Nov. 23, 1954 C. A. GARVER 2,694,975

TICKET IMPRINTING DEVICE

Filed Nov. 21, 1949. 2 Sheets-Sheet 1

Fig. 1.

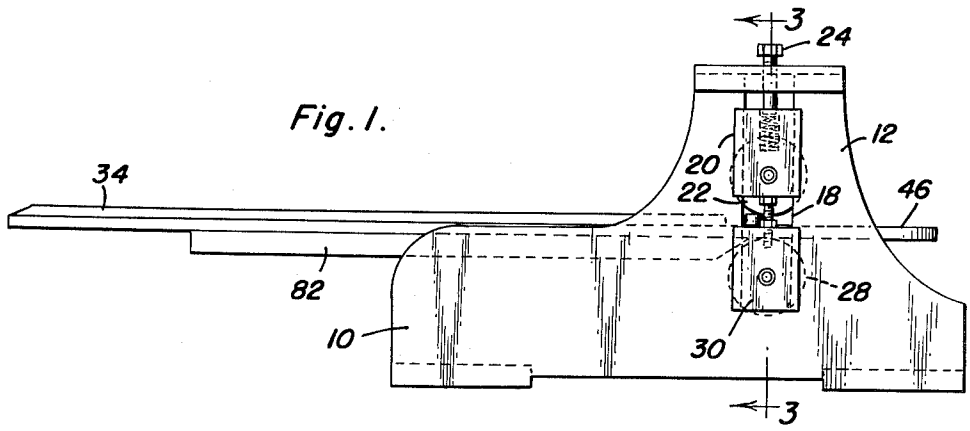


Fig. 2.

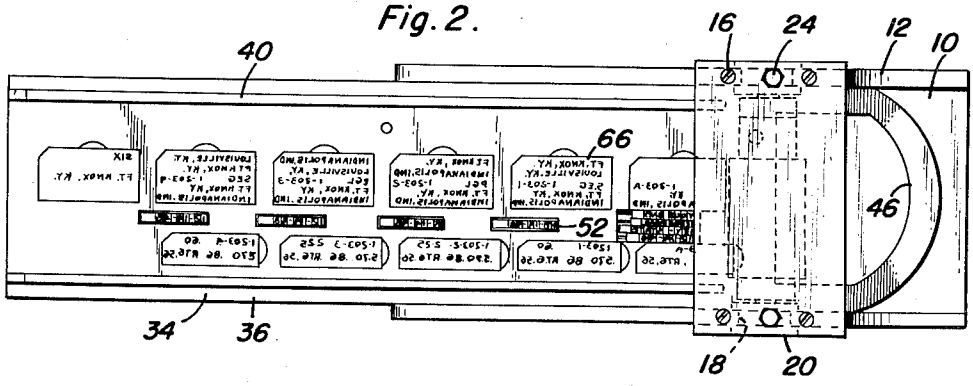


Fig. 3.

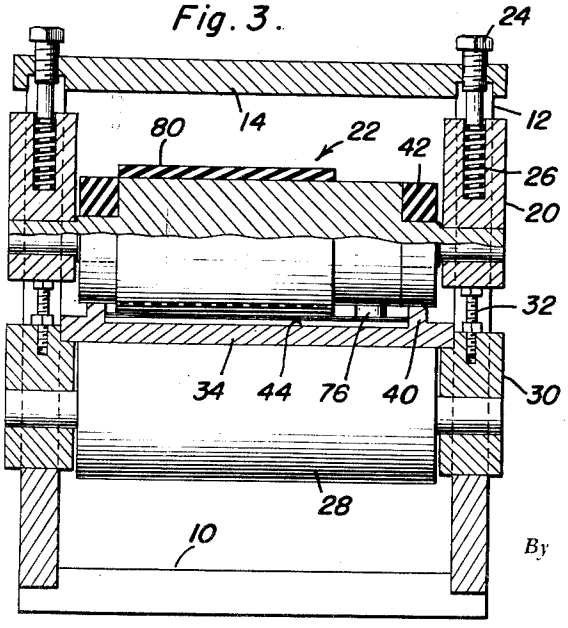


Fig. 8.

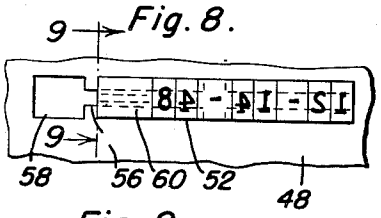
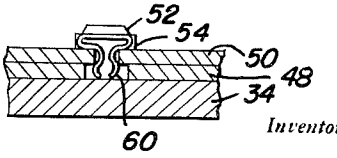


Fig. 9.



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2 Sheets-Sheet 2

Fig. 5.

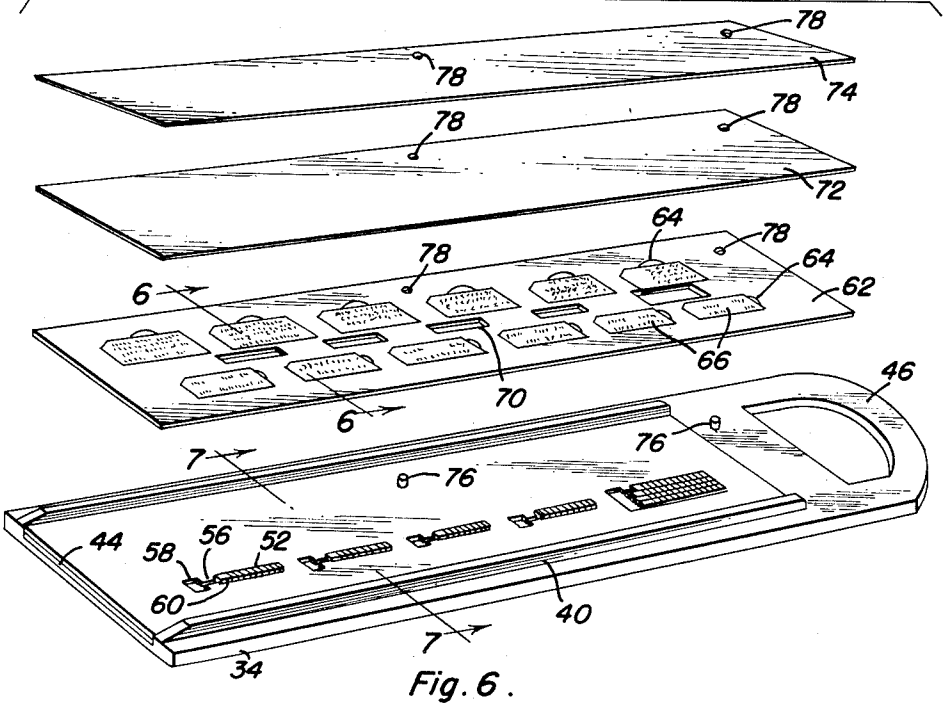


Fig. 6.

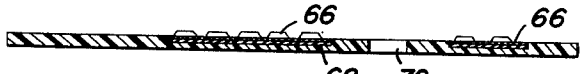


Fig. 7.

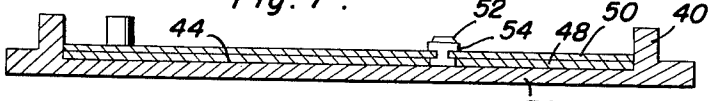


Fig. 4.

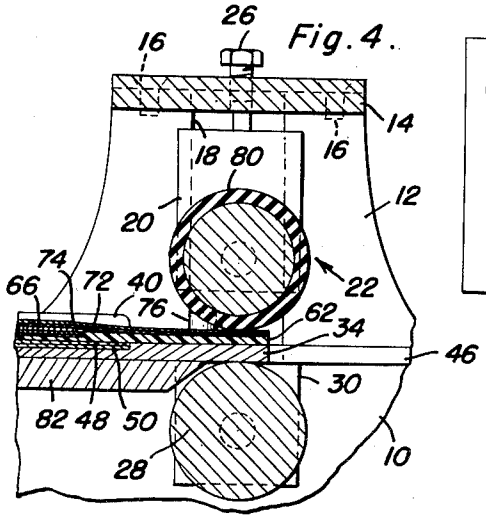
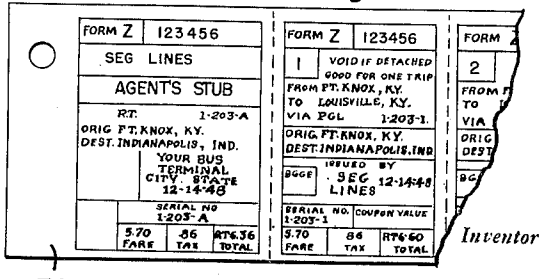


Fig. 10.



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2,694,975

Patented Nov. 23, 1954

2,694,975

TICKET IMPRINTING DEVICE

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Application November 21, 1949, Serial No. 128,540

4 Claims. (Cl. 101—374)

This invention relates generally to printing machines and more particularly to a device for imprinting the routing, fare, tax, and interline value of coupons, together with the dating or validating of tickets such as used by transportation companies.

A primary object of this invention is to facilitate the inserting of routings, fares, tax, dates or validations, and any other information desired, in transportation company tickets, or the like, especially those tickets in which the same matter is repeated upon successive tickets and/or upon different portions of the same ticket.

An underlying object of this invention is the simplification and facilitation of inserting routings, fares, tax, dates or validations and other information upon transportation tickets and the like, with resultant acceleration of the work and greater convenience to the travelling public, inasmuch as complete, accurate and easily legible tickets can be furnished customers very quickly upon application therefor at a ticket office.

A specific object of this invention is to provide a prepared plate to be on file in ticket agency, containing embossed slugs carrying the desired information for imprinting tickets of transportation companies.

Another specific object of this invention is the arranging of the routing on separate slugs from the fare, tax and interline rate and the affixing of these slugs to the plate with an adhesive to provide a means of easily changing portions of the imprinting without the necessity of preparing complete new plates.

Another specific object of this invention is to provide a ticket imprinting device in which a platen carries type plates having such relatively non-varying matter such as the routing and fares, while an under plate is provided carrying type relating to such matter as the date, which will, of course, change relatively frequently.

Another specific object of this invention is to provide simple means for guiding a carriage carrying printing type means along with a ticket and reproducing media, into contact with a pressure roller, and to make the actual manipulation of the carriage easily accomplished without smudging of the imprinted characters on the ticket, all as will be more fully explained in the following specification.

And a last object to be mentioned specifically is to provide a ticket imprinting device which is relatively inexpensive and practicable to manufacture, which is convenient, simple and safe to use, and which will give generally efficient and durable service.

With these objects definitely in view, this invention resides in certain novel features of construction, combination and arrangement of elements and portions as will be hereinafter described in detail in the specification, particularly pointed out in the appended claims, and illustrated in the accompanying drawings which form a material part of this application, and in which:

Figure 1 is a side elevational view of the assembled machine;

Figure 2 is a top plan view of the machine;

Figure 3 is a vertical sectional view taken on the section line 3—3 in Figure 1;

Figure 4 is a fragmentary vertical longitudinal sectional view;

Figure 5 is an exploded view, in perspective, of the carriage with its under plate, platen, and a ticket with a sheet of carbon paper arranged in a manner suggestive of the arrangement of these elements in the carriage during operation of the device;

Figures 6 and 7 are vertical transverse sectional views taken on the corresponding section lines in Figure 5;

Figure 8 is a fragmentary plan view of a section of what is hereinafter referred to as the under plate with type and a spring keeper used to retain the type in position in the under plate.

Figure 9 is a vertical sectional view, taken substantially upon the line 9—9 in Figure 8; and

Figure 10 is a fragmentary plan view of a ticket such as will be imprinted by the device which is the subject matter of this invention.

Similar characters of reference designate similar or identical elements or portions throughout the specification and throughout the different views in the drawings.

Referring now to the drawings in detail, this device includes a base 10 which is elongated and generally U-shaped and which has upstanding lateral walls 12 in opposed relation above the level of the main portion of the base. A flat plate or cross-bar 14 is rigidly secured terminally to the said upstanding walls 12, by means of screws 16, this plate or cross-bar 14 extending transversely of the base.

The lateral walls 12 are provided with vertical slots 18 and slide bearings 20, of cross-head character, are vertically slidably mounted in the slots 18. The slide bearings 20 are opposed to each other and carry an imprinting roller 22 which has journals freely rotatably mounted therein. Adjusting screws 24 are threaded into the cross-bar 14 and depend into bores provided in the slide bearings 20, helical springs 26 being provided between the lower ends of the screws 24 and the inner ends of the bores in the bearings so that the roller 20 is resiliently mounted to allow limited vertical movement relative to the base 10.

In the embodiment of this invention illustrated in the drawings, a second or lower roller 28 is somewhat similarly mounted for free rotation within somewhat similar bearings 30, although it will be obvious that equivalent structure may be substituted for this roller and bearings 30. Adjusting screws 32 may be inserted between the bearings 20 and 30, so that the spacing of the roller 22, above the roller 28, can be varied by the operator.

A carriage 34 is provided with laterally disposed rails 40 to engage collars 42 on the roller 22 for a purpose which will be made clear hereinafter. The carriage 34 is preferably centrally and longitudinally recessed on its upper surface as best indicated at 44 in Figures 3 and 7 and the carriage has a semi-circular handle 46 at one end. An under plate comprised of two layers 48 and 50 is removably mounted within the recess 44, these layers having registering longitudinally disposed slots, the slots in the upper layer 50 being narrower than the slots in the lower layer 48, so that type 52 can be removably mounted in the under plate by means of channeled mounting members 54, best illustrated in Figures 7 and 9. The slot in the upper layer 50 is indicated at 56, in Figure 8, and it will be noted that this slot is enlarged at 58 to allow insertion of the lower portion of the attaching block 54. It will be understood that the type 52 is mounted by first inserting the attaching blocks 54 in the enlarged portion 58 of the slot 56 and then sliding the type with its attachment block longitudinally of the slot. When the type is in position, a spring keeper 60, best illustrated in Figures 8 and 9, is forced into the slot 56 to hold the type against longitudinal movement. It is noteworthy that the type referred to above will be relating to matter which is changed relatively often, such as the date as illustrated in the figures.

A platen 62, ordinarily rectangular, as best illustrated in Figure 5, is mounted in superimposed relation on the under plate 48 and between the rails 40. The platen has a plurality of recesses in its upper surface, these recesses having enlargements 64 functioning as finger holds 64, and type plates 66, ordinarily metal plates with raised type on the upper surface, are removably received in these recesses and retained therein by an adhesive member 68, ordinarily comprising sheets of adhesive tape in the bottoms of the recesses in the platen. A plurality of apertures 70 in the platen 62 accommodate the type 52, and when the platen is placed on the carriage, in superimposed

relation with the under plate **48**, the impression faces of the type plates **66** will be coplanar with the impression faces of the type **52**.

Figure 5 also illustrates the relative dimension of the carbon paper **72**, or other reproducing media, and the ticket **74**. At least one guide post **76** will be provided on the upper surface of the carriage **34**, to extend through the under plate **48** and through apertures **78** in the platen **62**, carbon paper **72**, and ticket **74**, in order that these elements may be in proper registration with each other and with the carriage **34** during the actual imprinting operation. The roller **22** will be provided with a resilient covering **80**, and this resilient covering will be at least as wide as the transverse spacing of the type plates **66** and type **52** requires. When the carriage **34** is being pulled through the device, the roller **28** will function as the chief support for the carriage, and auxiliary supports for the carriage, both during the actual pulling operation as well as before the pulling operation is commenced, are provided in the longitudinally disposed rails **82**, which may be integral with the base **10**, as best illustrated in Figures 1 and 4.

The operation of this invention will be clearly understood from a consideration of the foregoing description of the mechanical details thereof, taken in connection with the drawings and with the above recited objects of the invention. In recapitulation, the carriage will be pulled manually through the device, as from the left to right in Figures 1, 2, and 4. The carriage **34** will carry the under plate **48** with its type **52**, the platen **62** with its type plates **66**, the carbon paper **72** with the carbon disposed upwardly, and the ticket **74**, arranged in that order. The actual imprinting will be clearly understood. The type plates **66** can be removed and replaced when fares or routing is changed, although the adhesive material **68** will ordinarily retain these type plates in the platen **62**. It will be understood that both this platen **62** and the under plate **48** are provided in sets according to the number of commonly used tickets sold in the particular office wherein this invention is used and wherein the routing and fare do not change frequently. It will be clear that the different parts of the ticket, as illustrated in Figure 10, can be filled out with expedition when the proper platen and under plate are chosen, inserted in the carriage along with the carbon paper and ticket and the carriage pulled through the device. The type plates **66** can be mounted transversely of the platen **62** when commutation tickets are being used. It will also be clear how all of the objects mentioned in the early part of this specification are amply accomplished by this invention, as well as possibly many other objects and advantages which will be evident to those skilled in the art to which this invention appertains.

Having described the invention, what is claimed as new is:

1. In a ticket printing device, a printing member comprising a substantially rectangular and flat carriage having an elongated recess in its upper face and a hand hold at one end, a pair of parallel roller engaging rails rising from the upper face of said carriage inwardly from the side edges of the carriage and including flat inner surfaces, said recess including side walls flush with the inner surfaces of said rails, an under plate positioned in the recess and contacting the bottom wall of the recess and having side edges contacting the side walls of the recess, type carried by the under plate and rising therefrom, and a type carrying platen overlying and resting flat against the under plate and having slots therein receiving the type carried by the under plate, said platen including longitudinal side edges contacting the inner surfaces of said rails.

2. The combination of claim 1 wherein said platen includes an upper face having recesses therein, type plates positioned in the recesses in said platen, and adhesive means retaining the type plates in the recesses in said platen.

3. In a ticket printing device, a printing member comprising a flat carriage having an upper face provided with a recess therein, an underplate disposed within the recess and resting flat against the bottom wall of the recess, said underplate comprising upper and lower juxtapositioned layers each having a slot therein, the slot in the lower layer being wider than the slot in the upper layer and being in registry with the slot in the upper layer, a type retaining block slidably carried by the underplate, said block being substantially H-shaped in cross-section to include spaced flanges and grooves between said flanges, said grooves receiving the side edges of the slot in the upper layer, one of said flanges being received in the slot in the lower layer and resting against the bottom wall of the recess and the other of said flanges resting upon the upper face of said upper layer, and a spring clip engaged in said slots to hold the block against sliding, said slots each having an enlarged end portion through which the block may be moved for removal from the underplate.

4. The combination of claim 3 wherein said spring clip comprises a substantially C-shaped head resting against the upper face of said upper layer and extending across the slots, said clip also having a pair of undulated leg portions formed with the ends of said head and yieldingly engaging the side edges of the slot in said upper layer.

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