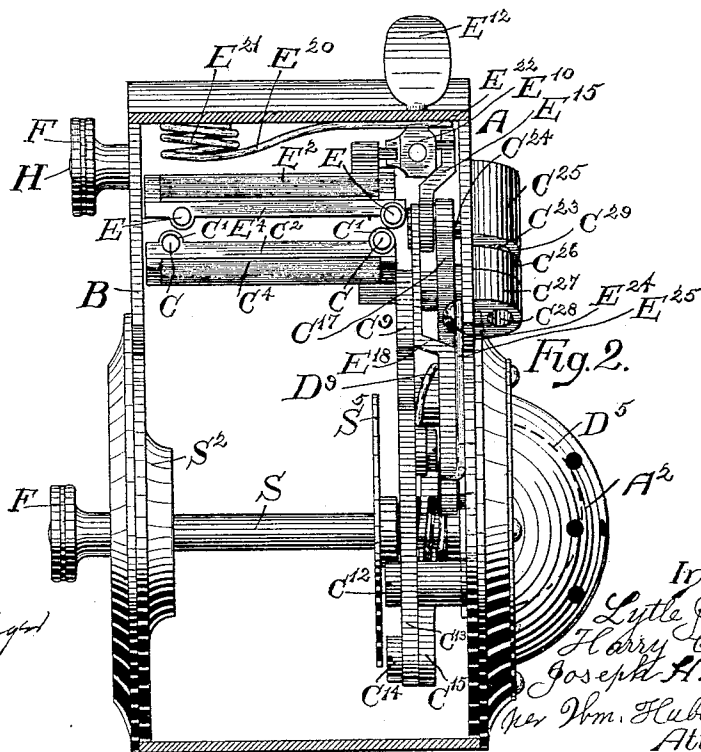
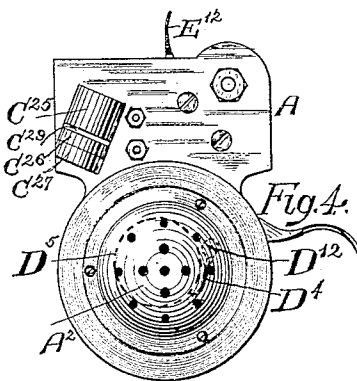
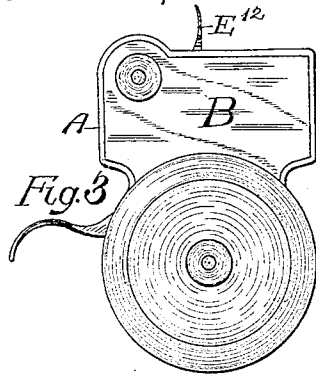
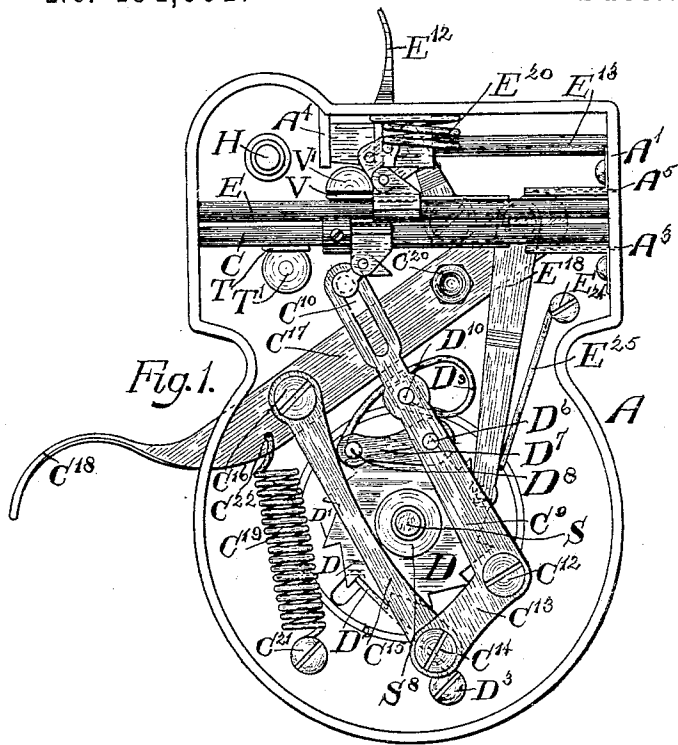


L. J., H. C. & J. H. HUNTER.
TICKET, TRANSFER, AND RECEIPT CONTROLLER.

No. 494,001.

Patented Mar. 21, 1893.



Attest:
A. L. Newling
H. Smith

Inventors
Lytle J. Hunter
Harry C. Hunter
Joseph H. Hunter
Per Wm. Hubbell Fisher
Attorney.

(No Model.)

2 Sheets—Sheet 2.

L. J., H. C. & J. H. HUNTER.
TICKET, TRANSFER, AND RECEIPT CONTROLLER.

No. 494,001.

Patented Mar. 21, 1893.

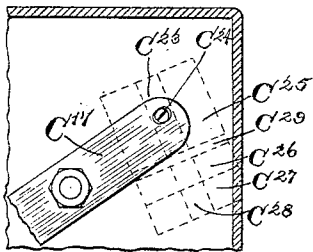
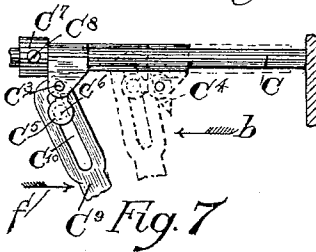
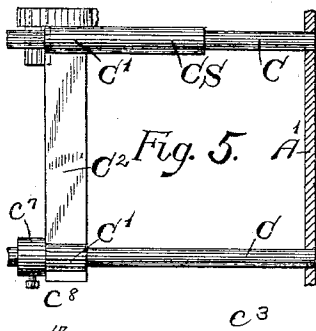


Fig. 10.

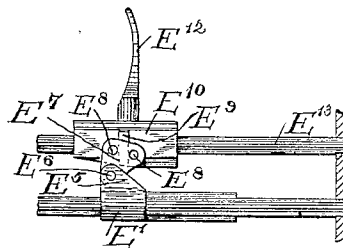
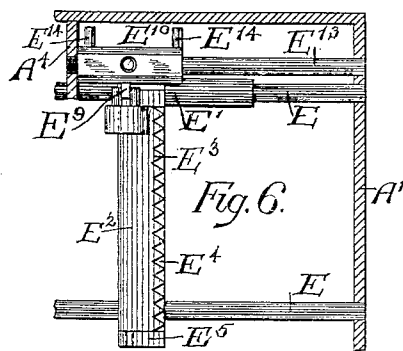


Fig. 8.

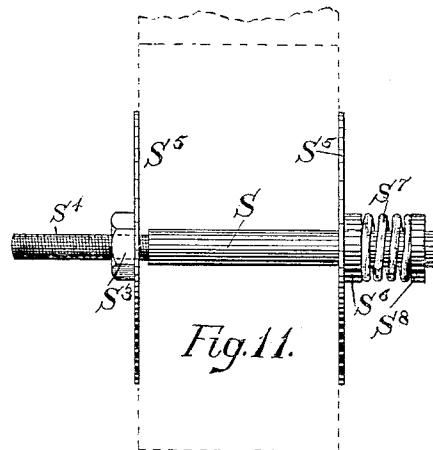
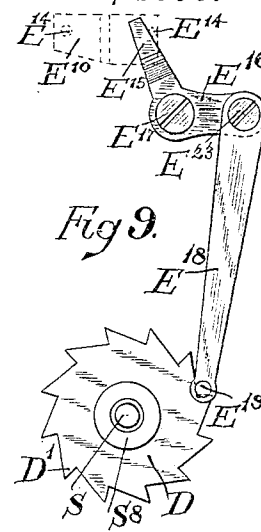


Fig. 11.

Attest:
A. K. Hensinger
H. J. Smith

Inventors
Lytle J. Hunter
Harry C. Hunter
Joseph H. Hunter,
per Wm. Hubbell Fisher
Attorney.

UNITED STATES PATENT OFFICE.

LYTLE J. HUNTER, OF COVINGTON, KENTUCKY, AND HARRY C. HUNTER
AND JOSEPH H. HUNTER, OF WINTON PLACE, OHIO.

TICKET, TRANSFER, AND RECEIPT CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 494,001, dated March 21, 1893.

Application filed January 28, 1892, Serial No. 419,521. (No model.)

To all whom it may concern:

Be it known that we, LYTLE J. HUNTER, a resident of the city of Covington, in the county of Kenton and State of Kentucky, and HARRY C. HUNTER and JOSEPH H. HUNTER, residents of the town of Winton Place, in the county of Hamilton and State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Ticket, Transfer, and Receipt Controllers, containing a strip of paper which represents tickets, receipts, transfers, or the like, and controlling the character of said tickets so that they may be delivered as a receipt or as a transfer at the will of the operator, of which the following is a specification.

The several features of our invention and the various advantages resulting from their use, conjointly or otherwise, will be apparent from the following description and claims.

In the accompanying drawings making a part of this specification,—Figure 1 represents an elevation of the interior of the casing, and showing the mechanism thereof. In this view, the cover or side which is on the left hand side in Fig. 2, is removed, the spectator being at the left hand of said Fig. 2. Fig. 2 is a front elevation of the interior of the casing, and the mechanism therein contained, the casing which is on the right hand side of Fig. 1 being removed, and the spectator being at the right of said Fig. 1. Fig. 3 is an elevation of the exterior of that side of the device which is on the left of Fig. 2. Fig. 4 is an elevation of the exterior of that side which is on the right in Fig. 2. Fig. 5 is a plan detail view of the gripping mechanism for advancing the strip for full fares, in the position shown in Fig. 1. Fig. 6 is a plan detail view of the gripping mechanism for advancing the strip for half fares, in the position shown in Fig. 1. Fig. 7 is an elevation of the gripping mechanism for advancing the strip for full fares, showing on the left the paper strip having just been grasped by the gripper, and ready to be advanced. To the right of this, another position of this gripper is shown in dotted lines, viz: in its position after it has let go of the paper and just previous to its return to its position of rest as shown in Fig. 1. This view (Fig. 7) is taken from a point of view

similar to that from which Fig. 1 is taken. This elevation (Fig. 7) is an elevation of that side of the device shown in Fig. 5 which is at the bottom of the latter, but showing the mechanism in the altered position mentioned. Fig. 8 is a side elevation of that side of Fig. 6, which is at the bottom of the latter, but showing the gripping mechanism in the position it assumes when it has grasped the half fare strip, and before advancing the latter. Fig. 9 is a detail view of the mechanism which rings the bell when the mechanism for advancing the half fare strip is operated. Fig. 10 is a detail elevation of mechanism for operating the punch. Fig. 11 is a front elevation of the devices for clamping the roll of paper and exerting a tension thereon.

A indicates the outer casing, of which the cover B forms a part.

The mechanism for advancing the strip of paper which contains the full fares is as follows:—C, C, are two parallel rods, preferably in the same horizontal plane. These rods constitute guideways, on which the gripping device is reciprocated. The gripping device consists of the upper jaw C² and the lower jaw C⁴. Each end of the upper jaw C² is provided with a sleeve C'. Each sleeve C' embraces its adjacent respective rod C, and slides thereon. One of the sleeves C' extends in front of the jaw C² a sufficient distance to constitute a stop C S, so that as the jaw C² is advanced toward the front wall A' of the casing, this stop C S will abut against the said wall at a time when the jaw C² has been advanced the proper distance. Upon one of the rods C and back of the adjacent sleeve of the jaw, a stop C⁷ is present for limiting the backward throw or movement of the jaw. This stop C⁷ is preferably adjustable upon the rod C for the purpose of regulating the amount of this backward movement of the jaw. The preferred mode of rendering this stop C⁷ adjustable is that shown, and consists of the set screw C⁸ screwed through the stop and impinging against the rod C. Below the rod C is a right angled lever C⁹, C¹³, fulcrumed at C¹² to any suitable stationary portion of the device. The upper end of this lever is provided with a slot C¹⁰ in which works a pin C⁶ connected to an arm C⁵, whose upper end is

pivoted at C³ to ears or projections from the upper jaw C² and is at the same time inflexibly connected to the lower jaw C⁴. In practice, the arm C⁹ of the lever is moved forward and toward the front of the casing A'. As it is moved forward, it elevates the free end of the jaw C⁴ and brings it against the upper jaw C², thereby causing the paper strip, hereinafter more particularly mentioned, and which passes between the said jaws, to be thereby firmly grasped. The continued forward movement of the lever C⁹ after the jaws have been closed upon the paper, operates to move the jaws forward upon their guides C, C, and carries the paper forward in the direction of the arrow *f*, (Fig. 7,) and out of the slit A³ in the front of the case until the stop C⁸ impinges against the abutment or wall A'. As lever C⁹ is moved backward in the direction of the arrow *b* (Fig. 7), it operates to depress the free end of the jaw C⁴, thereby releasing the paper from the grasp of the jaws, and as it, the lever, moves back, retracts the jaws until the sleeve of the latter strikes against the stop C⁷. The preferred mechanism for thus reciprocating the upper end of the lever C⁹ is as follows:—

To the end of the arm C¹³ of the right angled lever C⁹, C¹³, is pivoted at C¹⁴, one end of a connecting rod C¹⁵, whose other end is pivotally connected at C¹⁶ to a finger or hand lever C¹⁷, pivotally fulcrumed at C²⁰ to the casing or framework of the device. This lever C¹⁷ is provided with a handle C¹⁸, which extends through the casing and to the rear thereof, substantially as shown. Elevation of the rear end of the lever C¹⁷ operates to move forward the upper end of the lever C⁹ and closes the jaws on the paper and advances them to the front of the casing. In order to render the retraction of lever C⁹ of the jaws automatic, we introduce a spring C¹⁹, strained between the rear end portions of the hand lever C¹⁷ and a stationary point as C²¹. For convenience of application and removal, one end of the spring is inserted through a hole C²² of the hand lever while the other end of the spring is secured at C²¹ by means of a set screw indicated by the said character C²¹.

The mechanism is provided with means for ringing a bell and notifying the conductor or other operator of the register and the passengers that a receipt has been advanced. The preferred mechanism for this purpose is as follows:—To the lever C⁹ is pivotally connected at D⁶ one end of a connecting rod or pawl D⁷, whose other end is provided with a projection D⁸, pressing against a tooth D' of the ratchet wheel D. This projection is automatically and continuously thus pressed against the said ratchet by means of a suitable spring preferably of the form shown, namely, D⁹, rigidly fixed at D¹⁰ to the lever C⁹, the free end of this spring pressing against the projection D⁸ aforementioned, and pressing the latter against the ratchet. Fixed by

a stationary connection D³ to the frame is a spring D² whose free end presses against the ratchet wheel. The free end of this spring is provided with an arm D⁴ which extends into the hollow chamber formed by the swell A² on the register case, and is provided with an arm terminating in the bell hammer D¹², which impinges against a bell D⁵. This hammer and bell are shown in dotted lines in Figs. 2 and 4. As the handle C¹⁸ of the lever C¹⁷ is elevated to advance the lower strip for the full fares as aforementioned, the lever C⁹ is advanced and carries the pawl D⁷ toward the front of the case and the projection D⁸ of the said pawl presses against a tooth of the ratchet wheel and advances the latter the distance of one tooth. As the ratchet wheel is thus turned, a tooth thereof forces out and away from its center the free end of the spring D², and carries the arm D⁴ away from the bell. As the ratchet wheel is revolved, the free end of the spring D² passes the point of the tooth and falls back into the recess immediately behind said elevated portion of said tooth and allows the hammer to come into conjunction with the bell and ring the same.

The mechanism for advancing the strip for the half fares is substantially as follows:—E² constitutes the upper jaw, and E⁴ the lower jaw. The latter is provided at each end with a sleeve E', respectively sliding upon its adjacent guide E. The guides are preferably horizontal, and are parallel and supported in the framework of the casing. One of these sleeves E' is preferably longer than the other, and of suitable length so as to impinge against the front wall A' or other suitable stop in order to prevent the jaws from being carried too far when the strip which they are designed to hold is advanced. At the rear of the sleeve E' is a stop, (preferably a portion of the framework,) which regulates the rearward movement of the sleeve E' and consequently of the jaws E², E⁴. Upon the rod E¹³, parallel to the adjacent guides E, slides a carriage or sleeve E¹⁰. This carriage is provided with a handle E¹², extending up through a slot in the roof of the register case. The carriage is also provided with a projection E⁹, which lies between and in proximity to the projecting pins E⁸, E⁵, projecting from the arm E⁷. The lower end of this arm is rigidly connected to the upper jaw E². The latter is pivotally connected at E⁶ at each end to arms E⁵ arising from the lower jaw or from a connection therewith. Thus the upper jaw is free to oscillate on the pivots E⁶. As the operator presses the handle E¹² forward, the sleeve E¹⁰ slides upon the rod E¹³ and the projection E⁹ pressing against the forward pin E⁸, operates to close the upper jaw down upon the lower one, pinching the paper of the paper strip between them and the carriage E¹⁰. The sleeves E' and the jaws E², E⁴, together slide forward until the long sleeve E' impinges against the front wall A'. This strip is thus suitably advanced and

passes out through the opening A⁵. The operator tears off that portion of the receipt which now lies outside of the case. Upon his letting go of the handle E¹², a suitable spring retracts the same. In the present illustrative instance, this spring consists of a coil E²¹, fastened to the roof of the case, and its elastic free end E²² presses against the front side of the handle E¹² just above the carriage E¹⁰. Thus by the action of this spring, the handle E¹² and carriage E¹⁰ together with the jaws E², E⁴ and sleeves are retracted. As these parts begin to move backward, the handle E¹² moving first, because of its being directly actuated by the spring E²⁰, causes the projection E⁹ to impinge against the rear pin E⁸ of the arm E⁷, and thereby lifts the upper jaw away from the lower one and allows the paper strip to remain stationary while the jaws pass backward into their first position, namely that shown in Fig. 6. At the rear of the carriage E¹⁰ is a stop A⁴, which may be shown as a portion of the frame work, which prevents the further retraction of the jaws.

For enabling the upper jaw E² to better grasp the paper and hold it against the lower jaw, the front edge of the said jaw is provided with suitable teeth or projections E³. Whenever desired, the lower or movable jaw C⁴ arranged to carry forward the paper strip for full fares is likewise serrated.

The mechanism for enabling the bell to be rung when the paper strip for half fares is advanced is as follows:—The carriage E¹⁰ is provided with two studs or projections E¹⁴, E¹⁴. A bell crank lever having arms E¹⁵, E¹⁶, is pivoted at E¹⁷ to the frame or other stationary fixture of the device. The free end of the arm E¹⁵ is located between the two studs E¹⁴. The free end of the arm E¹⁶ of the lever is pivotally connected at E²³ to the connecting rod E¹⁸, whose lower end is provided with a pin or other projection E¹⁹ which impinges against a tooth D' of the ratchet wheel D. As the carriage is advanced as aforesaid, the rear pin E¹⁴ impinges against the rear side of the arm E¹⁵ of the bell crank lever and carries the same forward, thereby depressing the free end of the arm E¹⁶ and moving the connecting rod E¹⁸ downward, thereby moving the ratchet wheel forward one tooth and causing the said ratchet wheel to ring the bell in the manner aforementioned. The pin E¹⁹ is kept in proper engagement with the ratchet wheel D by means of a suitable spring. In the present illustrative instance, this spring consists of a spring bent around and fixedly connected to a projection E²⁴, fixed to the stationary part of the case or framework of the device. The free end of the straight portion of the spring bears against the rod E¹⁸ and thereby presses the projection E¹⁹ continually against the ratchet. Where the projection E¹⁹ is a screw whose thread engages a screw cut in the stationary part in which it is affixed, the spring can be easily inserted and easily removed when necessary. As the carriage E¹⁰

is retracted, the forward pin E¹⁴ thereof impinges against the free end of the arm E¹⁵ of the lever E¹⁵, E¹⁶, and moves the free end of the said lever backward, thereby elevating the connecting rod E¹⁸ and causing the projection E¹⁹ to pass up and back of a tooth of the ratchet in readiness to again be advanced and rotate the ratchet when the carriage E¹⁰ is moved forward.

The paper strip for full fares is wound upon an axial reel provided with a central hole which may be slipped upon the stationary axis S, or the paper may be wound in a roll without the reel, the hole being left at the center, and this paper then be adjusted upon the stationary shaft S by having the latter pass through the central hole in the roll before referred to.

For the purpose of frictionally retarding the roll and giving it the right tensional resistance so that it may feed properly in connection with the mechanism for advancing it, and carry it out of the device hereinbefore described, any suitable frictional device may be employed. One description of said device is as follows:—On the right hand end of the shaft S, shown in Figs. 2 and 11, is a disk S⁵, which slides upon the shaft, and is concentric therewith. To the right of this disk and surrounding the shaft is a spring S⁷. The right hand end of spring S⁷ bears against a shoulder S⁸ of the axis S. Interposed between this spring and the disk is a sleeve S⁶, preferably present as a bearing against which the spring S⁷ can press.

In cases where it is not desirable to have an adjustable bearing for the roll at the left hand end portion of the shaft, as shown in Fig. 11, and hereinafter described the roll will be placed upon the shaft S and the cover will then be placed in position in the case. The cover is preferably provided with the stationary bearing S² against which the left hand side of the roll will be pressed by the action of the spring S⁷ pressing the disk S⁵ against the right hand side of the roll and move the roll over until it frictionally bears against the cover.

In case the bearing at the left hand end of the roll should be adjustable, an adjustment is effected as follows:—A disk S⁵ corresponding to the disk S⁵ previously mentioned, is located on that diminished portion S⁴ of the shaft which carries a screw thread and a nut S³ screwed upon the portion S⁴ of said shaft S, and bears against the disk S⁵. When the roll is in position upon the shaft S, the spring S⁷ will, in connection with the sleeve S⁶ and right hand disk S⁵ press the roll of paper over against the left hand disk S⁵, and cause it to bear against the nut or adjustable stop S³. Obviously by turning this nut S³, the roll may be forced toward the spring S⁷, thereby increasing the frictional pressure upon the roll, or the nut S³ may be screwed away from the spring S⁷, thereby diminishing the frictional pressure upon the roll. These devices may

also be used when desired to keep the roll in alignment with the mechanism for advancing and carrying it out of the case.

The preferred mode of supporting the roll of paper for half fares is by means of the spindle H, one end of which is fixed in the frame of the device. Upon this spindle or shaft the roll of paper for the half strip is concentrically located.

When desired, tensional devices for limiting the rapidity of its unrolling may be present, as may also devices, when needed, for keeping the roll in alignment with the mechanism for advancing the half fare strip out of the case.

The cover B is secured to the case in any suitable manner. A very convenient mode is as follows:—The screw thread S⁴ of the shaft S projects through the cover, as does also the screw thread on the spindle H. Upon each of these is screwed a hand or thumb nut F, whereby the cover is secured in place.

Where it becomes necessary to receive for fares tickets already previously sold and not furnished by this registering device itself, and it is deemed necessary to punch the said tickets the punching device is provided in connection with the mechanism for giving a receipt with the following device:—The upper end of the lever C¹⁷ is provided with a laterally projecting stud or projection C²⁴ which works in a slot extending into the sleeve C²⁵. One end of this pin C²⁴ is fixedly attached to the punch C²³, working in a passage way C²³, located in the said sleeve C²⁵, and also in the corresponding lower sleeve C²⁶, C²⁷. Between the sleeve C²⁵ and the lower compound sleeve is a lateral slit or opening C²⁹. The pin C²⁴ is allowed to work loosely in the head of the lever C¹⁷ as shown, so that as the head of the said lever C¹⁷ is moved in the arc of a circle it shall not cause the pin C²⁴ to bind against the stud of the slot in which it works. This opening C²⁹ in which the said pin C²⁴ works in the head of the lever C¹⁷ is therefore of an elongated character. The lower sleeve is preferably compound, the upper portion C²⁶ being of extra hard steel, thereby forming a proper knife edge at the upper edge of the orifice C²³ as the punch C²³ descends into the opening in the said compound sleeve. In practice, the operator places the end of the ticket in the opening C²⁹ and then operates the lever C¹⁷, thereby depressing the punch C²³ and causing it to pass through said ticket and into the opening C²³ in the lower half of the punch and thereby punch a hole in the ticket. At the same time a full fare receipt from the paper strip within the register case is delivered through opening A³. Whenever a receipt is delivered either through opening A³ or A⁵, the operator tears off the same, using the edge of the case at the orifice through which the strip has come as the cutting edge. The roll or strip of paper for full fares is shown by dotted lines in Fig. 11. The paper from this roll extends from the back side of

the roll upward to the rear of the tension device T, T', to be hereinafter described, and thence between the jaws C², C⁴, and thence forward and through the slit or opening A³. The forward end of this strip is flush with the front face of the register until advanced by the jaws, as aforementioned. The roll or strip of paper for half fares on spindle H, extends from the lower side of said strip to the rear of the tension device V, V', thence between the jaws E², E⁴, and thence forward and between the sides of slit A⁵, and as far as the front face of the register until farther advanced by the jaws.

When cash fare is received, the bell is simply rung and the receipt advanced and delivered in the same manner, as heretofore described in connection with ticket fares.

The operations of the register have been fully described in connection with the description of the various parts thereof. Further description of these operations, therefore, need not be made.

Between the roller carrying the full fare paper strip and the jaws, we provide a device whose construction and purpose is as follows:—A broad, flat horizontal spring T extends across the path of the paper strip beneath the same, and presses the paper down against the flat surface of an arm T'. Such pressure frictionally holds the paper strips stationary, except when the jaws grasp it and perforce carry it forward as heretofore mentioned. Then after the jaws have opened, the paper is held stationary while they are retracted and until they advance. A similar tensional device is shown in relation to the roll of paper for the half fares, and consists of the spring plate V, pressing the paper of said strip up against the flat surface of the arm V'. This device performs the same functions in relation to the half fare paper strip and to the jaws E², E⁴, that the device T, T' performs in relation to the full fare paper strip, and the jaws C², C⁴.

Among the various advantages which may be mentioned as resulting from the use of our invention, are the following:—

This machine issues to each passenger a receipt for either cash or ticket fare, and at the same time rings a gong which is notice to the passenger that his fare has been received. If the fare be a ticket fare, the machine also cancels the same by punching a hole in the ticket, the same instant, in which the receipt is delivered and the bell rung, thus preventing any possible discrepancy.

Secondly, the person or persons, or company operating the street car route charges the conductor with the number of receipts on the rolls placed within the machine when delivered to him, these receipts being numbered consecutively, and when he turns in his machine with his report, credits him with the number of unissued receipts remaining on the roll. Thus the conductor stands charged with the receipts issued and pays to the party

or parties operating the street car line in lieu of the same either cash or canceled tickets.

This machine is easy to operate both by the conductor and the company. It is durable and will not get out of order. It is economical to manufacture. It is compact and easily carried by the conductor. We regard it as absolute security against discrepancies or fraud of any kind by the conductors, or the clerical force of the party or parties operating the street car line.

This machine does away with cash slips.

While the various features of our invention are preferably employed together, one or more of said features may be used without the remainder. In so far as applicable, one or more of said features may be employed in connection with machine other than the one herein specifically set forth.

We do not herein claim the combination of the guide ways and means for closing and advancing the jaws along said guide ways, nor the same with a tension device, save as herein stated. Broad claims for such subject matter are presented in our application, Serial No. 446,316, filed September 19, 1892.

What we claim as new and of our invention, and desire to secure by Letters Patent, is—

1. In a ticket transfer and receipt controller, the combination of the jaws reciprocating on the guideways, the jaws pivotally connected to one another, one of the jaws being provided with the lever C⁹, for working said jaw and means for operating said lever, and for reciprocating said jaws, the paper roll, and axial support substantially as and for the purposes specified.

2. In a ticket transfer and receipt controller, the combination of the jaws reciprocating on the guideways, one jaw C² provided with ears to which the jaw C⁴ is pivoted, and the lever C⁵ fixed to the jaw C⁴, and provided with projection C⁶, and lever C⁹ fulcrumed at C¹², and having slot C¹⁰ in which the projection C⁶ operates, substantially as and for the purposes specified.

3. In a ticket transfer and receipt controller, the combination of the jaws reciprocating on the guideways, one jaw C² provided with ears to which the jaw C⁴ is pivoted, and the lever C⁵ fixed to the jaw C⁴, and provided with projection C⁶, and lever C⁹, C¹³, fulcrumed at C¹², and having slot C¹⁰ in which the projection C⁶ operates, and link C¹⁵, and lever C¹⁷ pivotally fulcrumed at C²⁰, substantially as and for the purposes specified.

4. In a ticket transfer and receipt controller, the combination of the jaws reciprocating on the guideways, one jaw C² provided with ears to which the jaw C⁴ is pivoted, and the lever C⁵ fixed to the jaw C⁴, and provided with projection C⁶, and lever C⁹, C¹³, fulcrumed at C¹², and having slot C¹⁰ in which the projection C⁶ operates, and link C¹⁵, and lever C¹⁷ pivotally fulcrumed at C²⁰, and the spring C¹⁹, connected to the frame and to le-

ver C¹⁷, substantially as and for the purposes specified.

5. In a ticket transfer and receipt controller, the reciprocating jaws and means for closing them, the tension device for holding a paper strip, the bell and mechanism for ringing it, and mechanism substantially as described for simultaneously advancing the jaws and ringing the bell, substantially as described.

6. In a ticket transfer and receipt controller, the reciprocating jaws and means for closing and advancing them, the case having delivery orifice A³ and tension device for holding a paper strip, the ratchet wheel D, spring D² carrying arm D⁴, clapper D¹² and bell D⁵, and mechanism for enabling the lever for operating the jaws to simultaneously operate said ratchet wheel, in combination substantially as described.

7. In a ticket transfer and receipt controller, the combination with the reciprocating jaws and means for closing and advancing them, the case provided with delivery orifice, tension device for holding the paper, and the ratchet wheel D, and spring lever pawl D⁷, carrying arm D⁴, and clapper D¹² and bell D⁵, the lever C⁹ and link C¹⁵, and the pawl D⁷ pivoted to lever C⁹ and operating on the ratchet D, all substantially as described.

8. In a ticket transfer and receipt controller the jaws reciprocating on guides and pivoted together, and having lever E⁷ fixed to one of the jaws, and provided with projections E⁸, E⁸, and the reciprocating carriage E¹⁰, having projection E⁹, between the projections E⁸, E⁸, and wall provided with slit A³, substantially as and for the purposes specified.

9. In a ticket transfer and receipt controller the jaws reciprocating on guides and pivoted together, and having lever E⁷ fixed to one of the jaws, and provided with projections E⁸, E⁸, and the reciprocating carriage E¹⁰, having projection E⁹, between the projections E⁸, E⁸, and handle E¹², projecting through and located in a slot in the register case, and wall provided with slit A³, substantially as and for the purposes specified.

10. In a ticket transfer and receipt controller in combination with the reciprocating jaws and means for closing and advancing them, and wall having delivery orifice A⁵, and tension device for holding the paper strip stationary, and the ratchet wheel D, and spring D² carrying arm D⁴ and clapper D¹² and bell D⁵, and the lever C⁹, C¹³, and link C¹⁵, and lever C¹⁷, and pawl D⁷, pivoted at D⁶ to the lever C⁹, and spring D⁹, and spring E²⁰ for retracting the jaws, substantially as and for the purposes specified.

11. In a ticket transfer and receipt controller the jaws reciprocating on guides and pivoted together, and having lever E⁷ fixed to one of the jaws, and provided with projections E⁸, E⁸, and the reciprocating carriage E¹⁰, hav-

ing projection E⁹, between the projections E⁸, E⁸, and handle E¹², projecting through and located in a slot in the register case, and wall provided with slit A³, and spring E²⁰, pressing against the said handle, substantially as and for the purposes specified.

12. In a ticket transfer and receipt controller the jaws reciprocating on guides and pivoted together, and having lever E⁷ fixed to one of the jaws, and provided with projections E⁸, E⁸, and the reciprocating carriage E¹⁰, having projection E⁹ between the projections E⁸, E⁸, and handle E¹², projecting through and located in a slot in the register case, and wall provided with slit A³, and spring E²⁰ provided with coil E²¹ and extension arm bearing against said handle, substantially as and for the purposes specified.

13. In a ticket transfer and receipt controller the reciprocating jaws and carriage E¹⁰, and means substantially as described for reciprocating them, and wall provided with slit A³, the carriage E¹⁰, having the projections E¹⁴, E¹⁴, and the lever E¹⁵, E²³, having the connecting rod or pawl E¹⁸, and ratchet wheel and means for enabling the latter to ring the bell, substantially as and for the purposes specified.

14. In a ticket transfer and receipt controller the jaws reciprocating on guides and pivoted together, and having lever E⁷ fixed to one of the jaws, and provided with projections E⁸, E⁸, and the reciprocating carriage E¹⁰, having projection E⁹, between the projections E⁸, E⁸, and wall provided with slit A³, and carriage E¹⁰ having the projections E¹⁴, E¹⁴, and the lever E¹⁵, E²³, and pawl E¹⁸, pivoted to the lever arm E¹⁶, and ratchet wheel, and spring E²⁰ elastically bearing against the said pawl, and the pawl D² and arm D⁴ and clapper D¹², and bell D⁵, substantially as and for the purposes specified.

15. In a ticket transfer and receipt controller the jaws C², C⁴, reciprocating on the guideways and wall provided with slit A³, and tension device, and lever for reciprocating said jaws and punch C²³, located in guides, the punch connected to the end of the said lever, for enabling the ticket to be punched as a receipt is advanced, substantially as and for the purposes specified.

16. In a ticket transfer and receipt controller the jaws C², C⁴, reciprocating on the guideways and wall provided with slit A³, and tension device, and lever for reciprocating

said jaws and punch C²³, located in guides, the punch connected to the end of the said lever, for enabling the ticket to be punched as a receipt is advanced, and mechanism for ringing the bell, and mechanism substantially as described for enabling the said lever to ring said bell, substantially as and for the purposes specified.

17. In a ticket transfer and receipt controller the jaws C², C⁴, reciprocating on the guideways, and wall provided with slit A³, and tension device, and lever C⁹, C¹³, having slot C¹⁰, and lever C⁵ fixed to the movable jaw, and engaging lever C⁹, in slot C¹⁰, and connecting rod or link C¹⁵, lever C¹⁷, fulcrumed at C²⁰, and punch connected to one end of this lever C¹⁷, and the pawl D², and arm D⁴ and clapper D¹², and bell D⁵, ratchet wheel D and pawl D⁷, connected to lever C⁹, and spring D⁹, connected to lever C⁹, and said pawl, substantially as and for the purposes specified.

18. In a ticket transfer and receipt controller the jaws C², C⁴, reciprocating on the guideways and wall provided with slit A³, and tension device, and lever C⁹, C¹³, having slot C¹⁰, and lever C⁵ fixed to the movable jaw, and engaging lever C⁹ in slot C¹⁰, and connecting rod or link C¹⁵, lever C¹⁷, fulcrumed at C²⁰, and punch connected to one end of this lever C¹⁷, and the pawl D², and arm D⁴ and clapper D¹², and bell D⁵, ratchet wheel D and pawl D⁷, connected to lever C⁹, and spring D⁹, connected to lever C⁹, and said pawl, and spring C¹⁹, for retracting lever C¹⁷, substantially as and for the purposes specified.

19. In a ticket transfer and receipt controller the combination of the mechanism for advancing the jaws, and the tension device consisting of the axis or spindle S, having the concentric disk S⁵, sliding on said axle, and spring S⁷, at the side of said disk, and the opposing concentric disk S⁵ sliding on the spindle and nut S³ bearing against said disk and engaging a screw thread on said spindle, substantially as and for the purposes specified.

LYTLE J. HUNTER.
HARRY C. HUNTER.
JOSEPH H. HUNTER.

Attest:

K. SMITH,
C. J. MCDIARMID.