

939,789.

F. BATT.
FARE RECORDER.
APPLICATION FILED JAN. 9, 1907.

Patented Nov. 9, 1909.
8 SHEETS—SHEET 1.

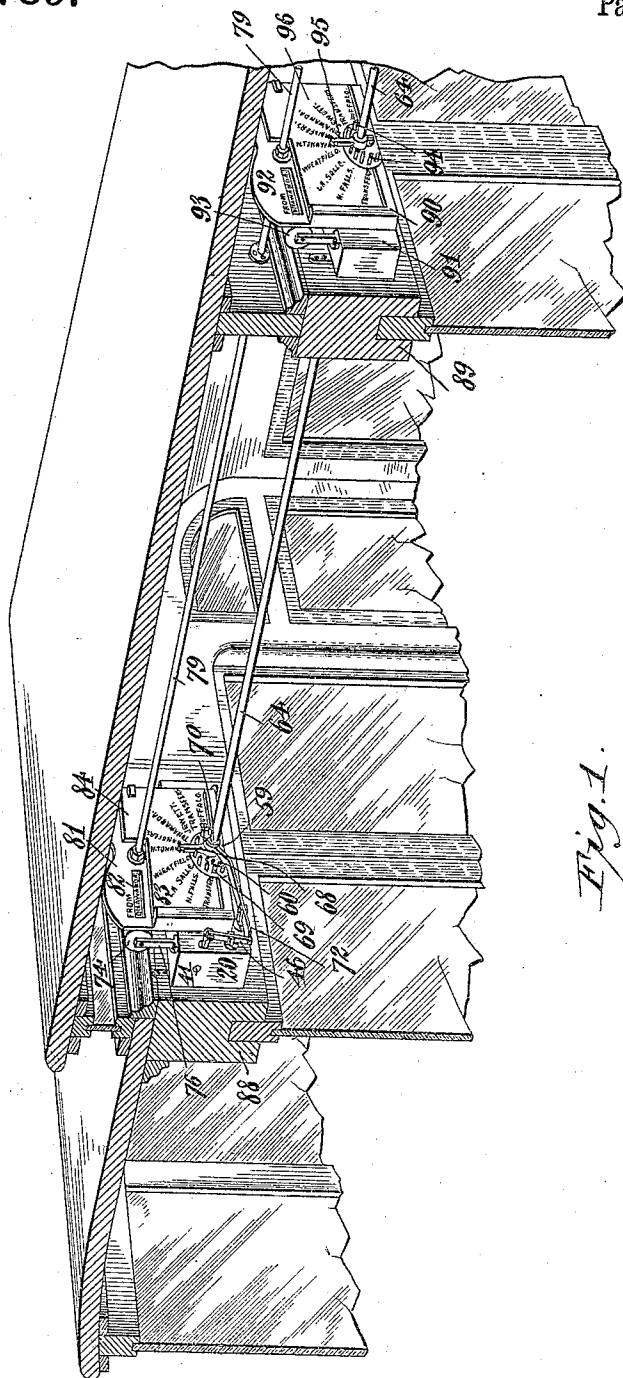


Fig. 1.

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Harry D. Rapp

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By Emil Neuhart,
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Fig. 2.

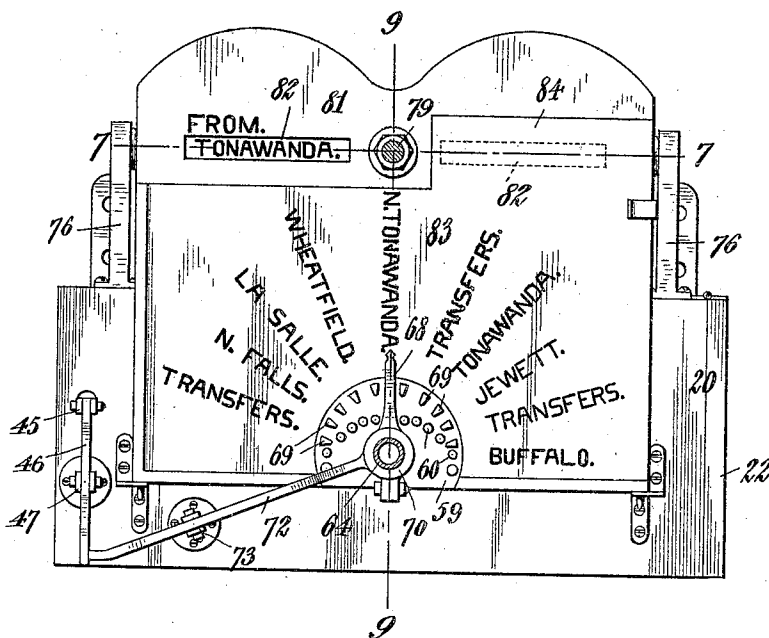
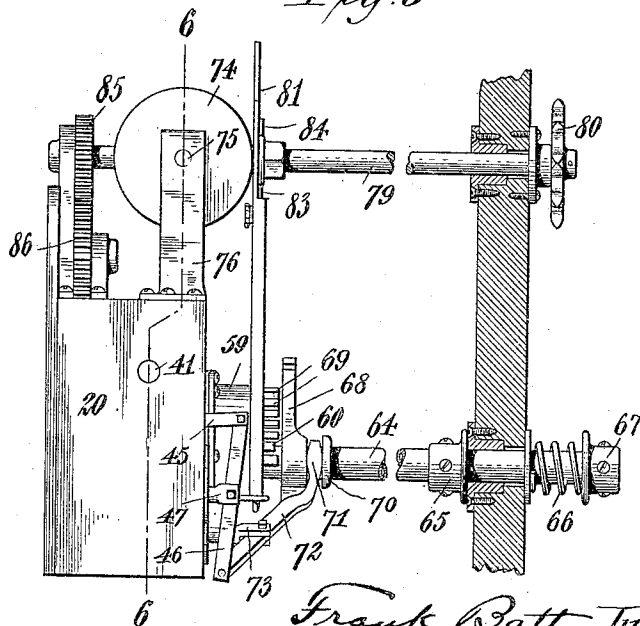


Fig. 3.



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8 SHEETS—SHEET 3.

Fig. 4.

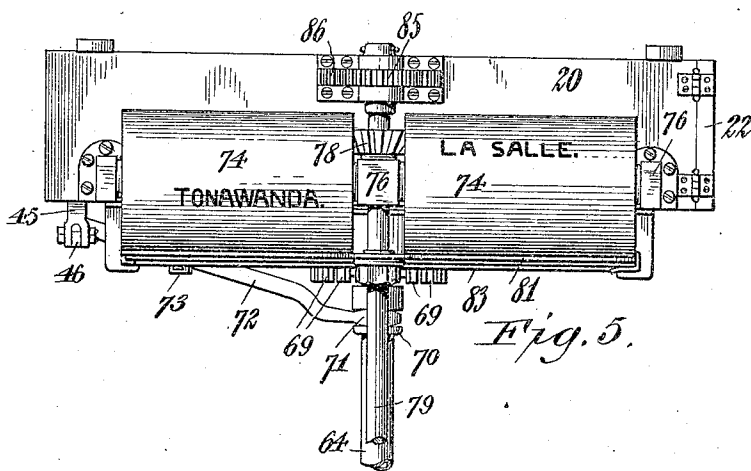
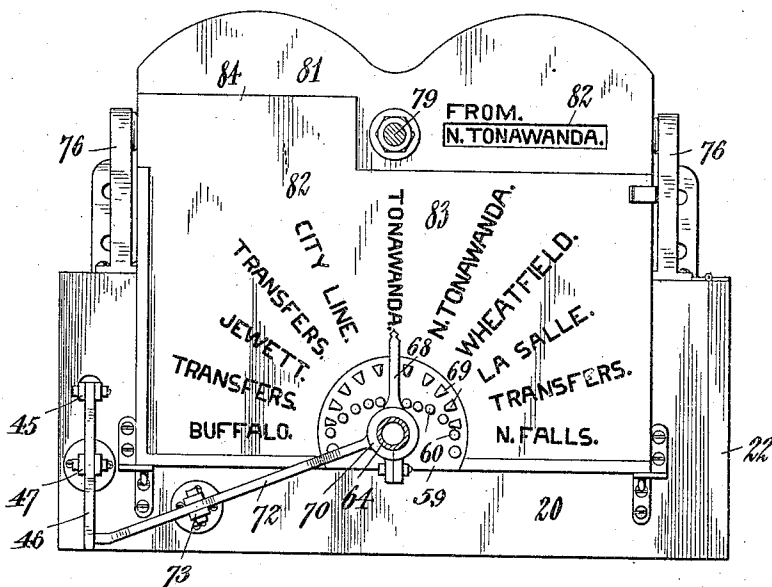


Fig. 5.

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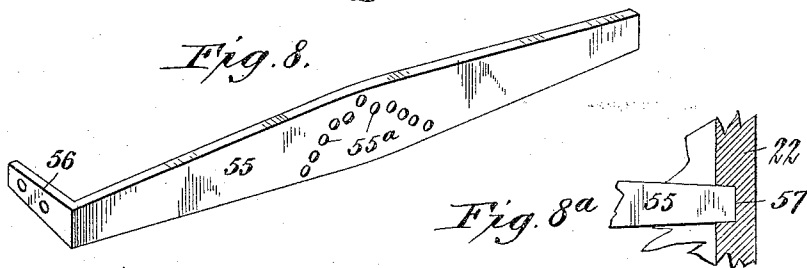
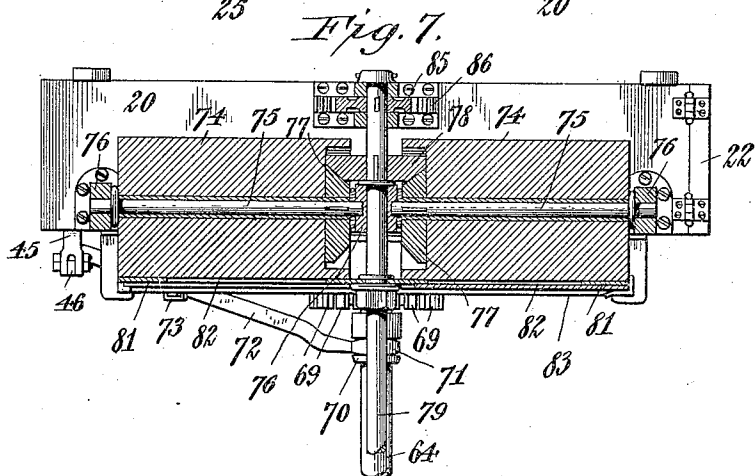
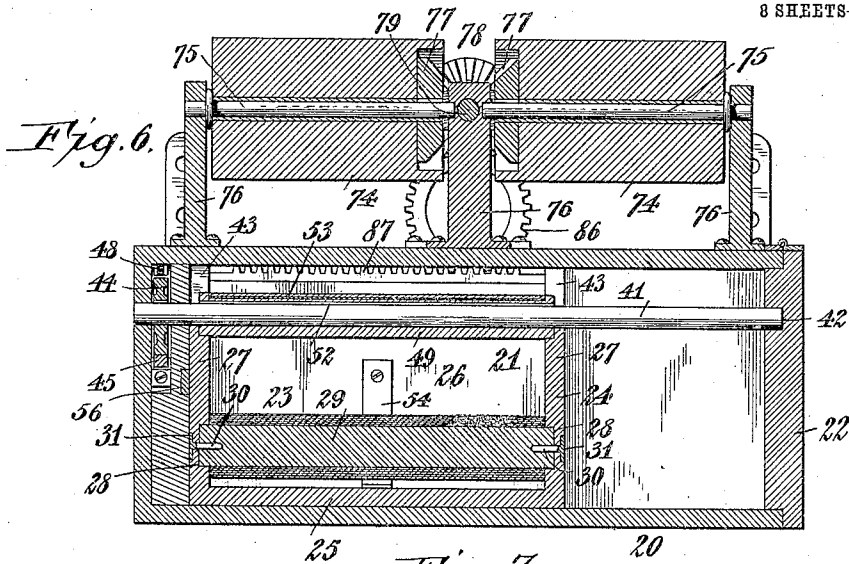
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8 SHEETS—SHEET 4.



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8 SHEETS—SHEET 5.

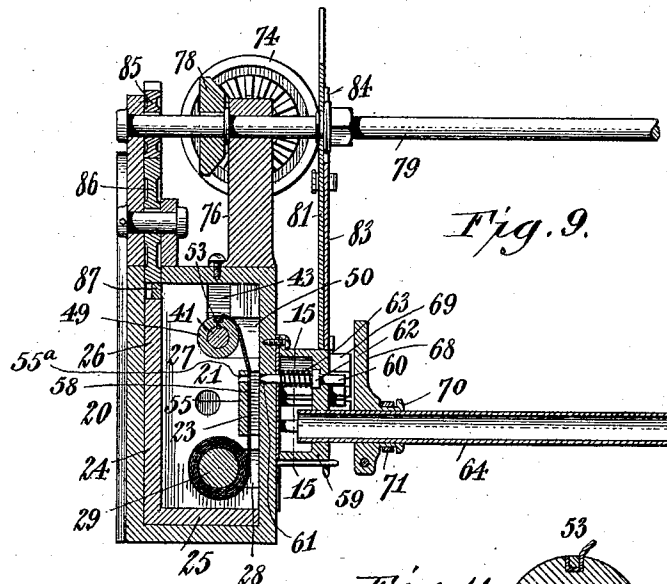


Fig. 9.

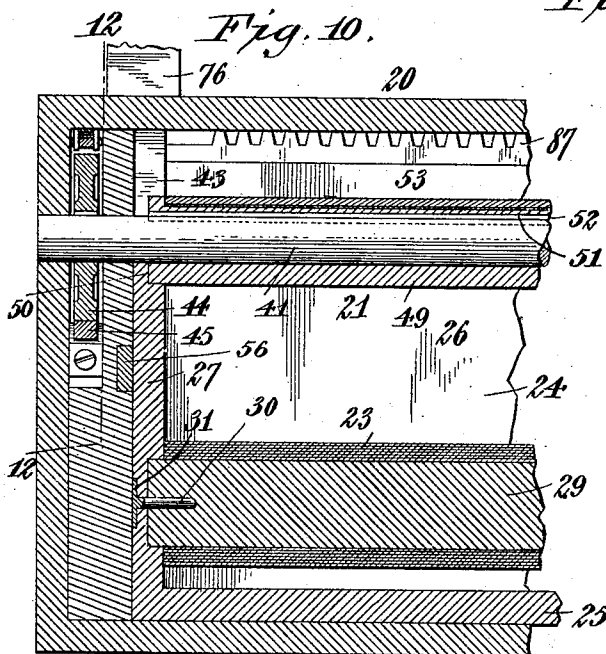


Fig. 10.

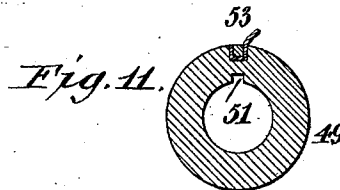
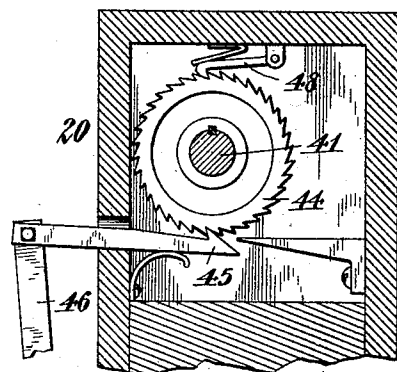


Fig. 11.

Fig. 12.



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Fig. 12a

32

34

Buffalo Fares.	34a	32a	33	Niagara Falls Fares.
" Transfers.	34a	32a	33	" " Transfers.
Swett Fares.	35a	32a	33	" " To La Salle.
City Line to Tonawanda.	35	32a	33	" " To Wheatfield.
City Line to Wheatfield.	35	32a	33	" " To Tonawanda.
City Line to La Salle.	35	32a	33	" " To Tonawanda.
City Line to A. Falls.	35	32a	33	" " To City Line.
Tonawanda Fares.	36	32a	33	La Salle Fares.
" Transfers.	36a	32a	33	" " To Wheatfield.
" To A. Tonawanda.	36a	32a	33	" " To A. Tonawanda.
" To Wheatfield.	36a	32a	33	" " To City Line.
" To La Salle.	36a	32a	33	Wheatfield Fares.
" To A. Falls.	36a	32a	33	" " To A. Tonawanda.
A. Tonawanda Transfers.	37	32a	33	" " To City Line.
" " Transfers.	37	32a	33	" " To Tonawanda.
" To Wheatfield.	37	32a	33	" " To A. Tonawanda.
" To La Salle.	37	32a	33	" " To City Line.
" To A. Falls.	37	32a	33	A. Tonawanda Fares.
A. Tonawanda Transfers.	38	32a	33	" " To Tonawanda.
" " Transfers.	38	32a	33	" " To City Line.
" To Wheatfield.	38	32a	33	" " Transfers.
" To La Salle.	38	32a	33	Tonawanda Fares.
" To A. Falls.	38	32a	33	" " To City Line.
Wheatfield Fares.	39	32a	33	" " Transfers.
" " To A. Falls.	39	32a	33	Swett Fares.
La Salle Fares.	40	32a	33	" " Transfers.
" To A. Falls.	40	32a	33	Buffalo Transfers.
A. Falls Fares.	40a	32a	33	Buffalo Fares.
" Transfers.	40a	32a	33	

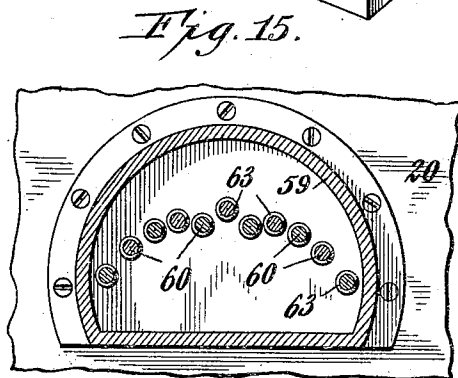
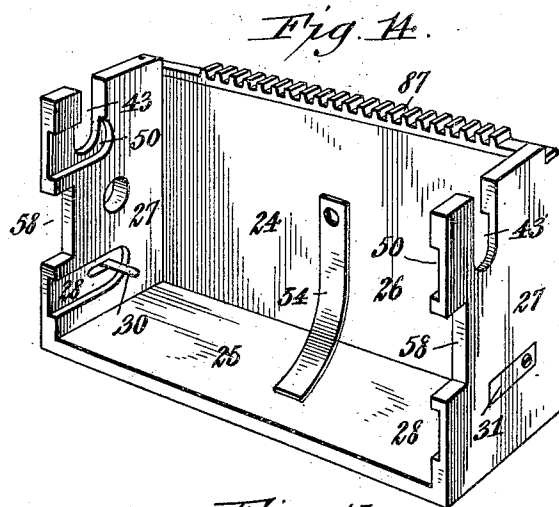
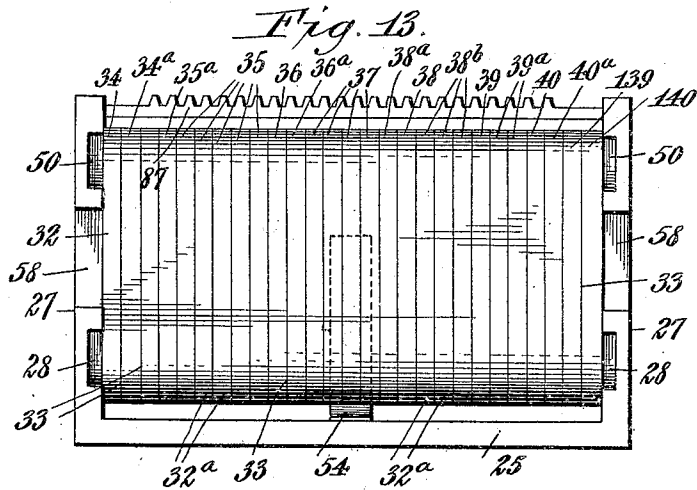
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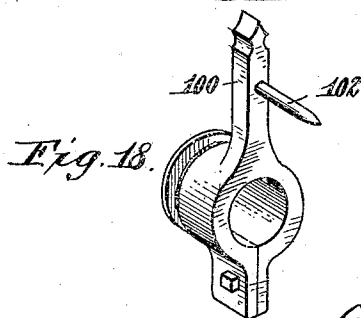
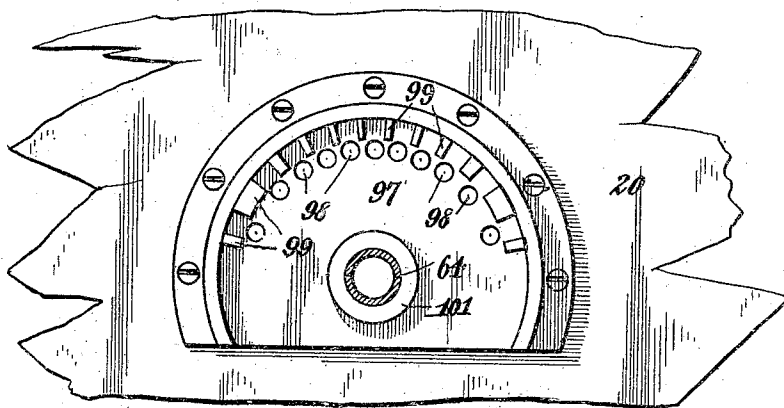
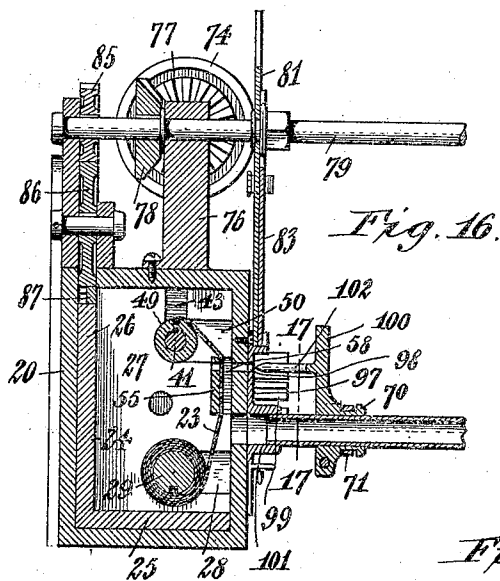
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8 SHEETS—SHEET 8.



Witnesses:
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UNITED STATES PATENT OFFICE.

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FARE-RECORDER.

939,789.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed January 9, 1907. Serial No. 351,555.

To all whom it may concern:

Be it known that I, FRANK BATT, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Fare-Recorders, of which the following is a specification.

My invention relates to certain new and useful improvements in fare recorders, such as are used in public conveyances for recording the fares of passengers.

The objects of my invention are manifold, but its primary object is the production of a recorder particularly designed for suburban or cross country use, whereby the starting point and destination of the passengers are exposed to view, and recording mechanism provided which is invisible from the exterior and whereby the distance between stations traveled by each passenger is recorded; to provide means for recording each fare separately and show upon the recording-mechanism from and to which stations the respective passengers have paid their fare; to provide means whereby the amount of travel between any two stations along the route of the car or other conveyance can be ascertained at a moment's notice so that travel can be properly cared for by running extra cars or conveyances between stations showing travel to be heavier than between other stations along the route; to expose in plain view of the passengers, the stations from and to which the conductor has recorded their fares, thereby avoiding all chance of the conductor recording the fare incorrectly in order to retain for his personal use, a part of the fare collected; to provide a recorder wherein provision is made to permanently record the fares upon a record-sheet which can be removed at the end of each trip or at any time desired, and then only by a properly authorized person having access to the interior of the recorder; and to otherwise improve on fare recorders now in use.

The invention consists, generally considered, of a casing having recording-mechanism therein locked against access to the conductor, indicating-mechanism bearing the names of the stations along the route of the car or other conveyance and operative to indicate the stations from and to which

each passenger's fare is recorded; the recording mechanism being invisible, from the exterior and the indicating-mechanism being exposed to the view of the passengers.

The invention also consists in the combination and arrangements of devices, and in the construction, arrangement, and combination of parts to be hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings,—Figure 1 is a sectional perspective view of a portion of a compartment car showing the manner of using my improved recorder. Fig. 2 is a front elevation of my improved recorder showing the names of the successive stations along the route of the car when the latter is traveling in one direction. Fig. 3 is a side elevation of the same, showing the ends of the indicating and recording shafts or rods journaled in the rear wall of a car. Fig. 4 is a front elevation of the recorder showing the names of the successive stations along the route of the car when the latter is traveling in the opposite direction. Fig. 5 is a plan view of the recorder. Fig. 6 is a vertical longitudinal section through the recorder taken on line 6—6, Fig. 3. Fig. 7 is a horizontal section taken on line 7—7, Fig. 2. Fig. 8 is an enlarged detached perspective view of the perforated punch-plate forming part of the recording-mechanism. Fig. 8^a is a view of the free end of the punch-plate inserted in the socket in the door of the casing. Fig. 9 is a central vertical section taken on line 9—9, Fig. 2. Fig. 10 is an enlarged vertical longitudinal section through one end of the casing taken on a plane indicated by line 6—6, Fig. 3. Fig. 11 is an enlarged cross-section of the take-up roll for the record-sheet. Fig. 12 is a vertical section taken on line 12—12, Fig. 10. Fig. 12^a is a broken face view of a record sheet showing opposite ends of the same with the arrangement and names of stations shown thereon. Fig. 13 is a face view of one end of the record-sheet on which the fares collected are recorded separately. Fig. 14 is an enlarged perspective view of the longitudinally movable record-sheet holder. Fig. 15 is an enlarged vertical section taken on line 15—15, Fig. 9. Fig. 16 is a central vertical section of a recorder embodying my invention in modified form. Fig. 17 is an

enlarged vertical section taken on line 17—17, Fig. 16, the perforating-pin being omitted. Fig. 18 is an enlarged detached perspective view of the indicator-finger carrying the perforating-pin.

Referring to the drawings in detail, like numerals of reference refer to like parts throughout the several figures.

The reference numeral 20 designates the casing in which the record-receiving mechanism 21 is housed. This casing may be of any shape, but is preferably of rectangular formation and provided with a door 22 at one end which is to be locked so as to render the record-receiving mechanism inaccessible to the conductor; it being the purpose of this invention to keep the conductor ignorant of the record and thus compel him to turn into the auditor's office all fares collected and recorded. The record-receiving mechanism is accessible to a properly authorized person, who is provided with the key of door 22, and who takes the record at the end of each trip, or at any other time, and locks the door of the casing after having taken the record from the casing. The record-receiving mechanism consists essentially of a record-sheet 23 movable vertically and horizontally, and devices to so move said sheet. In the particular embodiment herein disclosed, which is one representative way of accomplishing the desired results and the one now thought to be the best and most desirable; a longitudinally movable record-sheet holder 24 is confined within the casing and comprises a bottom 25, a rear-wall 26, and end walls 27. Said record-sheet holder is of a size to fit loosely within the casing so that it can travel therein, and the end walls 27 have depressions 28 on their inner sides which open at the front edges thereof to permit the ends of a record-sheet or delivery roller 29 to be conveniently seated in said depressions; the ends of said rollers being bored axially to receive pins 30 which are affixed to or formed on the ends of flat springs 31, seated in depressions in the outer sides of the end walls and fastened at their opposite ends to said walls. By this means the record-sheet or delivery roller may be conveniently and quickly applied to or removed from the traveling holder, and positively retained in place.

The record-sheet 32^a is wound upon the roller before placing within the holder and is provided with record spaces formed by parallel lines 33 drawn lengthwise thereof; each space being adapted to receive the record of fares collected between two stations, or within certain cities or towns. For a clear understanding of the invention I have illustrated the manner of marking the stations on a record-sheet adapted for use between Buffalo and Niagara Falls. When traveling in one direction, space designated

34 is to receive the record of all cash fares collected within the city of Buffalo; space 34^a is to receive the record of all transfers collected within the city of Buffalo. When the city line is reached, fares are collected to the point of destination from the city limits and the fares collected are recorded in the proper spaces, marked "City line to" the station of destination, and designated 35. Space 35^a is to receive the record of all fares collected to "Jewett," a manufacturing plant located a distance outside of the city limits, which is given a separate record space for the reason that the fare charged to the first station outside of the city limits would be excessive for a ride to "Jewett." This is explained to better understand the advantages of this improved register, and to show the adaptability thereof to meet all conditions. After reaching the first station, called "Tonawanda," a space 36 is provided for local fares within Tonawanda, and a space 36^a for local transfers. Spaces 37 are provided for all fares collected within Tonawanda for stations along the route, each station between Tonawanda and the end of the route having a separate record-space. 38 designates a record-space for local fares collected within the limits of North Tonawanda, and 38^a a record-space for local transfers. Spaces 38^b are provided for all fares collected for passage between North Tonawanda and the succeeding stations to and including the last station on the route. When the town of Wheatfield is reached, the fares collected for passage within Wheatfield are recorded in space 39, and spaces 39^a are provided for all fares collected in Wheatfield for points of destination beyond. When the next station is reached, shown on the drawings as La Salle, the local fares collected are registered in space 40, and the fares collected for the next and last station are recorded in space 40^a. When Niagara Falls is reached, all fares collected for local passage are recorded in space 139 and all transfers in space 140. It is therefore understood that a space is provided for local fares in each town or station beyond; and that where a transfer system exists in any town, a record-space may be provided for recording the same.

As shown in Fig. 12^a, the several record-spaces are marked at the end of the record-sheet; one end denoting the stations in order of location when the car travels in one direction, and the other end of said sheet, the stations are denoted in reverse order, for the return trip.

It may be found more convenient to have the order of stations and combination of stations printed upon a stiff card lined to correspond with the record-sheet, so that as the fares recorded along the record-sheet are being read, the card may be moved along the

record-sheet, retaining the corresponding spaces on the card and record-sheet in proper alinement.

41 designates a shaft journaled in one end of the casing and in a socket 42 formed in the inner side of the door 22 at the opposite end of said casing. Said shaft passes through openings 43 in the ends of the record-sheet holder and is provided with a ratchet-wheel 44, adapted to be actuated by a pawl 45 spring-pressed against the teeth of said ratchet and pivotally affixed to a lever 46 pivoted between its ends in a bracket 47 extending forward from the casing. Said pawl when actuated, serves to impart a slight rotary motion to said ratchet-wheel and the shaft 41; and spring-pressed against said ratchet-wheel is a detent pawl 48 to prevent retrograde movement of said wheel. 49 designates a "take-up" or receiving roller upon which the record sheet is to be wound as the fares collected are recorded; the ends of said roller are held in depressions 50 formed on the inner sides of the end walls of the record-sheet holder. Said receiving roller is bored axially to fit shaft 41 and has a longitudinal spline-groove 51 to receive spline 52 of said shaft. A longitudinal exterior groove is formed in the "take-up" or receiving roller in which the free end of the record-sheet is clamped by insertion of a key 53 therein, as best shown in Fig. 11. On revolving shaft 41 the record-sheet is wound upon the "take-up" or receiving roller; the delivery or record-sheet roller 29 being free to revolve so as to deliver or feed the record-sheet to said receiving-roller. In order to prevent excessive feed or delivery of the record-sheet, I provide a pressure-spring 54 which bears against the record-sheet wound upon the delivery-roller and serves to hold the latter against unwinding. In this manner the unrolled portion of the record sheet between the two rollers is held taut, the advantage of which will appear by further description.

A perforated punch-plate 55 best shown in Fig. 8, is arranged longitudinally in the casing near the front wall thereof, it having one end bent at a right angle, as at 56, and secured to the end wall of the casing, and its other end fitting into a depression or socket 57 in the inner side of the door 22. The end walls of the record-sheet holder are notched at 58, to clear the punch-plate in its movement within the casing.

As shown in Fig. 9, the record-sheet passes upward in front of the punch-plate and is drawn taut against the same; the sheet being so arranged that the longitudinal spaces thereon are disposed vertically.

When inserting the record-sheet holder in the casing, the door 22 of the latter must be opened. This frees the adjacent ends of the shaft 41 and punch-plate 55 and permits

the record-sheet to be placed against the front side of said plate, and the "take-up" or receiving-roller to be slid on said shaft. On closing said door, the ends of said shaft and said punch-plate enter their respective sockets in the door and are securely held. The door upon being locked by a properly authorized person, renders the record-sheet inaccessible to the conductor, and by reason of the record being unexposed, he is compelled to return all fares collected, as he has no record at the end of his trip or return period to adjust his collections to his record. This compels the conductor to be exact in his work, and accurate in his return of fares.

Secured to the front of the casing is a case 59 having perforating or punch pins 60 arranged preferably as near as can be, in an arc of a circle while positioning the centers thereof in equally spaced vertical planes. The front ends of said pins project through openings in the case 59, and their rear ends are tapered and extend into apertures 61 in the front wall of the register-casing. Between said last mentioned wall and collars 62 on said pins are springs 63 which act to retain the pins in normal position with their front ends projecting through the pin case. Perforations 55^a in the punch-plate 55 coincide with those in the wall of the casing, and when the perforating-pins are thrust inward, the tapered inner ends are forced through the record-sheet and record the fares collected in the proper spaces thereon.

For manipulating the perforating pins, I provide an operating-rod 64 arranged for rotary and longitudinal movement. This rod extends from the recorder to the rear end of the car so that it may be operated by the conductor from any point in the car or from the rear platform. The recorder is secured to one end wall of the car and the rod 64 extends to and through the other end wall of the car, terminating just outside of the latter, as shown in Figs. 1 and 3. It has a stop collar 65 to limit its movement outward or away from the recorder casing, which collar is held against the adjacent wall of the car by a spring 66 interposed between said wall and a collar 67 at the outer extremity of said rod.

An indicating and depresser-finger 68 is secured to operating rod 64 near the inner end thereof, it being so positioned that it may be moved over the projecting ends of the perforating pins, so that any one of said pins may be depressed by forcing the rod inward. Manifestly, the depresser finger 68 travels through an arc of a circle, and therefore may be moved in line with any one of the perforating pins. Suitable guides 69 are formed on the outer face of the pin case to aid in positioning the depresser finger and retaining the same in the desired position or angle while actuating the proper perforating

pin; the free end of the depresser finger passing between two guides.

Between the hub of the depresser finger and a collar 70 on rod 64, the croched inner end 71 of an inclined lever 72 is held; said lever being pivotally affixed between its ends to a bracket 73 projecting from the recorder-casing and having its opposite or outer end pivotally connected to the lower end of lever 46 previously described. It is apparent, therefore, that when the operating-rod 64 is manipulated to cause one of the perforating-pins to puncture the record-sheet, the pawl 45 is moved idly over the ratchet-wheel 44, through the action of levers 46 and 72, and when rod 64 is returned to its normal position, pawl 45 engages one of the teeth of said ratchet-wheel and revolves the same, causing of course a like rotation of the shaft 41 and the receiving-roller on said shaft. By means of such action new and imperforate portions of the record-sheet are moved in line with the perforations in the punch-plate, so that a clear and distinct record is obtained of every fare collected.

Indicating or annunciating-mechanism is provided by means of which the stations from and to which the passenger has paid his fare is exposed to view when the conductor records the fare. In preferred embodiment, this mechanism comprises two aligned reels or rollers 74, each secured to a shaft 75 journaled in supports 76 extending upward from the recorder-casing, and bearing the names of the stations along the line of travel; the names on both reels or rollers being arranged in similar order, but the direction of rotation of said rollers being opposite; they having their inner ends hollowed out to receive bevel-gears 77, which mesh with a bevel-gear 78 at diametrically opposite points. Gear 78 is secured to a shaft 79 extending lengthwise of the car and projecting through the distant end wall of the latter so that it may be revolved from the platform or from any point in the car. The portion of said shaft extending out over the platform may have a hand-wheel 80, or a sprocket-wheel may be provided to receive a chain carried down to a lower point, for more convenient manipulation.

A plate 81 is secured to the front wall of the recorder casing, or otherwise suitably supported, and it has two sight-openings 82 through which the names of the stations on the indicating-rollers 74 are exposed to view. On said plate, above each sight-opening is printed or otherwise marked the word "From" showing that the name of the station exposed to view through said opening is the station from which the fare is paid. In order to show to which station the fare has been recorded, I provide a removable indicating-plate 83 on opposite sides of which the names of the stations along the

line of travel are printed or otherwise marked in reverse order, as clearly shown in Figs. 2 and 4. The names of the stations are printed on the indicating-plate on lines radiating from the center of rod 64 so that the indicator and depresser-finger may be moved to point to any name on the plate. As shown in Fig. 2 the indicating and annunciating-devices show that the fare to be recorded is for a trip from "Tonawanda" to "North Tonawanda," while in Fig. 4 the said devices show that the fare to be recorded is for a trip from "North Tonawanda" to "Tonawanda." The indicating-plate has at its upper end an extended portion 84 adapted to close one of the sight-openings 82 when one side of the plate is exposed to view, and to close the other sight-opening when the opposite side of said plate is exposed to view, as clearly shown in Figs. 2 and 4. It is therefore apparent that only one of the annunciating reels or rollers 74 is in use at a time.

Provision must be made to shift the record-sheet holder when the annunciating-rollers are revolved. This I preferably do by securing a gear-wheel 85 to shaft 79 in rear of said roller, which gear-wheel is in mesh with a gear-wheel 86; the latter being held in mesh with a gear-rack 87 on the upper edge of the rear wall of the record-sheet holder. Upon actuating the shaft 79, the said holder is shifted the proper distance to bring the record-space on the record-sheet in line with the corresponding punch-needle to be actuated.

As shown in Fig. 2, the annunciating-roller is set to expose the word "Tonawanda." The record-sheet holder is therefore in position to receive a record of the fare collected in any of the six spaces designated 30, 31, and 32 on the record-sheet by turning shaft 79 to bring the indicating and depresser-finger in line with the name of the station to which the fare is to be paid, the perforating pins of said stations being in line with corresponding record-spaces on the record-sheet.

As many cars now in use have two compartments separated by a wall, one of which is used as a smoking compartment, it is highly essential that the recording of fares should be done in view of the occupants of both compartments. This I do by providing annunciating and indicating-devices in one of the compartments without the recording or registering-mechanism, and placing the complete recorder in the other compartment, the two being separate and distinct, with the exception that they are operated by the same means.

As clearly shown in Fig. 1, 88 designates the end wall of the car to which my improved recorder is secured, and 89 the partition or intermediate wall dividing the car

into two compartments and having the "dummy" recorder 90 secured thereto. This "dummy" recorder comprises a body 91 through which and partition 89, the operating-rod 64 is passed; said rod extending forward to the actual recorder on the end wall. Secured to said body 91 is a plate 92 having sight-openings similar to plate 81 hereinbefore described through which are exposed to view, annunciating rollers 93, one of which only is seen in the drawings. These rollers are similar to and operated precisely in the same manner as the annunciating-rollers of the actual recorder, the shaft 79 which actuates the rollers on the actual recorder passing through said plate and through partition 89 and extending to the actual recorder. Projecting forward from the body 91 are guides 94 and on operating-rod 64 is an indicating-finger 95 adapted to be moved between any two of said guides. An indicating-plate 96 is removably held to plate 92 and has the names of the stations along the line of travel on opposite sides thereof in reverse order. The indicating-finger 95 is secured to rod 64 and corresponds with the position of the indicating and depresser-finger 68 on the rod adjacent the actual recorder, and the annunciator-rollers are set to correspond to those of the recorder, so that the "dummy" recorder will at all times agree with the recorder proper.

In Figs. 16 to 18 I have shown a modification of my invention, in which the needle-case and the series of punch-needles are dispensed with. In this embodiment of my invention, a plate 97 is affixed to the front of the recorder casing and provided with perforations 98 which coincide with those in the punch-plate within the casing and with guides 99 extending outward from said plate. The indicator and depresser-finger is designated 100 and is secured to bar 64 in like manner to the indicator and depresser-finger 68 described hereinbefore. Plate 97 has a boss 101 extending forward and in said boss the end of bar 64 is guided. Finger 100 has a single perforating-pin 102 therein which passes through any one of the perforations in plate 97 when bar 64 is actuated and pierces the record-sheet.

In the event of the conductor failing to take up the fare of a passenger at the beginning of his trip, it may be recorded in its proper column at any time by setting the annunciating-roller back to the name of the station at which the passenger boarded the car.

Recording fares short of destination is almost impossible in view of the fact that the passenger may report the conductor when this is done, and furthermore the conductor is compelled to exercise greater care in seeing that passengers do not ride beyond

destination paid for, as the destination indicated can be easily noted by an employee of the company delegated to watch travel, generally termed a "spotter" who can check his notes with the number of passengers leaving the car at each station. For example when the conductor records four fares "Buffalo" to "La Salle"; two fares "Tonawanda" to "La Salle"; and one fare "North Tonawanda" to "La Salle"; a total of seven to leave the car at La Salle; the spotter upon reaching La Salle will count the passengers leaving at that station and if less than seven persons alight, he will know that one or more passengers have paid short, or that the conductor has recorded short of the full fare to be turned into the hands of the company.

By reason of the arrangement shown and described, whereby the starting point and destination of each passenger is shown as his fare is recorded, it is impossible for the conductor, to appropriate the fare or any portion of the fare, unless he does so in plain view of the passenger.

At the end of each trip, or at any other time desired, a properly authorized employee of the company may open the casing and remove the record-sheet holder with the sheet thereon, replace the same with another holder and record-sheet; or he may cut the record-sheet and remove the portion containing the record of fares collected and secure the end of the unused portion of the record-sheet to the receiving-roller of the holder; place the latter within the casing, and lock the door, after which the recorder is again in condition for use.

In order to prepare the recorder for the return trip, it is only necessary to reverse the indicating-plate 83 so as to expose the stations in reverse order, and also to uncover the opposite sight-opening 82 with the extended portion of the plate, while closing the one exposed to view during the trip just completed.

Having thus described my invention, what I claim is,—

1. In a fare-recorder, the combination with a casing having a record-receiving device, of means for causing the fares collected between any two points to be recorded distinctively upon the record-receiving device, so that the fares collected for passage between any points may be ascertained.

2. In a fare-recorder, the combination with a casing of a record-receiving device therein, of mechanism to record the fares collected on said record-receiving device, and means for indicating any two stations along the line of travel from and to which the fare has been recorded.

3. In a fare-recorder, the combination with a casing having a record-receiving device therein and invisible from without the

same, of mechanism to record the fares collected on said record-receiving device, and means exposed to view to indicate the stations or points from and to which the fares
5 are recorded.

4. In a fare-recorder, the combination with a casing, of recording mechanism and means to visibly indicate from and to which points the fares collected are recorded.

10 5. In a fare-recording device, the combination of a recorder having recording-mechanism and an indicating-device to indicate the points or stations from and to which the fare collected has been recorded, an indicating-device separate from said recorder to
15 indicate the points or stations from and to which the fare collected has been recorded, and operating-mechanism to actuate said recording-mechanism and both indicating-devices from either compartment.

20 6. In a fare-recorder, the combination with a casing, of recording-mechanism within the casing, a plate bearing the names of the stations secured to said casing, a rotatable
25 operating-rod to actuate the recording-mechanism and having an indicating-finger to point to any one of the names on said plate, and a rotatable annunciating-device bearing the names of the stations, said plate
30 and said rotatable annunciating-device indicating to the passengers the names of the stations from and to which the fares collected have been recorded.

35 7. In a fare-recorder, the combination with a casing, of recording-mechanism within said casing, having a removable record-sheet holder, a shaft operatively connected to move said record-sheet holder, a rotatable
40 station annunciator operatively connected with said shaft and bearing the names of the stations, a plate having a sight-opening through which any one of the names on said
45 rotatable station annunciator are exposed to view; said plate having the names of the stations applied thereto, and operating-mechanism to record the fare collected on the record-sheet of said record-sheet holder
50 and having operative connection with the latter to move the same and having also an indicating-finger to point to any one of the names of stations applied to said plate.

55 8. In a fare-recorder, the combination with the casing, of recording-mechanism having a record-sheet holder and a pair of rotatable reels in said holder adapted to receive a record-sheet, a shaft operatively
60 connected with said record-sheet holder to move the same, a plate applied to said casing and having two sight-openings, rotatable annunciating-reels operatively connected with said
65 shaft and bearing the names of stations, a plate having the names of stations on opposite sides in reverse order and having an extension adapted to close one sight-opening in the first mentioned plate when one side of

the name-bearing plate is exposed and adapted to close the other sight-opening when the other side thereof is exposed, a rotatable operating-rod also capable of lengthwise movement to actuate the recording-
70 mechanism and having an indicating-finger to point to any one of the names on said name-bearing plate, and operative connection between said operating-rod and said rotatable reels to cause the record-sheet to
75 move independent of the record-sheet holder.

9. In a fare recorder, the combination with a casing having a movable record-receiving device therein, of recording-mechanism to separately record on said record-receiving device the fares collected, and
80 mechanism to place the record upon the record-receiving device with a single impression so that the number of fares collected for
85 passage between any two points may be ascertained.

10. In a fare recorder, the combination with a casing having a record-receiving device therein, of mechanism to record the
90 fares on said record-receiving device with a single impression so that the points from and to which the fare was collected for passage will be shown.

11. In a fare-recorder, the combination
95 with a casing having a record-receiving device therein adapted to carry a record-sheet, of means for moving said record-receiving device bodily in one direction and in part in another direction, and recording-mechanism
100 to record the fare collected and having operative connection with said means for moving the record-receiving device so that a new portion of the record-sheet thereof is presented to the recording-mechanism for
105 each operation of the latter.

12. In a fare-recorder, the combination with a casing having a record-receiving device adapted to receive a record-sheet, of
110 recording-mechanism to record the fares collected on the record-sheet and having operative connection with said record-receiving device to move the sheet thereon in one direction, and a station annunciating-device
115 operatively connected with said record-receiving device to move the same bodily in another direction.

13. In a fare-recorder, the combination with a casing having a record-receiving device adapted to carry a record-sheet divided
120 into record-spaces, of recording-mechanism to record the fares on said record-receiving device and having station indicating-means attached thereto and operative connection with the record-receiving device to move
125 the record-sheet carried thereby lengthwise of the record-spaces thereon, a device bearing the names of the stations along the line of travel and over which the indicating-means of said recording-mechanism is moved
130

to indicate the point or station to which the fare collected is recorded, and annunciating-mechanism also in operative connection with the record-receiving device to cause the same to move at right-angles to the length of the record spaces on said record-sheet and being adapted to indicate the station from which the fare collected is recorded.

14. In a fare-recorder, the combination with a casing having a record-receiving device within the casing adapted to carry a record-sheet divided into a plurality of record-spaces, each space being adapted to receive the record of fares collected for passage between different points or stations or for different points of destination than the other record-spaces, of recording-mechanism for separately recording the fares collected in the proper record-spaces on said record-sheet and having operative connection to move said record-sheet lengthwise of the record-spaces thereon, means to indicate the station of destination the fare collected is recorded, and annunciating-mechanism to indicate the station from which the fare collected has been recorded, said annunciating-mechanism having operative connection with the record-receiving device to move the same at an angle to the length of the record-spaces on said record-sheet.

15. In a fare-recorder, the combination with a casing, of a record-sheet holder having a delivery-roller on which a record-sheet is adapted to be wound and a "take-up" roller to which one end of said record-sheet is adapted to be secured, station indicating-devices to indicate from and to which stations the fare collected is to be recorded, means for moving said record-sheet holder and simultaneously indicating the station from which the fare collected is to be recorded, means to record the fare and simultaneously indicate the station to which the fare collected is recorded, and mechanism to rotate said "take-up" roller.

16. In a fare-recorder, the combination with a casing, of a record-sheet holder within the casing arranged to receive the record of fares collected for different distances or for passage between different points, said record-sheet holder having a delivery-roller on which a record-sheet is wound and a "take-up" roller having one end of said record-sheet secured thereto, means for recording the fares collected on said record-sheet, means for moving said record-sheet holder within the casing, and means to rotate said "take-up" roller.

17. In a fare-recorder, a record-sheet holder comprising a support having spring-controlled pins, a roller into the ends of which said pins are held and on which a record-sheet is adapted to be wound, and a second roller onto which one end of said record-sheet is adapted to be secured; com-

bined with recording-mechanism, and means for revolving the said second roller.

18. In a fare-recorder, a record-sheet holder comprising a support having spring-controlled pins, a roller mounted to revolve on said pins and on which a record-sheet is adapted to be wound thereon, and a second roller onto which one end of said record-sheet is secured; combined with recording-mechanism, mechanism to move said support in the direction of length of said rollers, and mechanism for revolving said second roller.

19. In a fare-recorder, a record-sheet holder comprising a support, a roller mounted to revolve in said support and adapted to have a record-sheet wound thereon, a second roller also revoluble in said support and adapted to have one end of said record-sheet secured thereto, and a spring to prevent accidental or unnecessary rotation of said first-mentioned roller; combined with recording-mechanism, and means to revolve the said second roller.

20. In a fare-recorder, the combination with a casing, of a shaft mounted to revolve in said casing, a record-sheet holder movable lengthwise of said shaft, a receiving-roller adapted to have one end of a record-sheet secured thereto and being splined to said shaft so as to be carried lengthwise thereon upon movement of said record-sheet holder and so as to rotate with said shaft, a delivery-roller at a distance from said receiving-roller and adapted to have said record-sheet wound thereon, means to revolve said shaft, means to move the record-sheet holder, and recording-mechanism to record the fares collected on said record-sheet.

21. In a fare-recorder, the combination with a casing, of a delivery-roller revoluble therein and adapted to have a record-sheet wound thereon, a receiving roller having a longitudinal groove into which one end of said record-sheet is adapted to be placed, a key fitting said groove and adapted to secure the end of the record-sheet therein and recording-mechanism adapted to record the fares collected on said record-sheet.

22. In a fare-recorder, the combination with a casing, of a record-sheet holder having a gear-rack thereon and comprising a support, a delivery roller adapted to have a record-sheet wound thereon and a receiving roller to which one end of said record-sheet is adapted to be secured, means to revolve said receiving-roller, mechanism including a gear-wheel in mesh with the gear-rack on said record-sheet holder to move the latter, and recording-mechanism to record the fares collected on said record-sheet.

23. In a fare-recorder, the combination with a casing, of a punch-plate provided with a series of perforations over which a record-sheet is adapted to pass, a series of spring-controlled perforating-pins adapted to enter

the perforations in said punch-plate to perforate said record-sheet, a rod movable lengthwise and rotatable and having a presser-finger thereon to actuate any one of said perforating-pins.

24. In a fare-recorder, the combination with a casing, of two rollers revoluble within said casing and upon one of which a record-sheet is adapted to be wound to be taken up by the other roller, a shaft to which said last-mentioned roller is secured, a ratchet-wheel on said shaft, a pawl engaging said ratchet-wheel, a lever to which said pawl is engaged, and mechanism to record the fare and to actuate said lever.

25. In a fare-recorder, the combination with a casing, of two rollers revoluble within said casing and upon one of which a record-

sheet is adapted to be wound to be taken up by the other roller, a shaft to which said last-mentioned roller is secured, a ratchet-wheel on said shaft, an actuating pawl engaging said ratchet, a release-device to release the pawl from engagement with the ratchet at a predetermined point in its idle movement, a lever to which said pawl is pivotally secured, and mechanism to record the fares and to actuate said lever.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

FRANK BATT.

Witnesses:

ELLA C. PLUECKHAHN,
EMIL NEUHART.