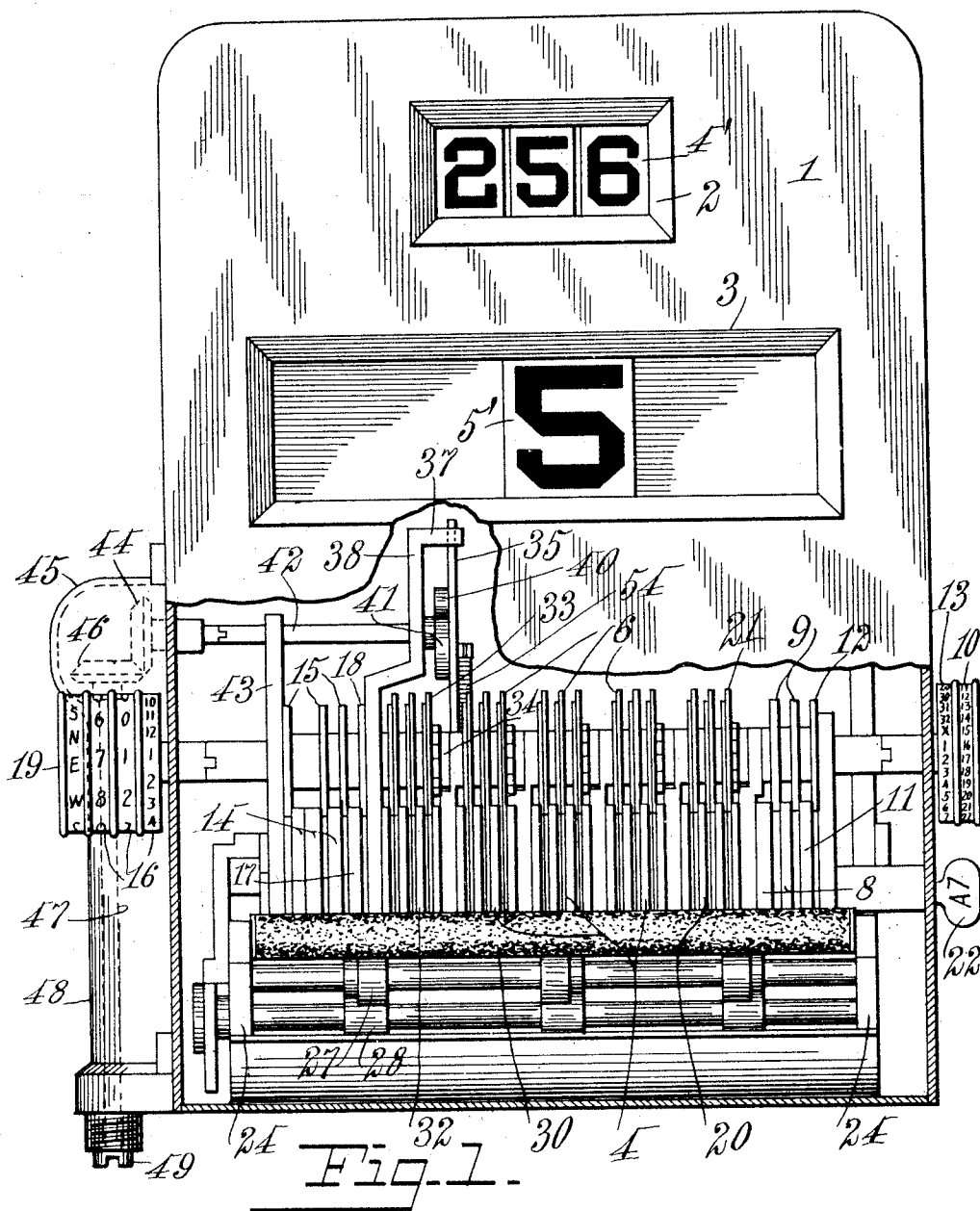


J. F. OHMER, JR.
FARE REGISTERING AND RECORDING MACHINE.
APPLICATION FILED DEC. 30, 1916.

1,255,561.

Patented Feb. 5, 1918.
2 SHEETS—SHEET 1.



Witness
W. Hubler

Inventor
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By *R. M. Carty* his Attorney

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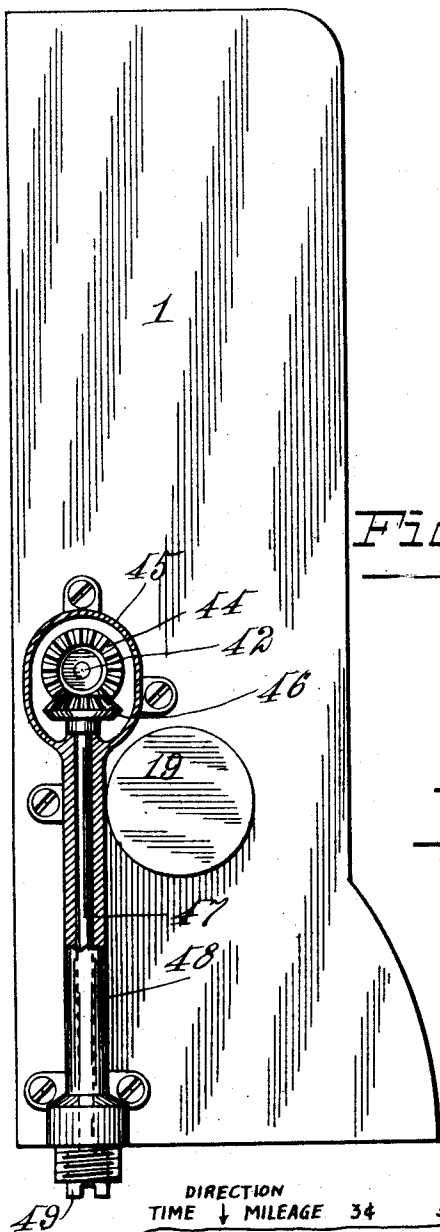


Fig. 2.

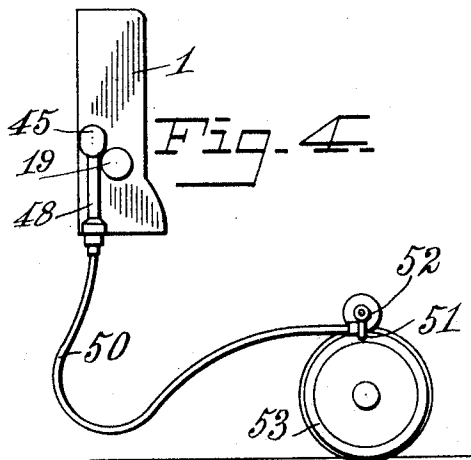


Fig. 4.

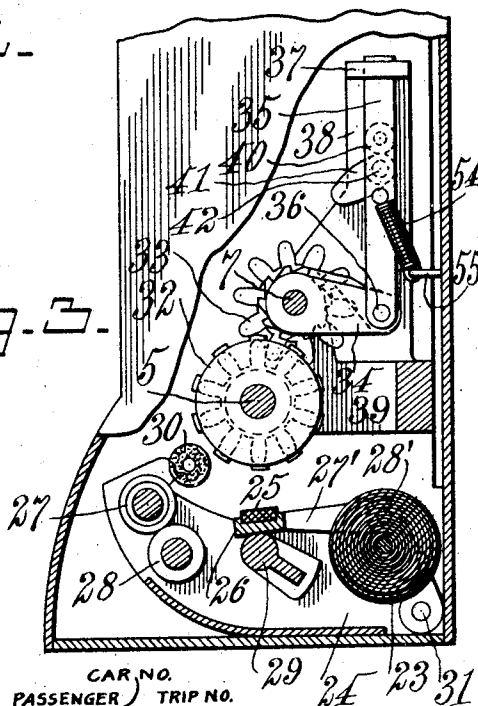


Fig. 3.

Witness
H. S. Miller

DIRECTION		CAR NO.		PASSENGER		TRIP NO.	
TIME	MILEAGE	34	54	TICKET	TOTAL	DATE	KEY NO.
5.32 E	174.5	7431	1321	0437	1461	JAN 7 11 A7	
4.40 W	132.2	7411	1301	0421	1404	JAN 7 10 A7	
3.58 E	119.3	7400	1288	0417	1376	JAN 7 9 A7	
2.45 W	108.7	7392	1276	0408	1347	JAN 7 8 A7	
2.37 E	101.0	7385	1266	0398	1320	JAN 7 7 A7	

Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN F. OHMER, JR., OF DAYTON, OHIO, ASSIGNOR TO OHMER FARE REGISTER COMPANY, OF DAYTON, OHIO.

FARE REGISTERING AND RECORDING MACHINE.

1,255,561.

Specification of Letters Patent.

Patented Feb. 5, 1918.

Application filed December 30, 1916. Serial No. 139,890.

To all whom it may concern:

Be it known that I, JOHN F. OHMER, JR., citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fare Registering and Recording Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements to be hereinafter specified in that type of fare recorders which is commonly used for registering, indicating, and recording the various fares collected on street and interurban railway lines. This type of machine is adapted to register, indicate, and record the fares, said fares being registered and recorded according to their classification, and at the end of each trip or at other times impressions or records are taken from type wheels which show on a single sheet the number of each class of fares collected on each given trip, together with the date, the number of machine, and the trip number. The present invention consists of certain improvements of the fare register and recorder shown and described in Letters Patent, No. 646,757, of April 3, 1900, No. 937,220, of October 19, 1909, and No. 1,091,727, of March 31, 1914.

The object of the present invention is to provide means for obtaining upon such record or records the number of miles the car travels or moves on each trip, whereby the earnings of each car per mile for each trip or for any number of trips combined may be estimated from the record which contains the other data or information mentioned above. In other words, the necessary means are combined with the well known record-producing means of the fare recorders referred to above for obtaining upon such records the earnings per car mile for each trip or for an aggregation of trips.

To this end the present invention comprises a set of type wheels or printing counters which are located in alinement with the various type or printing wheels from which are taken records of the collections of each

class of fares, and in printing alinement with the date printing wheels, the total registration printing wheels, the fixed printing device from which is printed the number of the register upon the record, the trip number printing wheel, and the wheels from which are printed upon the record the time and the direction in which the car is moving. It is not wholly essential that the distance or mileage printing wheels shall be located in alinement with the other printing members, but such manner of mounting is preferred, owing to the convenience of such an arrangement.

Before entering into a more minute description of the invention, reference is made to the accompanying drawings, of which Figure 1 is a front elevation of the registering and recording machine to which my improvements are applied, a portion of the front of the casing being broken away to illustrate the various banks of printing or recording wheels and the impression device which coöperates therewith in taking prints or records therefrom. Fig. 2 is a side elevation of the machine showing the connections extending to the distance or mileage printing wheels and by means of which connections said wheels are actuated from a moving part of the car in which the machine is mounted. Fig. 3 is a side elevation of the lower portion of the machine with a portion of the casing broken away to illustrate the distance or mileage printing wheels or counters and their actuating means. Fig. 4 is a side elevation of the machine showing the connection between the distance or mileage counter and a wheel of the car, and Fig. 5 is a view of the record sheet taken from the various printing wheels and upon which is shown the car mileage and the various other data, such as the classification of fares collected, etc.

In a detailed description of my invention, similar reference numerals indicate the same parts or elements both in the annexed drawings and in the description. The registering and recording mechanism is housed within the casing 1 which is of a well known design and in the front face of which there is provided sight openings 2 and 3 through which passenger indicator wheels 4 and the fare indicators 5 are visible as they are operated to exhibit the various figures thereon.

These elements are not involved in the

present improvements and are therefore only incidentally mentioned. Within the lower portion of said casing the several banks of printing wheels 4 are mounted upon a common shaft 5 and upon which the various fares collected are registered and from which prints or records are taken, showing the number of fare collections of each class for each trip, as shown in Fig. 5. These fare register and recording wheels 4 are actuated in a well known manner from transfer wheels 6, which are strung upon a shaft 7. In alinement with the fare wheels 4, printing wheels 8 are arranged from which the dates, that is to say, the months and the days thereof, are printed upon the record. These date printing wheels 8 are set to printing positions manually by means of wheels 9, the latter wheels being manipulated by the hand through the indicating drums 10, which extend on the outside of the casing and connect with the wheels 9. Also in alinement with the fare printing wheels and the date printing wheels is arranged the trip number printing wheel 11, which is actuated through gear 12 which is operated manually from an indicator drum 13 arranged on the outside of the casing. The time recording wheels 14 are likewise arranged in printing alinement with the other printing wheels referred to, and are actuated from wheels 15 which are set manually or by hand through means of indicating drums 16 arranged on the outer side of the casing. The direction printing wheel 17 is adjacent to the time printing wheels and the said wheel is actuated or set by wheel 18, which is operated by hand from drum 19. 20 indicates the bank of printing wheels which print upon the record the total fares collected or the accumulation of the various fares which are recorded from the classified fare printing wheels 4, before referred to. The total fare printing wheels 20 are actuated from transfer wheels 21 in a well known manner. The conductor's identification key 22 from which is printed the identifying mark upon the record of the person taking said record is also placed in printing alinement with the other printing wheels or elements.

The above mentioned printing devices have been briefly mentioned because they are well known elements of the registering and recording machines which are more fully described in the several Letters Patent hereinbefore referred to, and a more detailed description is believed to be unnecessary.

The printing or impression devices which cooperate with the various wheels and elements are also described in detail in said patents and therefore it is unnecessary to describe them here beyond what is sufficient to enable an understanding of the same. The record as shown in Fig. 5 is made upon

a sheet of paper unwound from roll 23 which is mounted on a spindle having bearings in the lower portion of the casing. The sheet from this roll lies between the printing characters on the various printing wheels and devices, and an impression pad 25 carried upon a bar 26, which is supported upon arms 27' pivoted at 28' to the side plates or bearings 24. The paper is thence carried through feed or unwinding rolls 28 and 27^a, the former being the actuating roll by means of which the paper is fed forward for each impression. The impression pad 25 is operated from an eccentric bar 29, which is journaled or mounted in the plates 24. The printing characters on the various wheels and printing devices are inked from a suitable inking roll 30. The side plates or bearings 24 are pivoted at points 31, and may be lowered to supply additional paper rolls as the case may require by opening the bottom of the casing.

Having described the well known mechanism of the modern fare registering and recording machine, through means of which records have been heretofore taken showing the necessary data for fixing the responsibility for the fare collections taken up in street and interurban cars, I will now refer to the elements and parts that enter into the present invention and extend the utility of such machines to the extent that the mileage or distance covered by the car may be conveniently shown on the same record. 32 designates a bank of printing wheels or counters, which print the mileage or distance of travel of the car. These mileage or distance counters are actuated by the common form of transfer wheels 33. The said mileage counters are mounted in alinement with the other printing elements, and the actuating or transfer wheels 33 are likewise mounted in alinement with the transfer or actuating wheels of the other counters. The actuating wheel of this mileage counter has its pawl-carrying arm 34 pivoted to a pitman 35 at 36. The pitman 35 is reciprocated vertically to actuate the pawl-carrying member 34 and is guided or supported in its movements by a guide member 37 which is mounted upon a frame 38 extending from the bearing 39 which supports the transfer wheel shafts. The pitman 35 has mounted upon a side thereof a roll 40, which lies in the path of a cam 41, mounted upon a shaft 42. The shaft 42 turns in bearings furnished by the frame 38 and a frame 43. It will be observed that when the shaft 42 is rotated the cam 41 will reciprocate the pitman 35 and will thereby operate the mileage printing counter 32. The shaft 42 is driven from a suitable gear 44 which lies on the outside of the main casing within a housing 45 fixed to a side of the main casing. The gear 44 is driven from a similar

gear 46, which is mounted upon a vertical shaft 47 journaled in a tubular bearing 48, which is likewise fixed to the side of the main casing of the machine and may be an extended portion of the gear housing 45. The shaft 47 has its lower end 49 exposed beyond the bearing, and this exposed end 49 is suitably constructed to adapt it to be coupled to a well known form of flexible shaft 50, which extends to a rotating part of the car and is driven therefrom. In Fig. 4 this connection of the flexible shaft 50 is sufficiently illustrated to show the manner of conveying motion to the mileage counter. It may be stated here, however, that the mileage counter may be actuated by and through means other than the particular connection shown and now being referred to. The flexible shaft 50 is connected to a gear or worm wheel 51 which is driven from a similar wheel 52 suitably mounted in proximity to one of the car wheels 53 and adapted to be driven therefrom. By this means the rotations of the wheel 53 cause a continuous reciprocation of the pitman 35, during which the cam 41 as before stated is operated to elevate said pitman according to the distance which the car travels, and thus the distance traveled by the car is measured. A spring 54 is attached to the pitman 35 and to a convenient part of the casing of the register and recorder, for example at 55. By means of this spring the pitman is controlled or moved to the normal position

when not under the control of the moving cam 41. By referring to the illustration of the record sheet as shown in Fig. 5, from this it will be seen that the work of the fare register and recorder machine for four trips is recorded thereon. The mileage or distance traveled by the car on each of these trips is indicated thereon, in addition to the collections of each class of fares, as well as the other data referred to, by which a complete account is obtainable, including a record showing the total number of passengers who paid fares in any denomination.

Having described my invention, I claim:

In a machine of the character specified, a mileage printing counter, means for actuating said counter from a movable part of a vehicle including an actuating wheel, a pawl engaging said actuating wheel, a pitman adapted to actuate said pawl, a roll carried by said pitman, a cam engaging said roll, a shaft through which said cam is actuated, a driving shaft adapted to actuate said shaft, said driving shaft being operated from a moving part of a vehicle, and means for taking impressions from said counters, substantially as specified.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN F. OHMER, JR.

Witnesses:

E. SEHELLENBACH,
MATTHEW SIEBLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."