagement, as shown in Fig. 1, project into the path of two teeth 33, 34 upon the disk 32 geared to the wheels of the vehicle. The arms of the levers of the first order 26, 27, which carry the projections 23, 24, are moreover provided with oblique recesses 35, with which, when the watch is put into engagement, there engages a transverse rod 37 attached to the lower arm of the lever 19, which is acted upon by the spring 36.

The upper arm of the lever 19 projects into the path of a cam 38 attached to the flag shaft 7, by means of which the watch is thrown out of engagement, when the apparatus is adjusted to "Cash".

By means of a stirrup-shaped piece 39 there is attached to the lever 18 a spring blade 40 which, when the watch is stopped, arrests its balance and when the watch is set going releases it.

The mode of operation of the fare indicator is as follows:—Let it be assumed that the fare indicator is in action and that the passenger desires the vehicle to stop for a while. The driver will then turn the handle 2 in the direction indicated by the arrow 42, whereby, by means of the pin and slot connection 8, 9, the disk 5 will also be rotated and caused to assume the position shown in Fig. 1, wherein the inscription on the disk 5 is rendered visible to the passenger, while the disk



6 on which the fares are shown, is partly concealed. When the disk 5 is in this position the detent 12 of the lever 14, which is rotatable around 11 engages the projection 15 on the disk 5 and maintains the disk in a horizontal position against the action of the spring 10. Simultaneously with the movement of the disk 5 in front of the disk 6 the two levers 18 and 19 are by means of the cam 16 caused to assume the positions shown in Fig. 1, wherein the balance 41 of the clock mechanism is released. The catch 22 of the lever 18 is pressed by the spring 20 against one of the projections 23, 24 of the levers 26, 27, while the rod 37 of the lever 19 rests in the recesses 35 of the levers 26, 27. The watch is now set going and the counting mechanism continues to operate during the time the vehicle stops, which time has to be paid for by the passenger. If the journey comes to an end when the time for which the vehicle has been stopped is ended, that is to say, if the fare indicator is adjusted at once to "Cash" the cam 38 on the flag shaft 7, is by the rotation of this shaft caused to press against the upper arm of the lever 19, which is thereby rocked on the stud 43 against the action of the spring 36. The rod 37 on the lower arm of the lever 19 consequently slides over the oblique surfaces of the recesses 35 on the levers 26, 27, and moves these levers in the direction indicated by the arrow 44. By this means one of the projections 23 or 24 is thrown out of engagement with the catch 22, and the upper arm of the lever 19 is consequently free to be drawn towards the left by the spring 20, whereby the spring blade 40 is again brought into contact with the balance wheel 41 and the watch is stopped. The rod 21 is simultaneously pressed against the lever 14 which is thereby moved laterally to an extent sufficient to effect the disengagement of the detent 12 and the projection 15 on the disk 5, whereupon this disk is moved by the spiral spring 10 from the horizontal into the vertical position, that is to say into the position in which it is invisible. (Fig. 3). If however, the passenger, after having delayed the vehicle for some time, desired to continue his journey, it will be necessary that the watch should be automatically stopped, as the driver might occasionally forget to stop it, in which case the passenger would have to pay not only for the distance traveled, but also for the time occupied. For this purpose there are provided on the disk 32, which is geared to the vehicle wheels and actuates the fare indicator projecting teeth 33, 34, already referred to, which strike against the projections 30, 31 on the locking levers 26, 27. Should the vehicle start while the watch is going and the mechanism is in the position shown in Fig. 1, the projections 30, 31 will successively be raised by means of the teeth 33, 34, whereby the locking levers 26, 27 will be oscillated on the stud 25. The projections 23, 24, will consequently release the catch 22, whereupon the lever 18 will through the action of the spring 20 be caused to assume the position shown in Fig. 3, wherein it stops the watch, and, by means of the rod 21, releases the disk 5, and allows it to fall back into its invisible position.

If in place of the two locking levers 26, 27, only one such lever were provided, it might easily occur, that upon the stoppage of the vehicle, one of the teeth 33, 34 might be directly beneath the projection on this lever, in which case it would not be possible to put

the watch into engagement or to maintain it therein. As the two projections 30, 31 of the levers 26, 27, are displaced in relation to each other, the teeth 33, 34 of the cam disk 32 can act always upon one or other of these projections with the result, that even if one of the levers 26, 27 should be in the disengaged position, the other will by means of its projection retain the catch 22 and thus secure the clockwork in the engaged position.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:

1. A fare indicator for vehicles comprising time mechanism, actuating means under the control of the driver of the vehicle for throwing said time mechanism into operation when the vehicle stops, means for indicating cash and the like, means for shifting said indicating means to "Cash", means operated by said actuating means for concealing said indicating means, and means for automatically discontinuing the operation of the time mechanism for returning said concealing means to normal position when the vehicle resumes its journey or when said indicating means is shifted to "Cash".
2. A fare-indicator comprising a shaft, a disk for indicating cash and the like, means for shifting said disk to "Cash", a disk 5 mounted upon the shaft and provided with a suitable inscription, a handle for actuating the shaft causing thereby the shifting of the disk 5 in front of the indicating disk, means for retaining the disk 5 in its shifted position, and means for automatically returning the disk 5 to its normal position when the vehicle starts or when the indicator-disk is adjusted to "Cash".
3. A fare-indicator for vehicles comprising a shaft, a disk for indicating cash and the like, means for shifting said disk to "Cash", a disk 5 mounted upon the shaft and provided with a suitable inscription, a handle for actuating the shaft causing thereby the shifting of the disk 5 in front of the indicating disk, means for retaining the disk 5 in its shifted position, means for automatically returning the disk 5 to its normal position when the vehicle starts or when the indicator-disk is adjusted to "Cash," and means for automatically returning the shaft and handle to normal position.
4. A fare-indicator for vehicles comprising a shaft, a disk for indicating cash and the like, means for shifting said disk to "Cash", a disk 5 mounted upon the shaft and provided with a suitable inscription, a handle for actuating the shaft causing thereby the shifting of the disk 5 in front of the indicating disk, means for retaining the disk 5 in its shifted position, means for automatically returning the disk 5 and shaft to normal position when the vehicle starts or when the indicator-disk is adjusted to "Cash," a time mechanism, means operated when the vehicle starts or when the indicator-disk is adjusted to "Cash" for retarding the operation of the time mechanism, a cam carried by the shaft, and a lever mechanism adapted to be actuated by said cam for releasing said retarding means for the time mechanism.
5. A fare-indicator for vehicles comprising a shaft, a disk for indicating cash and the like, means for shifting said disk to "Cash," disk 5 mounted upon the shaft and provided with a suitable inscription, a handle for actuating the shaft causing thereby the shifting of the disk 5 in front of the indicating disk, means for retaining the disk 5 in its shifted position, a time mechanism, means operated when the vehicle starts or when the indicator-disk is adjusted to "Cash" for retarding the operation of the time mechanism, a cam carried by the shaft, and a lever mechanism adapted to be actuated by said cam for releasing said retarding means for the time mechanism.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BERTHOLD SCHNEIDER.

Witnesses:

HENRY HASPER,  
WOLDEMAR HAUPT.