

No. 753,535.

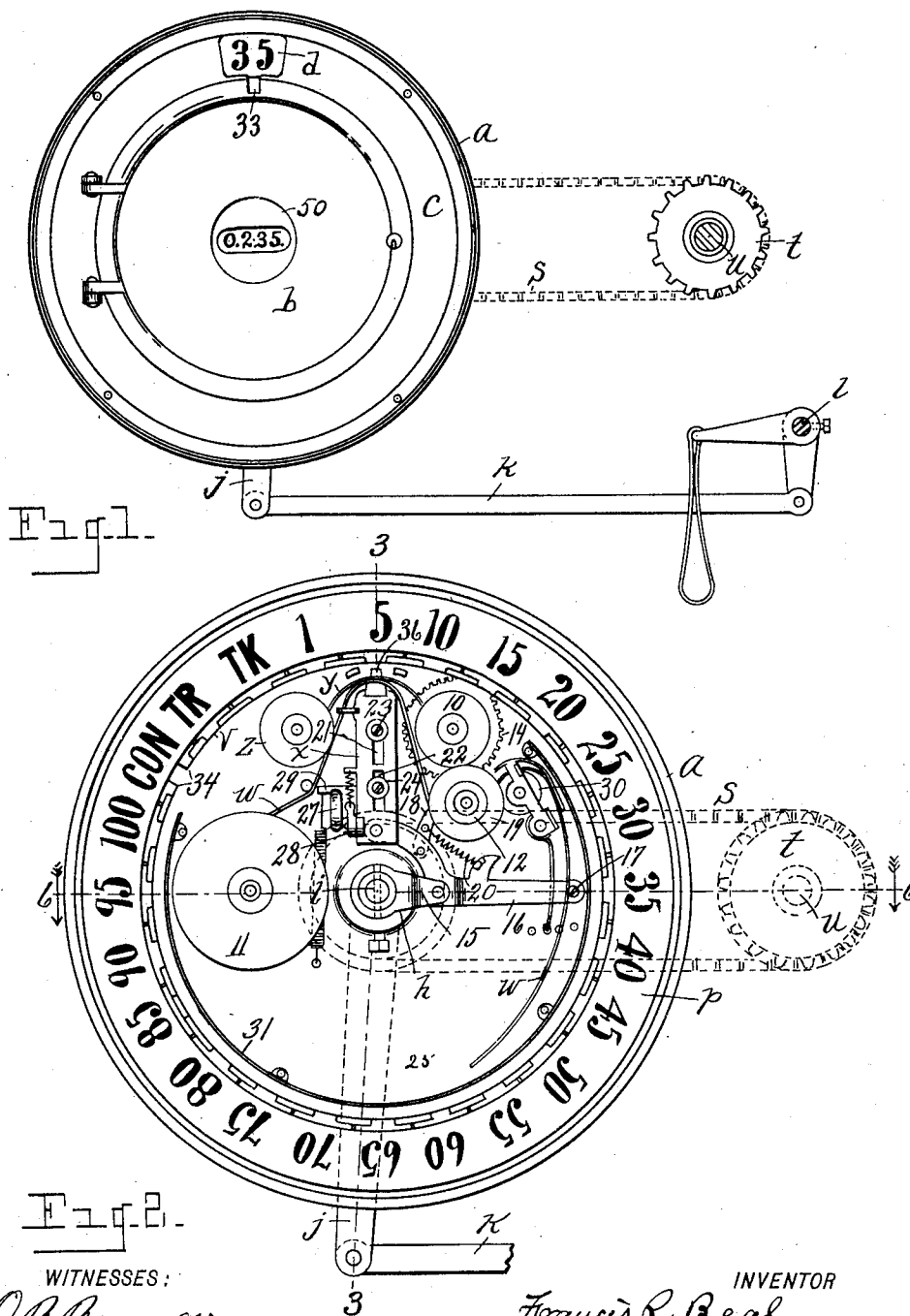
PATENTED MAR. 1, 1904.

F. R. BEAL.
REGISTER.

APPLICATION FILED MAY 6, 1903.

NO MODEL.

4 SHEETS—SHEET 1.



WITNESSES:
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No. 753,535.

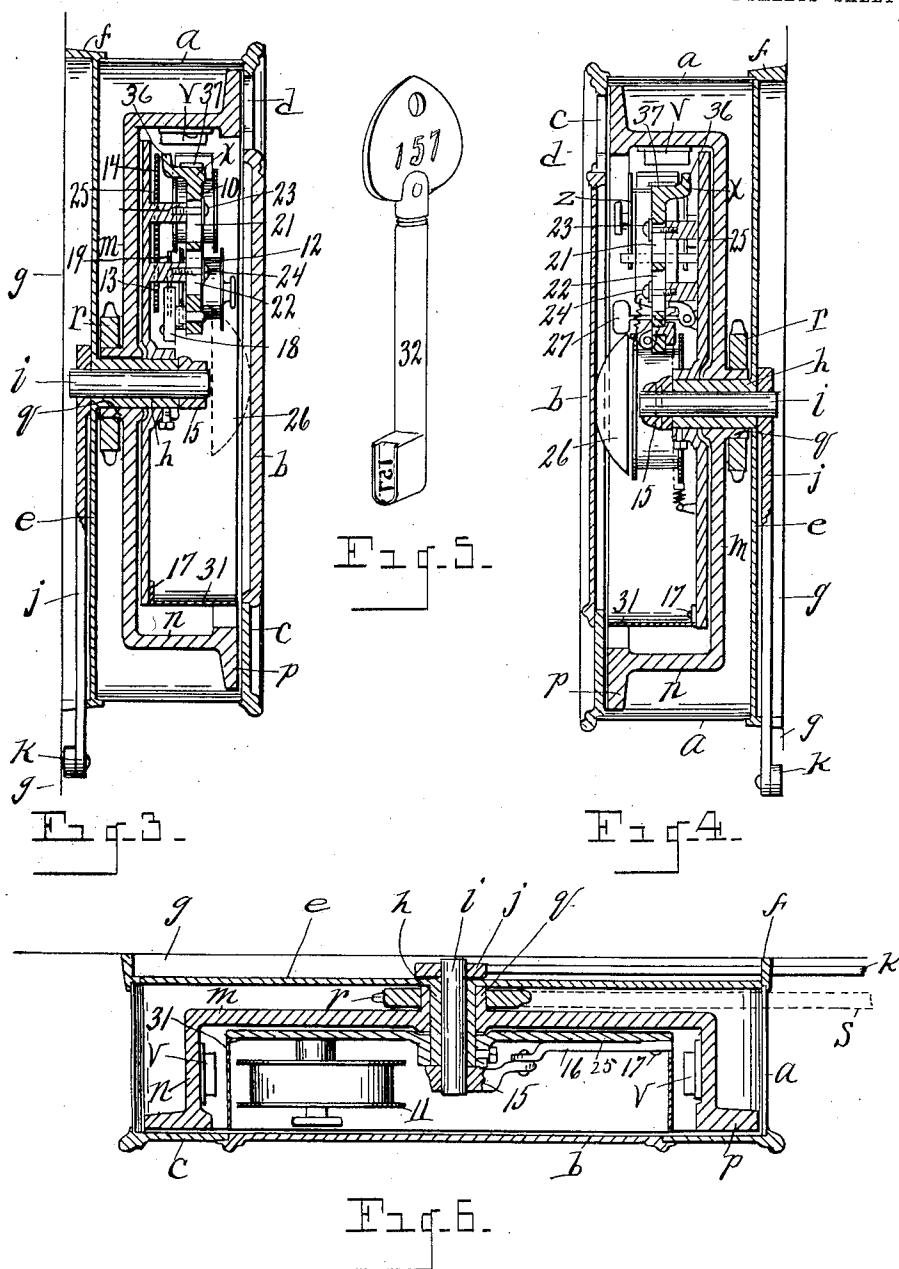
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F. R. BEAL.
REGISTER.

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NO MODEL.

4 SHEETS—SHEET 2.



WITNESSES:

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No. 753,535.

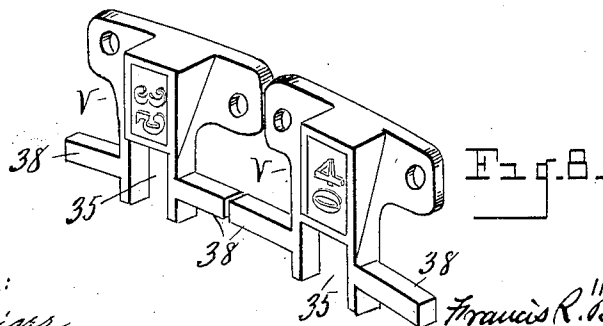
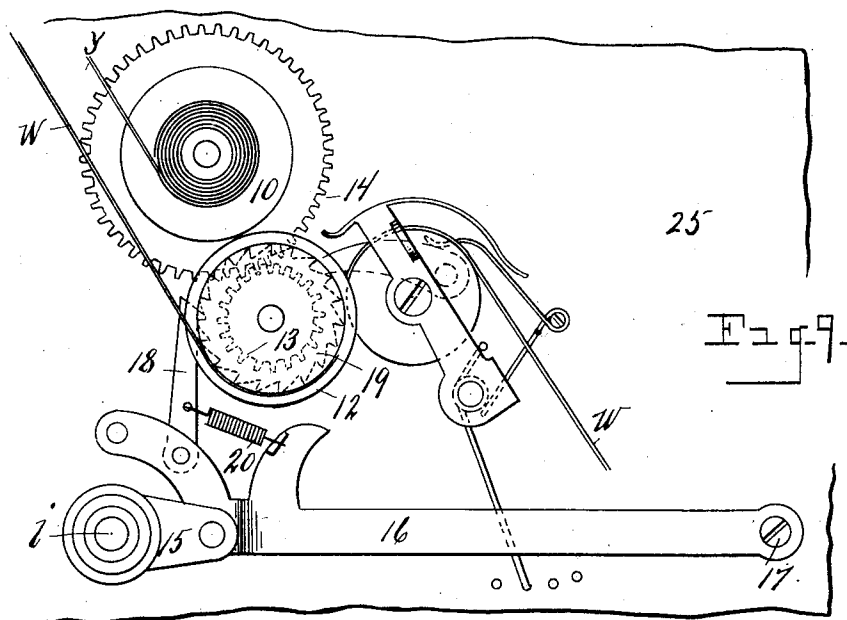
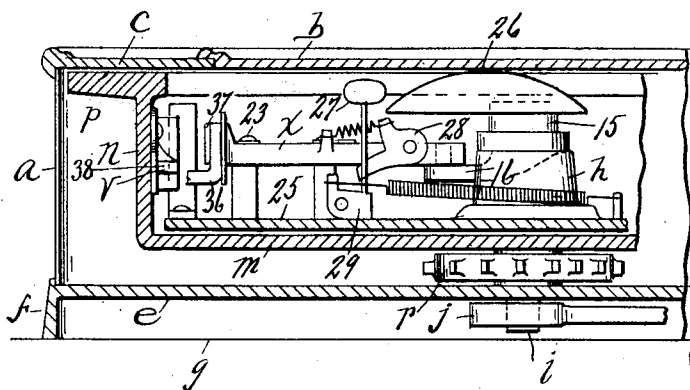
PATENTED MAR. 1, 1904.

F. R. BEAL.
REGISTER.

APPLICATION FILED MAY 6, 1903.

NO MODEL.

4 SHEETS—SHEET 3.



WITNESSES:

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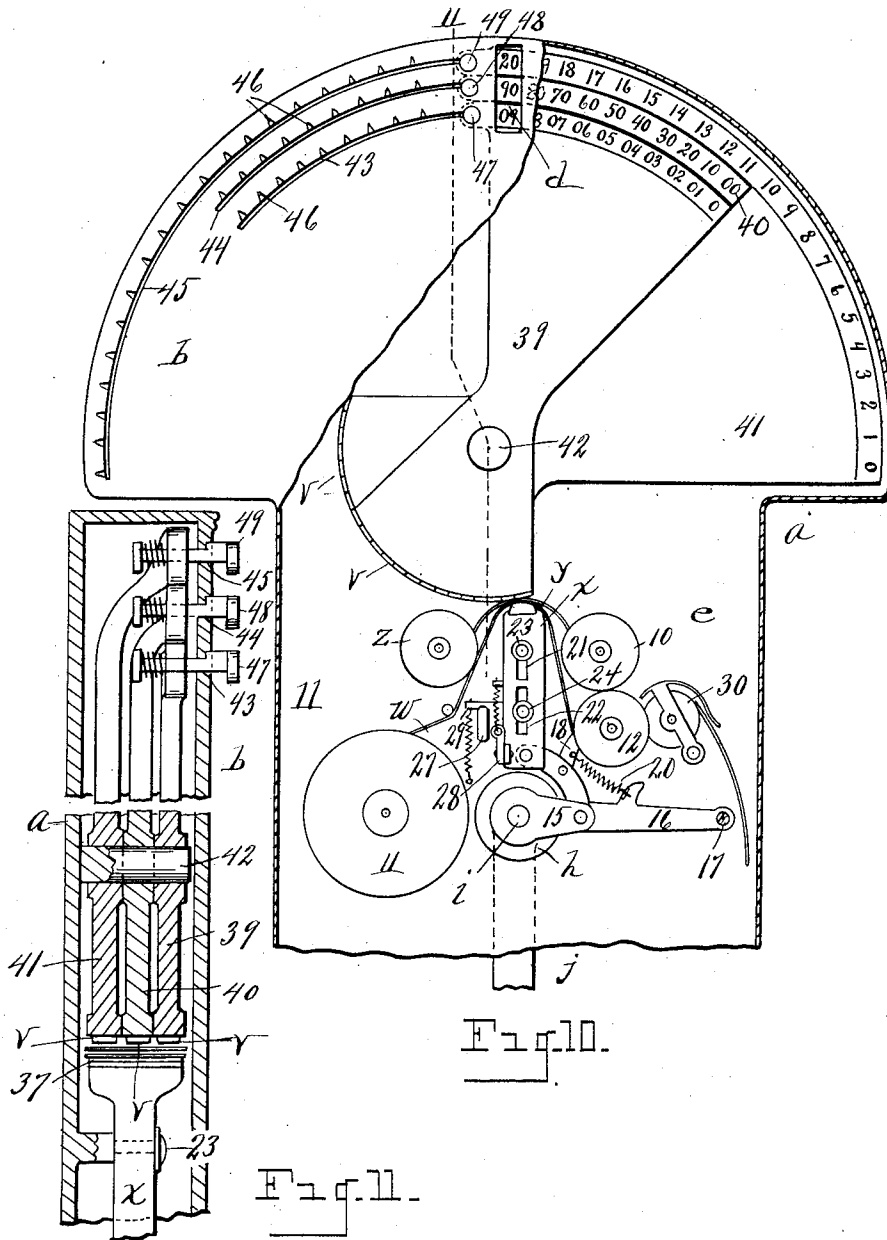
PATENTED MAR. 1, 1904.

F. R. BEAL.
REGISTER.

APPLICATION FILED MAY 6, 1903.

NO MODEL.

4 SHEETS—SHEET 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANCIS R. BEAL, OF NORTHVILLE, MICHIGAN.

REGISTER.

SPECIFICATION forming part of Letters Patent No. 753,535, dated March 1, 1904.

Application filed May 6, 1903. Serial No. 155,810. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS R. BEAL, a citizen of the United States, residing at Northville, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Registers, of which the following is a specification, reference being had to the accompanying drawings, which form a part of this specification.

My invention has for its object to provide a cash-register, the same being designed for any use to which it may be found adapted, my apparatus embodying particularly a cash-register adapted for registering fares on suburban car-lines where the amount of the fares is liable to differ considerably.

My invention consists of the construction, combination, and arrangement of devices hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in front elevation, showing the operative shafts in section. Fig. 2 is a similar view of portions of the device, the cover being removed. Fig. 3 is a section on the line 3 3, Fig. 2, looking to the right. Fig. 4 is a similar section, but looking in the opposite direction. Fig. 5 is a detail view of a key. Fig. 6 is a view in horizontal section on the line 6 6, Fig. 2. Fig. 7 is a partial sectional view showing the bell-hammer-tripping mechanism. Fig. 8 is a detail view of two of the type-plates. Fig. 9 is a detail view showing the mechanism for actuating the ribbon. Fig. 10 illustrates a modification of my invention, a portion of the cover being broken away. Fig. 11 is a view in section through portions of the device shown in Fig. 10.

In ordinary cash-registers for registering fares on street-railways the construction has been such as to register fares of like amounts. It will be evident, however, that where fares differ in amount a register of different construction must be employed, so that the conductor, for example, may register fares of varying amounts. The register shown herewith is shown adapted for registering fares of varying amounts, as from five cents to one dollar; but I would have it understood that I do not limit myself to any particular amounts of the fares to be registered; but it will be con-

venient to describe the invention as well as to illustrate it as arranged to register fares from five cents to one dollar.

I carry out my invention as follows:

In the drawings, *a* represents an inclosing case provided with a cover *b*, arranged to be opened, a stationary annular rim *c* being located between the cover *b* and the sides of the case *a*, said rim *c* practically forming a part of the cover. The rim is provided with an opening *d*, through which the amount of the fare registered may be displayed. The case is provided with a base *e*, preferably provided with a peripheral annular flange *f*, so that the base *e* will be spaced suitably from the support *g*, to which the register may be attached to allow for the free action of certain operative devices to be hereinafter described. The base *e* is constructed with a bearing (indicated at *h*) projecting within the case, through which bearing projects an actuating-shaft *i*, actuated by a lever-arm *j* on the under side of the base *e*, said lever-arm *j* being connected with any suitable operative device, as by a connecting-rod *k*, with a crank-shaft *l* running lengthwise of the car, convenient for the operation of the conductor.

Within the case *a* and about the bearing *h* is located a bed-plate *m*, provided with an outwardly-projecting peripheral flange *n*. The edge of the peripheral flange *n* is provided with a laterally-extending flange *p*, located underneath the rim *c* and bearing the numerals to indicate various amounts of fares, as shown more particularly in Fig. 2. The bed-plate *m* is sleeved upon the bearing *h* and is rotatable thereupon, so as to bring any desired number to indicate a given fare to register with the opening *d* in the rim *c*. This flanged bed *m* may be rotated in any desired manner. As shown, the bed is provided with a hub *q*, upon which is located a sprocket-gear *r* or an analogous device to rotate the flanged bed, the sprocket-gear *r* being shown as in Fig. 1 connected by a sprocket-chain *s* with a similar gear *t* upon a shaft *u*, which may run also lengthwise of the car for the operation of the conductor. I do not, however, limit myself to any particular mechanism by which the operation of the shaft *u* may rotate the flanged

bed. The flange *n* of the bed *m* is provided on its inner periphery with a series of stationary types, (indicated at *v*,) the individual type corresponding to the adjacent number upon the face of the flange *p*. The type *v* may be constructed in any desired manner to be secured to the inner periphery of the flange *n*.

The mechanism embodying my invention is designed to cause the impression of any given type to be made upon a movable ribbon or strip of paper (indicated at *w*) arranged to be moved in position adjacent to the type, as over the end of a reciprocatory arm or hammer *x*. Between the strip *w* and the adjacent type *v* is an inking-ribbon *y* or other inking device, the inking-ribbon, if employed, being made movable in any desired manner. As shown, the inking-ribbon is wound upon a spool *z* and wound upon a spool indicated by the numeral 10. The tape *w* is shown carried upon a spool 11 over the end of the reciprocatory hammer *x* and to a rotatable spool 12. The spool 12 is provided with a gear 13, meshing with a gear 14 upon the spool 10.

To actuate the reciprocatory hammer *x* and other portions of the mechanism, as herein-after described, I have shown the shaft *i* provided on its inner end with a crank-arm 15, with which is connected a lever 16, fulcrumed, as at 17, upon the stationary rear plate or wall 25. The lever-arm 16 is constructed with a pawl 18, engageable with a toothed disk 19 upon the spool 12 for actuating said spool and therethrough actuating spool 10 for winding up the tape *w* and the inking-ribbon *y*. A spring 20 holds the pawl 18 in engagement with the toothed disk. The lever-arm 16 is also connected with the reciprocatory arm or hammer *x* to actuate said hammer. The hammer is shown provided with elongated slots 21 and 22 and is held in place by guide-pins extending through said slots, (indicated at 23 and 24,) said pins entering suitable supports therebeneath carried upon the plate or wall 25, engaged upon the bearing *h*. A bell 26 is attached to the cover actuated by a clapper 27, the clapper being actuated in turn by a dog 28, carried upon the hammer *x*, the clapper being carried at its lower end upon a rocking device 29, arranged to be tripped by the dog 28.

The strip *w* is passed about the spool 12 and over a guide-spool 30, thence passing down into the base of the chamber formed within the flanged bed *m*. In said chamber is located a guard 31 to keep the strip away from the adjacent type.

A conductor's key is indicated at 32. The rim *c* and cover *b* are cut away, as indicated at 33, to permit the insertion of said key between two adjacent type *v*, the key being provided with a number, as indicated in Fig. 5, and arranged to make its imprint upon the strip *w* by the reciprocation of the hammer *x*. The inner surfaces of the flange *n* of the plate

m is provided with guides (indicated at 34, Fig. 2,) between which the key may be inserted, the flange *p* being provided with letters to indicate the position for the conductor's key. So, also, the surface of the flange *p* may be provided with letters to indicate a transfer and with a corresponding type on the inner peripheral surface of the flange *n*, the same being indicated in Fig. 2 by the letters "T R." So, also, the flange *p* may be provided with suitable letters, as "T K," to indicate a ticket and the inner peripheral surface of the flange *n* with a corresponding type.

The operation of the device is as follows: The conductor first rotates the plate *m*, so as to show the position for the conductor's key through the orifice *d*. His key is then inserted, and the imprint of his number is made upon the strip *w*. His key is then removed, the number of his key of course corresponding to his own number. Supposing the conductor to be starting within the city limits in which five-cent fares are to be paid, when such fares are received he turns the numeral "5" in the manner hereinbefore described to register with the opening *d*. He then manipulates the lever *j* to make the desired imprint upon the strip *w*. For a successive number of fares of similar amounts of course he needs no further adjustment of the flanged plate *m*. Outside the city limits, where fares of various amounts are to be received, he correspondingly adjusts the flanged plate *m* to bring the desired number to register with the orifice *d* and makes the required imprint upon the ribbon.

Obviously the mechanism is simple, not liable to get out of order, and is efficient in operation for fares of various amounts.

Should fares of larger denominations than those indicated upon the face of the flange *p*, the numeral corresponding to the amount, for example, might be brought into position and two imprints made upon the ribbon.

Any suitable inking device may be employed within the scope of my invention, and any suitable means may be employed to rotate the flanged plate *m* and to actuate the hammer *x*.

I do not limit myself to any particular construction, arrangement, or operation of a hammer to make the impression of the type upon the record-strip *w*, as my invention contemplates any suitable plunger or hammer actuated in any desired manner for this purpose.

The type *v* are preferably constructed to abut the one against the other, although this is not essential, and are formed with guide-recesses (indicated at 35) to receive a tongue 36 of the hammer *x*, so that anvil-face 37 of the hammer *x* will be guided certainly into proper position to make the desired imprint. To prevent the possibility of the hammer entering between two adjacent types, the types are shown constructed with laterally-project-

ing arms 38 to abut against one another and prevent the tongue 36 of the hammer from entering between two adjacent types.

In Figs. 10 and 11 I have shown a modification of certain features of my invention, embodying, however, the same essential features as those above described. In the construction above described the type and corresponding numbers have been carried upon a rotatable flanged plate. In Figs. 10 and 11 instead of the employment of a flanged plate to carry the type and their adjacent numbers I have shown oscillatory plates or arms, (indicated at 39, 40, and 41,) three being shown herewith for the purpose of illustration; but my invention contemplates any desired number of said plates, whether singular or plural, each pivoted upon a stud or journal 42. Where plural plates or arms are employed, they would all be made oscillatory upon a common center or journal. Both extremities of said plates are formed, preferably, arc-shaped, one end thereof being provided with the type *v*, as shown, arranged, preferably, upon the arc-shaped edge thereof. The opposite ends of said plates are provided, preferably upon the surface thereof, with numerals, as shown in Fig. 17, corresponding to the type on the opposite end of the plate. The cover *b* of the case embodying this construction is provided with elongated arc-shaped slots, (indicated at 43, 44, and 45,) each of said slots being preferably formed with a series of serrations or recesses 46. Each of the plates is shown provided with a spring-pin, as shown at 47, 48, and 49, extending through the corresponding slot, the spring of the corresponding pin serving to hold the pin in any given serration of the slot to which the corresponding plate may be adjusted. To move the plate, the operator grasps the corresponding spring-pin and moves the plate to bring the desired numeral upon the outer end of the plate to register with the opening *d* in the case. By the employment of three plates, as shown in Figs. 10 and 11, one of the plates, as the plate 39, may be provided with numerals at its outer end to indicate units, the next plate, as the plate 40, with numerals to indicate tens, and the next plate, as 41, with numerals to indicate hundreds, the unit-numbers indicating cents, the tens dimes, and the hundreds dollars. In the illustration of my invention shown in Fig. 11 the dollar-plate 41 is provided with numerals from "0" to "20," inclusive, the dime-plate 40 with numerals in multiples of from "10" to "90," inclusive, and the unit-plate 39 with numerals from "1" to "9," so that by adjusting the three plates into position indicated in Fig. 10 the operator would read through the opening *d* the amount of "\$20.99" by adding the numerals upon the plural plates. It will be understood that for any sum in dollars the plate 41 could be adjusted to bring the proper nu-

meral to register with the orifice *d*. To register any number of cents above units, the plate 40 would be brought to bring the proper numerals to register with the orifice *d*, and to register the desired number of cents the plate 39 would be adjusted to bring the proper numeral to register with the orifice *d*. Then by adding the various amounts disclosed through the orifice *d* the proper registration would be made upon the record-strip *w*. It will be evident that in adjusting any of the plates to bring the numeral at its outer end to register with the orifice *d* the corresponding type at the opposite end of the plate will be brought into position for the hammer *x* to make the proper imprint. The hammer *x*, where several plates are employed, may strike the types on the several plates simultaneously. If there were no cents, the plate 39 would of course be adjusted to bring the numeral "0" to register with the orifice *d*, and if there were no dimes the plate 40 would be brought into position to disclose the zero-marks through the orifice *d*, so, likewise, if there were no dollars a zero-mark would be brought into position to register with the orifice *d*. Obviously the plate 41 might be constructed with a higher series of numerals than those shown herewith, so as to register a higher number of dollars. I do not limit myself to the number of plates which may be employed within the scope of my invention. The same elements or features may be employed to make the imprint of the type on the inner ends of the plates as those hereinbefore described, or any other mechanism may be employed to make said imprint.

The numeral 50 denotes any suitable counter which may be employed for counting the number of fares registered on a given trip or for the consecutive number of the fares taken during the entire day and may be operated in any desired manner simultaneously with each imprint. The number of fares registered must of course agree with the number of imprints during a given time.

The bed *m* is made to rotate with the adjacent sprocket-wheel in any suitable manner.

It will be observed that all of the imprinting apparatus is arranged to be actuated from the crank-arm 15. The shaft *i*, as above described, it will be seen, has a crank on each end thereof for the operation of the imprinting mechanism.

What I claim as my invention is—

1. A register comprising a series of types movable on the arc of a circle, a record-strip, an inking device, and a reciprocatory device to cause an imprint of any desired type of the series upon the record-strip, said reciprocatory device, inking device, and record-strip located within the arc on which said mechanism moves.

2. A register comprising mechanism movable in the arc of a circle provided with a se-

ries of type upon the inner surface thereof, a record-strip, an inking device, and a reciprocatory device for causing the imprint of any desired type of the series upon the record-strip, said reciprocatory device, inking device, and record-strip located within the arc on which said mechanism moves.

3. A register comprising a case provided with an opening therein, a series of type movable in the arc of a circle to bring any desired type adjacent to said opening, a record-strip, an inking device, and mechanism for causing an imprint of a given type adjacent to said opening upon the record-strip, said mechanism, inking device and record-strip located within the arc on which said type are movable.

4. A register comprising a series of types movable in the arc of a circle, and corresponding numbers, a record-strip, an inking device, and mechanism for causing an imprint of any desired type of the series upon the record-strip, said mechanism, inking device, and record-strip located within the arc on which said type are movable.

5. A register comprising a case provided with an opening therein, a series of type and corresponding numbers movable on the arc of a circle to register any desired number with said opening, a record-strip, an inking device and mechanism for causing an imprint of a given type upon the record-strip when its corresponding number registers with said opening, said mechanism, inking device, and record-strip located within the arc on which said type are movable.

6. A register comprising mechanism movable in the arc of a circle provided with a series of type upon the inner surface thereof and a series of corresponding numbers or marks, means to move said mechanism to bring any desired number or mark into given position, and mechanism to make an imprint of a given type when its corresponding number or mark is brought into said given position, said latter mechanism located within the arc on which the type are movable.

7. A register comprising a device movable in the arc of a circle having two faces at right angles one to the other, one face carrying a series of type, the other face carrying a series of corresponding numbers or marks means to move said device into given position, and mechanism to make an imprint of any given type of the series when its corresponding number or mark has been brought into given position, said mechanism located within the arc on which the type are movable.

8. In a register a movable plate having an inner annular face provided with a series of type, means to move said plate to bring any given type into given position, and means located interior to said face to make an imprint of any type of the series when brought into given position.

9. A register comprising a rotatable plate

provided with a series of type on the inner face thereof and with corresponding numbers or marks, means to move said plate to bring any given numeral or mark with its corresponding type into given position, and mechanism to make an imprint of the type when brought into given position, said mechanism located within the arc on which the type are movable.

10. A register comprising a case provided with an opening therein, a rotatable plate provided with a series of type on the inner face thereof and with corresponding numbers or marks, means to move any given number or mark with its corresponding type into position to register with the opening in the case, and mechanism to make an imprint of any given type of the series when its corresponding number or mark has been brought into position to register with said opening, said mechanism located within the arc on which the type are movable.

11. A register comprising a device provided with a series of type and with a series of corresponding numbers or marks, said numbers and type being simultaneously movable on the arc of a circle to bring any given type with its corresponding number or type into given position, and mechanism to make an imprint of any given type when brought into given position, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

12. A register comprising a rotatable plate provided on the inner face thereof with a series of type and upon another face thereof with a corresponding series of numbers or marks, means to bring any given number or mark with its corresponding type simultaneously into given position, and mechanism to cause an imprint of any type of the series when its corresponding number or mark is brought into given position, said mechanism located within the arc on which the type are movable.

13. A register comprising a device provided with a series of type and with corresponding numbers or marks, said type and corresponding numbers or marks simultaneously movable on the arc of a circle to bring any given number with its corresponding type into given position, a record-strip, an inking device, and mechanism for causing an imprint of any given type of the series upon the record-strip when its corresponding number or mark has been brought into given position, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

14. A register comprising a device provided with a series of type and with corresponding numbers or marks, said type and corresponding numbers or marks being simultaneously movable on the arc of a circle to bring any given number with its corresponding type into

given position, a record-strip, an inking device, and a reciprocatory device to cause an imprint of any given type of the series upon the record-strip when its corresponding number or mark has been brought into given position, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

15. A register comprising a rotatable plate provided with an annular flange having a series of type upon the inner face of the flange and an additional flange provided with numbers or marks corresponding to the type, and mechanism to make an imprint of any given type of the series when its corresponding number or mark has been brought into given position, said mechanism located within the arc on which the type are movable.

16. A register comprising a rotatable plate provided with a flange at right angles thereto having on the inner periphery of the flange a series of type and an additional flange at right angles to the first-named flange of the plate provided on its face with a series of numbers or marks corresponding to said type, and mechanism to make an imprint of the type when its corresponding number or mark has been brought into given position, said mechanism located within the arc on which the type are movable.

17. A register comprising a rotatable plate provided with a flange at right angles thereto having on the inner periphery of the flange a series of type and an additional flange at right angles to the first-named flange of the plate provided on its face with a series of numbers or marks corresponding to said type, a record-strip, an inking device, and mechanism to make an imprint of a given type of the series upon the record-strip when its corresponding number or mark has been brought into given position, said mechanism located within the arc on which the type are movable.

18. A register comprising a rotatable plate provided with a flange at right angles thereto having on the inner periphery of the flange a series of type and an additional flange at right angles to the first-named flange of the plate provided on its face with a series of numbers or marks corresponding to said type, and a reciprocating device to make an imprint of the type when its corresponding number or mark has been brought into given position, said device located within the arc on which the type are movable.

19. A register comprising a device movable on the arc of a circle provided with a series of type and with a series of corresponding numbers or marks, a record-strip, an inking device, a reciprocatory arm or hammer, a crank-shaft to actuate the hammer, and means to actuate the crank-shaft, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

20. A register comprising a device movable on the arc of a circle provided with a series of type and with a series of corresponding numbers or marks, a record-strip, an inking device, a reciprocatory arm or hammer, a crank-shaft to actuate the hammer, means to actuate the crank-shaft, a bell and a bell-hammer actuated by the movement of the reciprocatory hammer, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

21. A register comprising a series of type movable on the arc of a circle whereby any type of the series can be brought into given position, a movable arm or hammer to cause an imprint of the type, said arm or hammer provided with a tongue and each of said type constructed with a guide to receive the tongue, said hammer located within the arc on which the type are movable.

22. A register comprising a rotatable plate provided with a flange having a series of type upon the inner face of the flange, means to make an imprint of any given type of the series when brought into given position, and a guard over a portion of said type.

23. A register comprising a series of types movable to bring any given type of the series into given position, a removable key provided with type, and means for causing an imprint of the key when in place and of any desired type of the series when in given position.

24. A register comprising a series of movable type, a record-strip, an inking device, a removable key, and means for causing an imprint of the key upon the record-strip and an imprint of any desired type of the series upon the record-strip when in given position.

25. A register comprising mechanism movable in the arc of a circle provided with a series of type, a removable key to be engaged with said mechanism, a record-strip, an inking device, and means for causing an imprint of the key and of any desired type of the series upon the record-strip when in given position.

26. A register comprising a series of movable type whereby any type of the series can be brought into given position, a movable arm or hammer to cause an imprint of the type, said arm or hammer provided with a tongue and each of said type provided with a guide to receive the tongue, and means to prevent the said arm or hammer from moving into position to make an imprint when said guide is not in position to receive said tongue.

27. A register comprising a series of type movable on the arc of a circle whereby any type of the series can be brought into given position, a hammer located within the arc on which the type is movable to cause an imprint of the type, and means whereby said hammer can only move to its work when the type is in proper position for an imprint.

28. A register comprising a case, a station-

any rear wall therein, a shaft projecting at right angles through said wall, a bed rotatable about said shaft provided with numerals or marks and with types corresponding to said numerals or marks, said case constructed to disclose said numerals or marks when in given position, and mechanism within said bed for making an imprint of the types when in given position.

29. A register comprising a rear wall, a shaft projecting therethrough, a bed rotatable about said shaft, said bed provided with numerals or marks and with types corresponding to said numerals or marks, and a stationary plate located over said numerals or marks and constructed to disclose the numerals or marks when in given position, and mechanism within said bed carried upon the rear wall for making an imprint of the types when in given position, said mechanism actuated by said shaft.

30. A register comprising a case, a stationary rear wall, a shaft projecting therethrough, a bed rotatable about said shaft provided with numerals or marks and with corresponding types on the inner face thereof, mechanism within said bed for making an imprint of the types when in given position, said case constructed with a keyhole through which a key may be inserted into the rotatable bed, and mechanism for recording a print of the device when in given position.

31. A register comprising a case, a stationary rear wall, a shaft projecting therethrough, a bed rotatable about said shaft provided with numerals or marks and with corresponding types on the inner surface thereof, mechanism for making an imprint of the types when in given position, said case constructed with a keyhole through which a key may be inserted into the rotatable bed, and mechanism for recording a print of the device when in given position, the mechanism for recording an imprint of said types also effecting an imprint of the key when in given position.

32. A register comprising a case, a stationary rear wall, a shaft projecting through said wall, a bed rotatable about said shaft provided on its inner surface with types and corresponding numerals or marks, and mechanism for ringing up fares and simultaneously making an imprint of the same.

33. A register comprising a case, a stationary rear wall, a shaft projecting through said wall, a device movable about said shaft provided on its inner surface with types and corresponding numerals or marks, imprinting mechanism to make a record of said types when in given position, a crank upon the inner end of said shaft to actuate said mechanism, and a crank upon the outer end of said shaft to actuate the shaft.

34. A register comprising a rotatable shaft,

a series of types movable about said shaft, a record-strip, an inking device and a reciprocatory device to cause an imprint of any desired type of the series upon the record-strip, said reciprocatory device, inking device and record-strip actuated from said shaft.

35. A register comprising a rotatable shaft, a series of types movable about the shaft, and mechanism to cause an imprint of any desired type of the series, said mechanism actuated from said shaft.

36. A register comprising a series of types movable on the arc of a circle, corresponding numbers or marks movable simultaneously on the arc of a circle with said types, a record-strip, an inking device, and mechanism for causing an imprint of any desired type of a series on the record-strip, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

37. A register comprising a case provided with an opening therein, a series of type and corresponding numbers both movable on the arc of a circle to register any desired number with said opening, a record-strip, an inking device, and mechanism for causing an imprint of a given type upon the record-strip when its corresponding number registers with said opening, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

38. A register comprising mechanism provided with a series of type and with a series of corresponding numbers or marks, said type and numbers or marks being both movable on the arc of a circle, means to move said mechanism to bring any desired number or mark into given position, and mechanism to make an imprint of a given type when its corresponding number or mark is brought into said given position, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

39. A register comprising a device movable in the arc of a circle having two faces at right angles one to the other, one face carrying a series of types, the other carrying a series of corresponding numbers or marks, means to move said device into given position, and mechanism to make an imprint of any given type of the series when its corresponding number or mark has been brought into given position, the imprint of the type upon the record-strip being within the arc on which said numbers or marks are movable.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANCIS R. BEAL.

Witnesses:

N. S. WRIGHT,

M. M. STRUBLE.