

(No Model.)

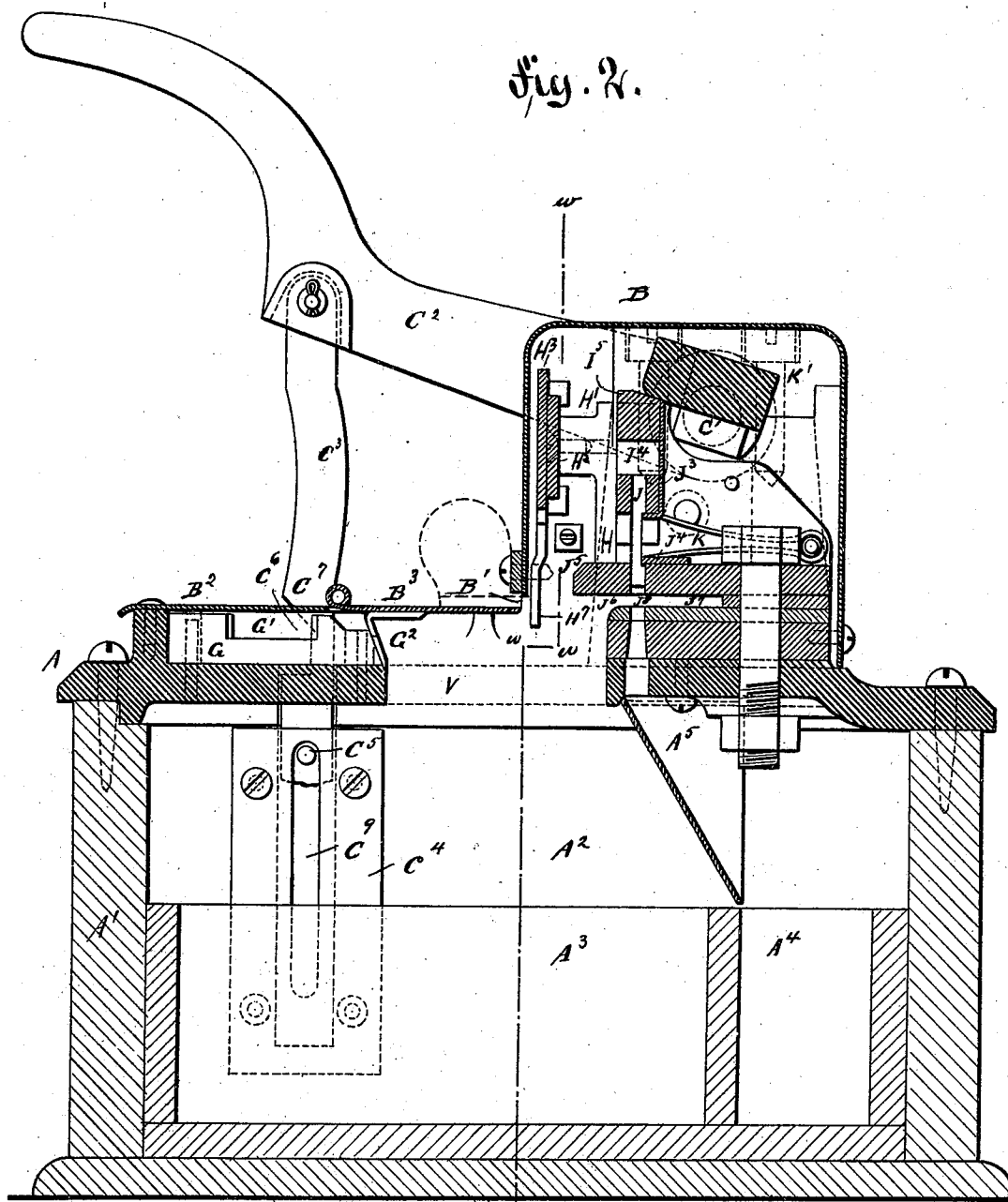
5 Sheets—Sheet 2.

C. M. DANNER.
PERFORATING STAMP.

No. 504,106.

Patented Aug. 29, 1893.

Fig. 2.



WITNESSES:

W. H. Rosenbaum.
Carl Karp

INVENTOR

Carl Maria Danner
BY *Joseph Paegener*
ATTORNEYS.

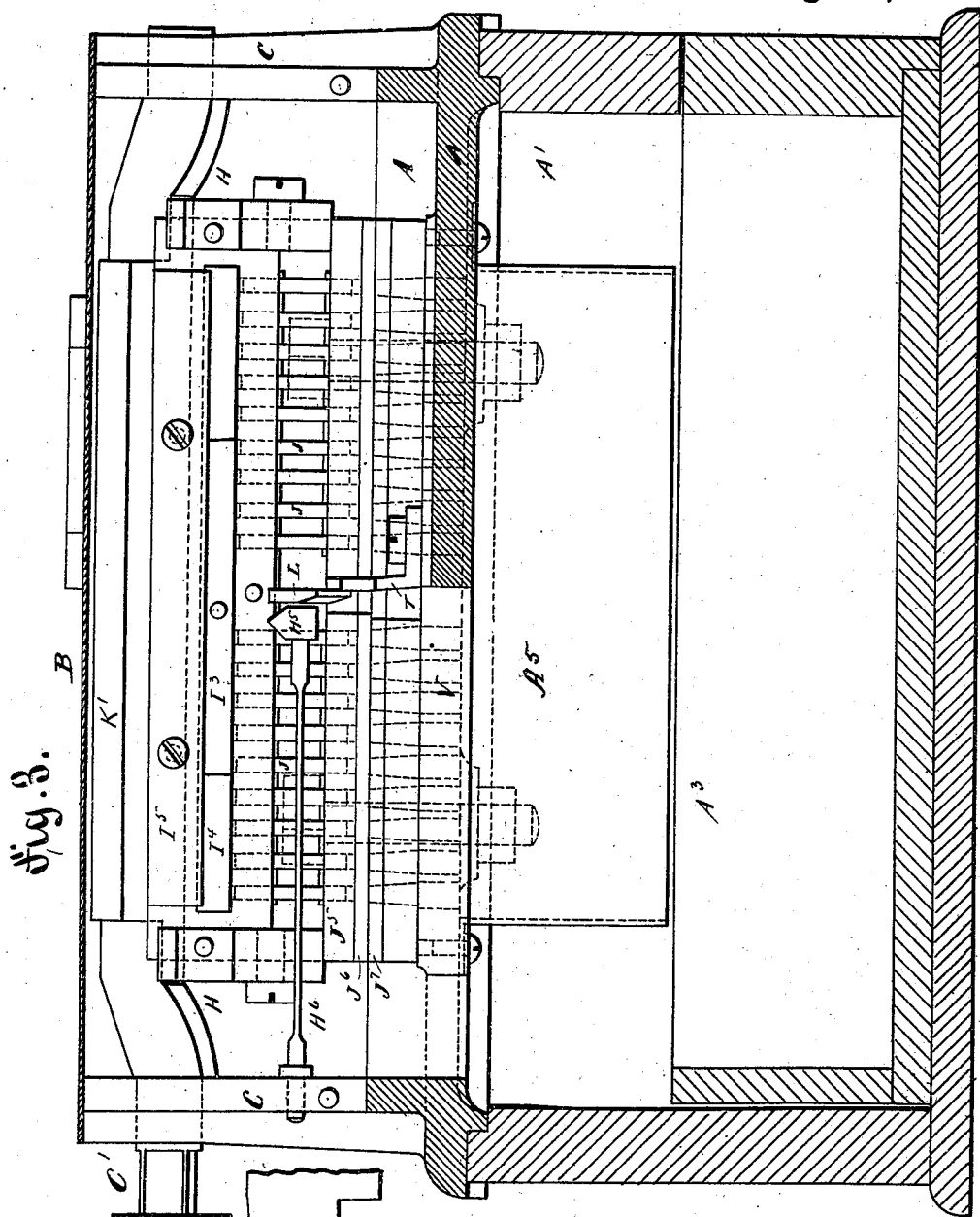
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5 Sheets—Sheet 3.

C. M. DANNER.
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No. 504,106.

Patented Aug. 29, 1893.



WITNESSES:

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Fig. 4.

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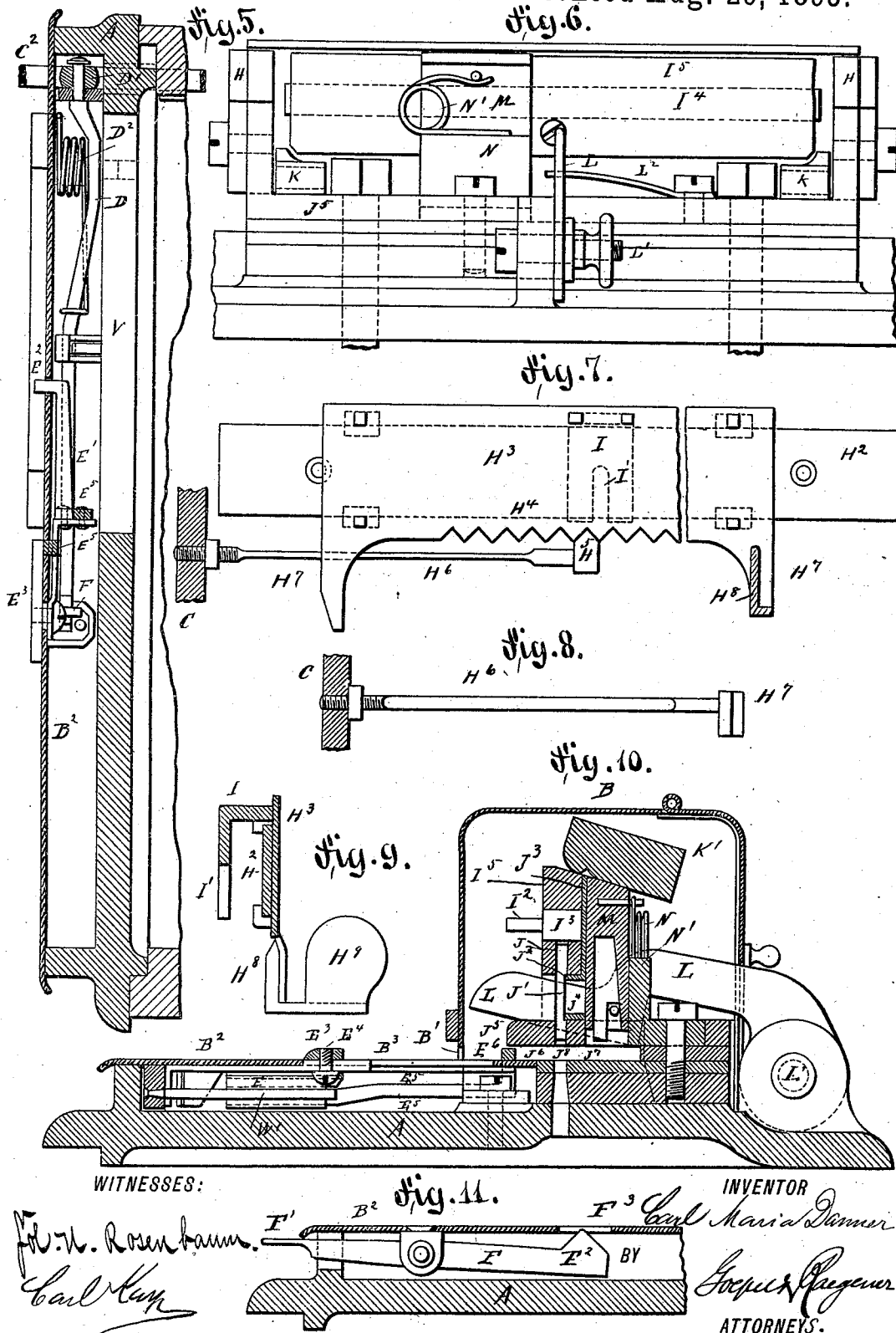
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5 Sheets—Sheet 5.

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Fig. 12.

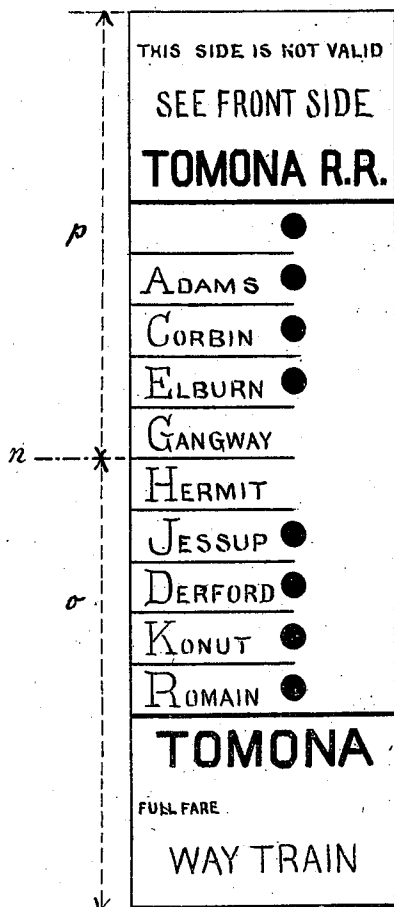
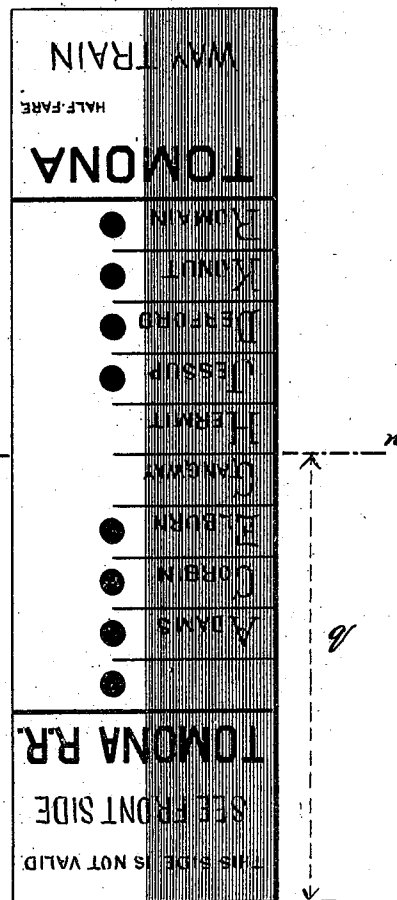


Fig. 13.



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UNITED STATES PATENT OFFICE.

CARL MARIA DANNER, OF VIENNA, AUSTRIA-HUNGARY.

PERFORATING-STAMP.

SPECIFICATION forming part of Letters Patent No. 504,106, dated August 29, 1893.

Application filed March 19, 1888. Serial No. 267,612. (No model.) Patented in Austria-Hungary October 16, 1887, No. 20,065 and No. 48,177; in Germany February 4, 1888, No. 45,939; in Spain February 10, 1888, No. 7,885; in England February 13, 1888, No. 2,174; in Belgium February 15, 1888, No. 80,486; in Norway March 26, 1888, No. 945; in Sweden March 28, 1888, No. 1,822; in Italy April 3, 1888, XXI, 23,022, and XLV, 330; in France April 18, 1888, No. 188,618; in Denmark August 3, 1888, No. 785, and in Switzerland April 6, 1889, No. 1,686.

To all whom it may concern:

Be it known that I, CARL MARIA DANNER, a subject of the Emperor of Austria-Hungary, residing at the city of Vienna, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Perforating-Stamps, (for which I have received Letters Patent in Austria-Hungary, dated October 16, 1887, No. 20,065 and No. 48,177, Reg. Tom. 37/2064 and 21/2013; in Germany, dated February 4, 1888, No. 45,939; in France, dated April 18, 1888, No. 188,618; in Belgium, dated February 15, 1888, No. 80,486; in Italy, dated April 3, 1888, Reg. Gen., Vol. XXI, No. 23,022; and Reg. Clbh., Vol. XLV, No. 330; in Sweden, dated March 28, 1888, No. 1,822; in Norway, dated March 26, 1888, No. 945; in Denmark, dated August 3, 1888, No. 785; in Spain, dated February 10, 1888, Libro 6, folio 185, No. 7,885; in Switzerland, dated April 6, 1889, No. 1,686, and in England, dated February 13, 1888, No. 2,174;) 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.

This invention relates to a new and improved machine for punching, perforating or marking railway, steamer or other tickets in such a manner as to clearly designate the purpose for which they were issued and the distance for which they are valid, and also to provide at the same time a duplicate of the marked or punched ticket to facilitate auditing the accounts of the person selling the ticket.

The invention consists in the combination with a supporting plate, of a punch holder, two groups of punches in the same, a cutting device between the groups of punches, a ticket adjuster and a ticket shifter.

The invention also consists in the construction and combination of parts and details, as will be fully described and set forth herein after and finally pointed out in the claims.

In the accompanying drawings Figure 1 is a plan view of my improved machine for punch-

ing or marking tickets, parts being broken out and the top or cover removed. Fig. 2 is a vertical longitudinal section on the line *xx* 50 Fig. 1, parts being omitted. Fig. 3 is a vertical longitudinal section on the line *www*, Fig. 2. Fig. 4 is a detail view of the hand lever, parts being broken out. Fig. 5 is a vertical longitudinal section of the top plate on 55 the line *vv*, Fig. 1. Fig. 6 is a rear elevation of the punching device, parts being omitted and others broken out. Fig. 7 is an elevation of the ticket adjusting slide and its locking mechanism, parts being in section. Fig. 8 is a plan view of the spring locking pawl 60 for the ticket adjusting slide, parts being in section. Fig. 9 is a cross sectional view of the ticket adjusting slide. Fig. 10 is a vertical cross section on the line *zz*, Fig. 1. Fig. 11 is a cross sectional view on line *uu*, Fig. 1. Figs. 12 and 13 are opposite views of the ticket 65 to be punched by my improved machine.

Similar letters of reference indicate corresponding parts. 70

The working mechanism is supported on a top-plate A, resting on a box A', containing the drawer A², divided by a longitudinal partition into two compartments A³ and A⁴. On the top plate is secured a box-shaped cover 75 B, inclosing part of the working mechanism and provided in the bottom of its front with a longitudinal slot B', for the insertion of the ticket. In front of said box-shaped cover B, the cover B² is fixed on the top-plate, and is 80 provided with a hinged section B³, the swinging edge of said hinged section forming the bottom part of the slot B'.

In standards C, on the ends of the top plate, the shaft C' is mounted to turn, said shaft 85 being bent at the ends between the two standards to form a crank, as shown in Fig. 3. On one end of the shaft C' the handle C² is secured. To said handle the bar C³ is pivoted, which extends downward into a guide C⁴, 90 fixed in one end of the box, said bar being provided with a pin C⁵ working in a suitable slot C⁶ of the guide. The bar C³ is provided in one edge with a notch C⁶, having a top

beveled edge C⁷ which can act on a roller D' on one end of a lever D, pivoted on the top-plate A, below the covering plate B, to swing horizontally.

- 5 Around the pivot of the lever D a spring D² is coiled, one end of the spring resting on said lever and pressing the end opposite the one carrying the roller D' in the direction of the arrow α , Fig. 1, said end of the lever being
- 10 provided with a tongue that passes into a notch of the slide E on the under side of the covering plates B², B³. Said slide is provided with an arm E', having at its end an upwardly projecting lug E², passing through
- 15 a transverse slot in the hinged section B³ of the cover, shown in dotted lines in Fig. 1. Said slide is also connected with a rule E³, mounted to slide on the top of the cover B², the pin E⁴ connecting it with the slide E,
- 20 passing through a transverse slot in the cover, shown in dotted lines in Fig. 1. From the slide E two arms E⁵ project into the front bottom part of the box cover B, and are provided at their inner ends with the two rules
- 25 E⁶ E⁷, extending in opposite directions parallel with the front of the box-cover B. Adjacent to the slide E the lever F is pivoted on lugs on the under side of the covering plate B², and is provided at its outer end with a finger plate
- 30 F', projecting beyond the front edge of the covering plate, and at the opposite end with a wedge-shaped tooth or projection F², which can pass through the slot F³, of the covering plate B². The lever D passes through a
- 35 notch G' in the top of the sliding block G, mounted to slide below the covering plate B² on the top-plate A, the inner end of said sliding block resting against the inclined lug G² fixed on the under side of the hinged
- 40 covering section B³.

- From standards H H on the supporting plate and below the box-cover part B, arms H' project and support a rail H² placed edge-wise parallel with and a short distance back
- 45 of the front of the box-shaped cover B. On the front of said rail H², a plate H³ is mounted to slide longitudinally, suitable jaws on said plate H³ embracing the edges of the top and bottom of the rail H². Said slide-plate H³ is
- 50 provided on its under side with a series of teeth H⁴, with which a locking tooth or pawl H⁵ can engage, that is secured on the end of the spring arm H⁶ secured in one of the standards C, as shown in Fig. 3. Said plate
- 55 H³ is provided at each end with a downwardly projecting lug H⁷, extending below the swinging edge of the hinged covering section B³, directly behind the slot B'. One of said lugs H⁷ is provided with an angular projection H⁸,
- 60 extending through the slot B', and provided in front of the box-shaped cover B with a handle-piece H⁹, shown in Fig. 9. The sliding plate H³ is provided with an angular lug I, projecting from its back surface and provided with a slot I', into which a pin I² passes
- 65 from a plate I³ mounted to slide in a longitudinal groove I⁴, Fig. 3, in the front of the

vertically movable punch holder I⁵, which is guided at its ends to move vertically in the standards H. By shifting the plate H³ longitudinally, the plate I³ is also shifted longitudinally. Said punch-holder contains a series of cylindrical punches J, provided with notches J', and into said notches the flange J² of a plate J³, secured to the back of the punch holder projects and rests against the top of the notches, and on the bottoms of the notches the check-plate J⁴ rests, that rests on the top of the guide-plate J⁵, having as many apertures as there are punches. Said guide-plate J⁵ is fixed as shown in Fig. 10, and below the same a space J⁶ is provided in line with the slot B'. Below the space J⁶ the plate J⁷ is provided, which has as many female dies J⁸ as there are punches J, directly below said punches. Below the dies J⁸ apertures are formed in the top-plate, through which the parts punched out of the tickets can drop, said parts being guided by a deflecting plate A⁵ into the compartment A⁴ of the drawer A². Springs K, Fig. 2, each have one end rested on the check-plate J⁴, and the other one against the bottom edge of the punch-holder I⁵, and tends to press the die holder upward and against the plate K', forming the crank part of the shaft C'.

The plate J⁵ is provided with a transverse vertical slot, through which the swinging end of a blade L can pass, said blade being pivoted outside of the box cover B at L'; and pressed upward by a spring L² secured on the plate J⁵. The blade L swings past the fixed blade T.

The dating stamp M, serving to receive different types to impress the date into the ticket, is mounted to slide on the back of the punch-holder I⁵. The spring N is secured at one end of an angle-piece N' on the top-plate A, behind the dating stamp M, and the other end of the spring acts on a pin of said stamp for the purpose of pressing the stamp upward and against the under side of the plate K'.

The ticket to be used is shown in Figs. 12 and 13. On one face, at the top, is printed "This side is not valid," "See front side." At the bottom of the same face is printed "Full fare," "Way train," or "Express train," &c. On the back, the matter "This side is not valid" and "See front side" is printed at the bottom and the words "Half fare," "Way train" or "Express train," &c., at the top.

The ticket is divided into as many transverse spaces as there are stations, plus one. As in the ticket shown, there are ten spaces, whereas there are only nine stations on the road or section for which the ticket is printed. On the front the uppermost space is left blank and the stations are printed in their proper order, the main station being at the bottom. On the back the order is reversed, the main station being at the top and the bottom space being blank. The front has a uniform color whereas the back of the ticket is divided midway and has different colors.

The apparatus may have any number of punches, and said punches are arranged in two groups at the right and left of the cutting blades L and T. A suitable mark at *m*, on the front of the box cover B, shows the position of the cutters, and is to be used as a gage or mark for adjusting the ticket. The top plate A is provided at the left of the blade with an opening or recess V, through which part of the ticket can drop into the compartment A³ of the drawer A². The ticket shifting slide E is mounted to slide on the pin or guide-piece W', Fig. 10.

The operation is as follows:—For example, if a person purchases a ticket at "Tomona" for the distance from "Tomona" to "Hermit," Figs. 12 and 13, and said ticket is to be a full fare ticket, the ticket is placed upon the cover B³, with the side shown in Fig. 12, that is, the side of uniform color and having printed on its lower end "Full fare" at the top. The ticket also rests upon the hinged cover B³. That edge of the ticket toward the front of the apparatus rests against the rule E³, and against the inner edge of the lug E². The ticket is also inserted or passed through the slot B', so that its edges rest between the lugs H⁷ of the slide H³, the distance between said lugs being exactly equal to the length of the ticket. Then the handle H⁹ is grasped, the slide H³ is moved to the right or left hand until the line between "Hermit" and "Gangway," Fig. 12 is in line with the mark *m*, on the front of the casing B. Thereby the ticket is adjusted. By moving the slide H³ to the right or left, the plate I³ in the groove I⁴ in the front of the punch-holder I⁵ is moved likewise, and thus said plate I³ is moved to cover the upper ends of some of the punches and leave other punches uncovered, see Fig. 3. The handle C² is then pressed downward and as soon as said handle begins to descend, the beveled edge C⁷ of the notch C⁶ acting on the roller D' swings the other end of the lever D and the slide E in the inverse direction of the arrow *x'*, and its inner beveled end strikes the angular beveled projection G² of the hinged part B³, whereby the said hinged part is raised and prevents the ticket being removed. When the ticket has been moved under the punches, the line between "Gangway" and "Hermit" is directly in line with the cutting jaws of the blades L and T, and the stations "Jessup," "Derford," "Konut," "Romain," "Elburn," "Corbin," "Adams," and the blank space above "Adams" are below punches. There are no punches above "Gangway" and "Hermit," as a blank space is left between the two groups of punches, as shown in Fig. 3. When the handle C² is pressed down, the plate K' on the shaft C presses down the punch holder, and the blade L is pressed down by the punch holder I⁵, and cuts the ticket on the line between "Hermit" and "Gangway." Those punches upon the upper end of which the plate I³ rests are pressed down and forced through the ticket. The

other punches remain raised. As the punch-holder descends, the plate J³ also descends and its bottom-flange passes from the upper ends of the notches in the punches to the lower ends of said notches, thus permitting those punches by which the plate I³ rests to be pressed down. The ticket is thus punched at the stations "Elburn," "Corbin," "Adams," and the blank space above "Adams," and "Jessup," "Derford," "Konut," and "Romain" on the front side, and "Romain," "Konut," "Derford," "Jessup," "Elburn," "Corbin," "Adams" and the blank space adjacent to Adams on the rear side. The plate K' also depresses the dating stamp M, and thus the date of issue is stamped on the right hand part of the ticket; then the handle C is released, the punch-holder is pressed upward by the springs K, and the dating stamp is pressed upward by its spring N, and the punches J are raised by the bottom flange of the plate J³. The spring D², which was brought in tension by lowering the bar C³, throws the lever D in the direction of the arrow *x'*, whereby the slide E is moved in the same direction. The rules E⁶ and E⁷ connected with the shifting slide E, push the ticket out of the slot B', the right hand end being delivered upon the cover B³ and the left hand end passing under the hinged cover B³, which is still raised, and dropping into the drawer compartment A³. When the lever D is just completing its stroke it moves the slide G in the direction of the arrow *x'*, permitting the hinged cover B³ to drop. Another ticket can then be punched in the manner described. The ticket is punched on the line *nn*, Fig. 12, the part *o* is handed to the purchaser, and the part *p* has dropped into the compartment A³ of the drawer A². That part of the ticket that is handed to the purchaser rests upon the projection F² at the inner end of the lever F, and by depressing the finger-plate at the outer end of said lever F, the ticket is raised so that it can easily be grasped by the operator. The part *o*, handed to the purchaser, shows that the ticket is a full fare ticket, as the words "Full fare" only appear on the face of the same. It further shows that it is for a "way train;" that it was issued at "Tomona" and is valid to the station of "Hermit," as no other stations appear beyond "Hermit" on the ticket. The back of the ticket *q*, Fig. 13, states that that side is not valid and that the front side should be seen. The part *p* of the ticket, Fig. 12, that drops into the drawer compartment A³ shows on its back that the ticket was issued from "Tomona" to "Hermit." As the valid side of the ticket that is dropped into the drawer compartment is for half fare, this is a proof that the ticket issued was a full fare ticket, and thus the auditor can control the number of tickets sold and the points for which they were issued. In case a half fare ticket is to be issued, the ticket is reversed when placed upon the shifting slide E, the

side shown in Fig. 13 being at the top. Otherwise the ticket is inserted and punched in the manner described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a ticket-punching apparatus, the combination, with a series of vertical punches arranged in two groups, there being a number of punches in each group, of a cutter between the two groups and at right angles to the line of punches, substantially as set forth.

2. In a ticket-punching apparatus, the combination, with a series of punches in line and arranged in two groups which are separated a short distance from each other, of a slide mounted above the punches and a lever for forcing down said slide and the punches below it, substantially as set forth.

3. In a ticket-punching apparatus, the combination, with a series of punches arranged in line and two groups which are separated a short distance from each other, of a ticket-adjusting slide mounted to slide in the front of said punches and parallel with the same, and provided with prongs against which the ends of the ticket to be punched can rest, and a slide above the punches, and a lever for forcing down said slide and the punches below it, substantially as set forth.

4. In a ticket-punching apparatus, the combination, with a series of punches arranged in line and in two groups which are separated a short distance from each other, of a toothed slide in front of the punches, having prongs for guiding the ticket, a spring-pawl engaging the teeth of the slide, a slide above the punches and a lever for forcing down said slide and the punches below it, substantially as set forth.

5. The combination, with a series of punches arranged in line and in two groups, which are separated a short distance from each other, of a punch-holder having a groove above the punches, a block or plate sliding in said groove, and with an adjacent slide in front of the punch-holder, said ticket-adjusting slide being connected with the sliding block in the groove of the punch-holder, and a lever for forcing down said sliding block and the punches below it, substantially as set forth.

6. In a ticket-punching apparatus, the combination with a vertically-movable punch-holder, of punches in the same, a pivoted cut-

ting blade below the punch-holder, a fixed blade adjacent to the pivoted cutting blade, and a lever for forcing down the punch-holder and blade, substantially as set forth.

7. In a ticket-punching apparatus, the combination, with a punch-holder, of a row of punches in the same, a shaft provided with a plate above the punch holder, a handle on said shaft, a bar projecting downward from the handle, a pivoted lever connected with said bar, a ticket shifting slide connected with said lever, a hinged section in front of the punch lever, means substantially as herein described for operating said hinged section, and a slide operated by the lever connected with the bar projecting downward from the handle, substantially as set forth.

8. In a ticket-punching apparatus, the combination with a punch-holder, of a row of punches in the same, a shaft provided with a plate above the punch holder, a handle on said shaft, a bar projecting downward from the handle, a pivoted lever connected with said bar, a ticket shifting slide connected with said lever, an additional slide-mechanism substantially as shown and described for operating said additional slide from said lever and a hinged cover section actuated by said additional slide, substantially as set forth.

9. In a ticket-punching apparatus, the combination as herein described, with a punch-holder, of a row of punches in the same, a rocking-shaft having a plate for forcing down the punch-holder, a handle on said shaft, a bar projecting downward from the handle and a swinging lever actuated by said bar, and a ticket-shifter connected with said lever, substantially as set forth.

10. In a ticket punching apparatus, the combination, with the punch-holder, a series of punches in the same, a shaft provided with a plate above the punches, a ticket-shifter, levers connecting the ticket-shifter with a handle lever of the bar above the punch holders, a separate ticket-lifting lever adjacent to the ticket-shifter, and a slide above the punches, substantially as herein shown and described.

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

CARL MARIA DANNER.

Witnesses:

EDMUND JUSSEN,
OTTO SCHIFFER.