April 26, 1932. J. E. JOHNSON 1,855,398

DEVICE FOR RECORDING SALES TRANSACTIONS

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Fig. 1.

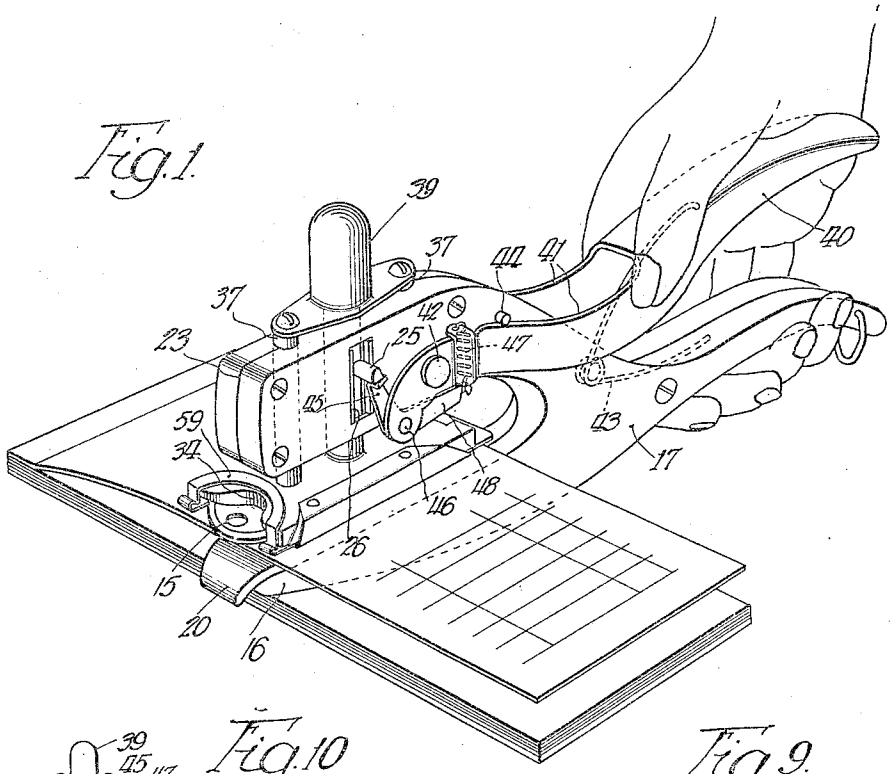


Fig. 10

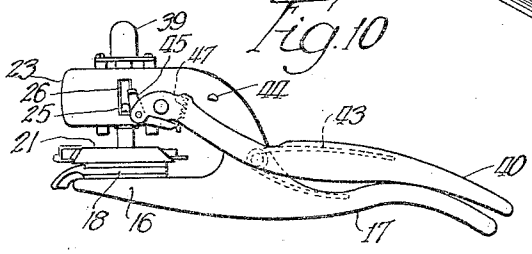


Fig. 9.

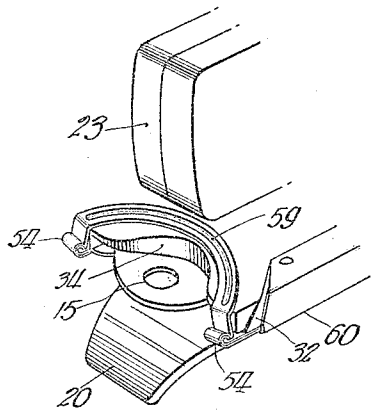
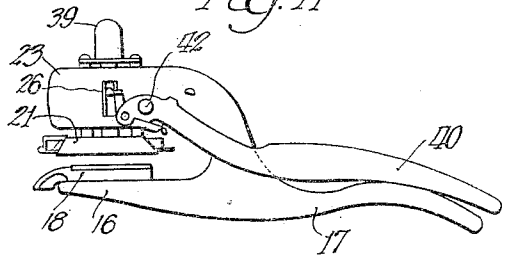


Fig. 11



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DEVICE FOR RECORDING SALES TRANSACTIONS

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Fig. 2.

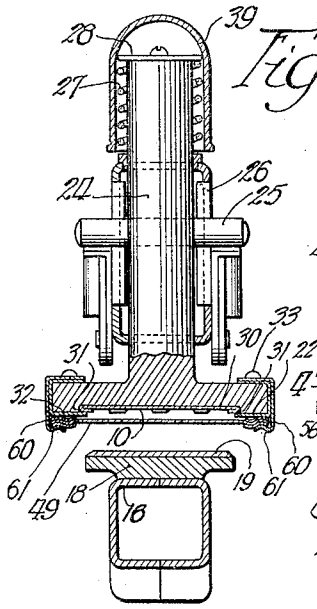


Fig. 3.

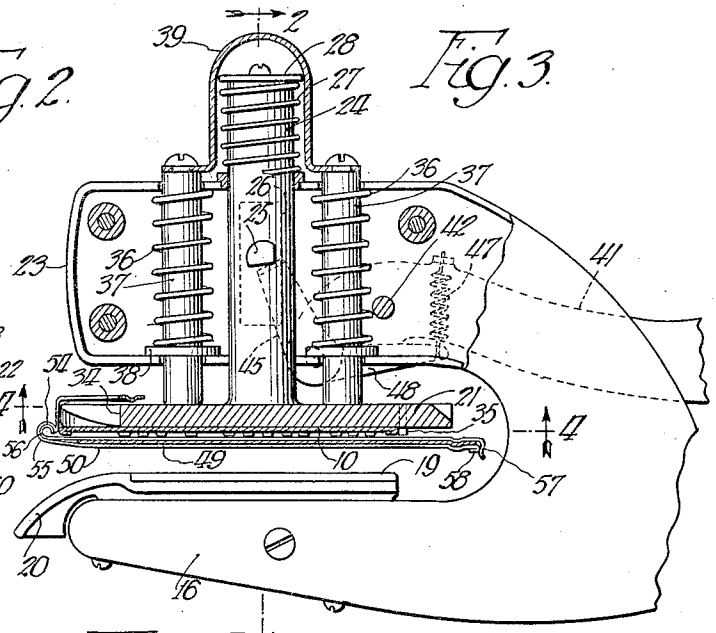


Fig. 4

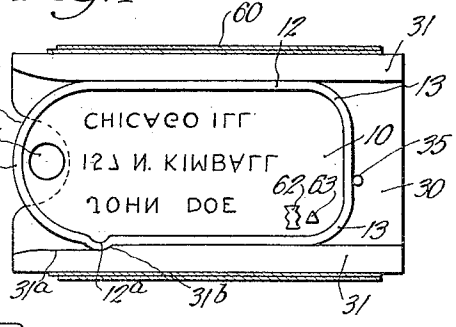


Fig. 8.

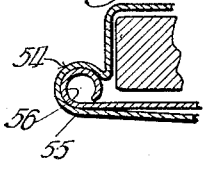


Fig. 5.

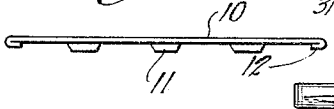


Fig. 6.

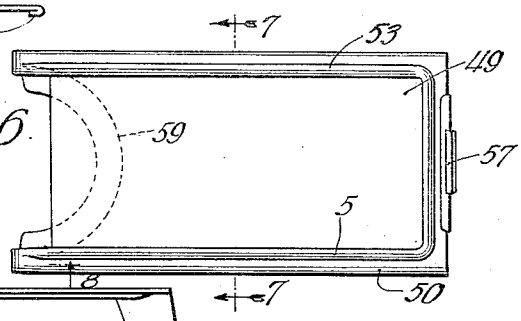
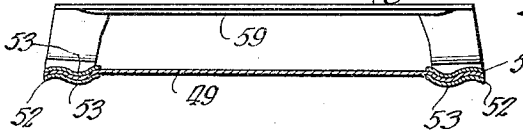


Fig. 7.



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UNITED STATES PATENT OFFICE

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DEVICE FOR RECORDING SALES TRANSACTIONS

Application filed October 23, 1929. Serial No. 401,914.

This invention relates to business transactions which involve the making of records or the like containing specific data relating, for example, to the individual making the transaction; and aims to provide improved means for expediting and increasing the reliability and accuracy of such transactions.

The invention may be readily understood by reference to one exemplification thereof as applied to retail merchandising and recording of retail sales transactions. Such exemplification of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of a hand held imprinting device having associated therewith one form of sales book and record for receiving data involved in sales transactions;

Fig. 2 is a vertical transverse section through the imprinting mechanism (the sales record having been removed for the sake of clarity) taken approximately on the line 2—2 of Fig. 3;

Fig. 3 is a vertical longitudinal section through the principal portion of the device, certain other parts being shown simply in elevation;

Fig. 4 is a bottom plan section of the impression head (taken on the line 4—4 of Fig. 3) showing a printing plate in position;

Fig. 5 is an end edge view of a printing plate or token;

Fig. 6 is a plan view of the carbon sheet and holding frame;

Fig. 7 is a transverse section thereof taken on the line 7—7 of Fig. 6;

Fig 8 is a slightly enlarged section of a hinge detail, taken on line 8—8 of Fig. 6;

Fig. 9 is a larger perspective view of the front end of the printing device showing the design of the end of the device to expose the end of the inserted token to enable it to be readily grasped for removal;

Fig. 10 is a general view (details omitted) showing the relation of the parts of the printing device at the instant of impression; and

Fig. 11 is a similar view showing the relation of the parts immediately after impression, such position being assumed automatically and without any intervening action of the operator.

In the present embodiment of the invention, the physical instrumentalities employed cooperate to record upon a record (such as a sales record) in an invariably legible form, certain data specific to the customer, such as, for example, the customer's name, address, credit rating, et cetera. These cooperating instrumentalities comprise a printing plate or token of a size and shape convenient to be carried by the customer and bearing in legibly embossed printing characters the customer's name, address, et cetera; a sales or other record upon which the customer-data may be imprinted by the embossed characters on the token on as many copies as may be desired; an imprinting medium; and a device for associating the record sheet or sheets and the token and impressing the latter upon the record, thereby to record the data on the token legibly and accurately.

The present embodiment of the invention avoids direct contact of the customer-token with the ink or other imprinting medium, whereby the token may be returned to the customer in unsoiled condition and the danger of soiling the customer's hands or gloves may be avoided.

The individually carried token or imprinting element comprises in this instance a plate 10 (Figs. 4 and 5) of metal sufficiently ductile and malleable that it may be embossed (and re-embossed if need be to correct errors or to make changes) to provide in relief, clear and sharp printing characters 11, that is, characters which will print clearly and sharply. The obverse or intaglio side of the plate exhibits the characters in normal order so that the data may easily be read. The plate or token is reinforced by a marginal bead 12 formed by folding over the margins of the blank tightly against the printing face of the plate (see Fig. 5), the bead serving also to provide the plate with smooth rounded edges. It will be observed that the printing characters are slightly higher than or project beyond the bead 12 so that the latter does not interfere with the printing operation, i. e., there is no offset. The rear corners of the plate are rounded as at 13 and the front end 14 is advantageously found on an arc of a

circle. The edges of the plate being smooth, round, and free from sharp projections or indentations, wear upon the purse, pocket or clothing of the customer is minimized, so that the plate lends itself to convenient handling,—thereby eliminating any reluctance on the part of customers to develop the habit of carrying the plate and using it in making purchases or transacting other business. The marginal reinforcement prevents bending of the relatively soft metal of the plate by much handling and preserves it in the flat condition desirable when the plate is used to print upon a record. In this connection the embossed surface of the plate also supplies a certain longitudinal and transverse reinforcement against bending. A recess, in the form of a hole 15 is provided at the end 14 of the plate to serve as a means for manipulating the plate for easy insertion into and removal from the printing device, as hereinafter explained. The plate may be either grasped between the fingers, the hole providing a gripping means in such case, or it may be carried on a watch or other chain, or the like, enabling it to be inserted without removal from the chain, and by means of which it may be easily withdrawn from the imprinting device. The hole, therefore, serves as an expedient calculated to assist the customer in cultivating the habit of always carrying the token. The other structural features likewise adapt the plate to be continuously carried by a customer without damage or impairment of function as a printing plate.

The device for operatively associating the printing token and sales record and for making the impression is in this instance embodied in a light weight, compact, hand carried or hand held device which requires no fixed or other support for its use and particularly avoids the use of valuable counter or other supporting space in department stores and the like. Such device comprises a platen support 16 having an integral supporting handle 17 projecting rearwardly thereof. A platen 18 faced with a plate 19 of firm rubber or other slightly resilient material appropriate for platen purposes is screwed to the platen support. In area the platen corresponds in size to the type area of the token. The depth or vertical height of the platen and its supporting structure is such that it may be readily inserted under a record sheet or group of sheets (if more than one copy be made) without the necessity for removing the record sheet or sheets from the record book (see Fig. 1). The front end of the platen is flared downwardly as at 20 to assist in the insertion of the record sheets.

The printing token is in this instance removably held in an impression head 21 (including a plate holder 22) movably carried by a supporting structure in the form of a housing 23 opposite and spaced from the platen, and in this instance integral with the handle 17. The impression head is limited to vertical movement relative to the platen by a guide rod 24 passing through the housing 23 and welded into the back of the impression head (see Figs. 2 and 3). The guide rod 24 and head 21 are prevented from rotation relative to the platen by a guide pin 25 carried by the guide rod 24 and travelling in slots 26 in opposite sides of the housing 23. A relatively weak spring 27 surrounding the guide rod and confined between the head 28 thereof and a collar 29 seated in an opening in the hollow structure 23, normally maintains the impression head at a substantial distance above the platen (see Figs. 2, 3, and 10).

The lower face of the head is recessed at 30 to receive a backing surface for the printing plate and to provide marginal flanges 31 between which the printing plate is positioned and by which it is prevented from lateral movement. The printing plate is releasably held against the backing plate by the holder which in the present instance comprises channel members 32 of thin springy metal secured at 33 to the back of the impression head. The horizontal flanges of the holders 32 yieldingly engage the token margins to press the token against the impression head. The token may be inserted in and removed from the impression head by grasping it between the fingers at the hole 15 and sliding it longitudinally between the holder flanges. For this purpose the head is recessed at 34 to expose the end of the token when in the holder, so that it may be quickly removed, speed in and facility of removal and insertion of the token being important in many systems in which the device is used.

The impression head is advantageously provided with a stop in the form of a pin 35 a short distance from the backing plate to locate the token longitudinally of the holder.

The apparatus is designed to prevent the insertion of the printing plate in improper position either in inverted or reversed position. In the present case one side margin of the printing plate is provided adjacent one end with a projecting lug 12^a to receive which one flange 31 is cut back as at 31^a adjacent its front end, the cut back portion terminating at 31^b. As shown in Fig. 4, when the printing plate is inserted in proper position the cut back flange permits the lug to enter the holder a sufficient distance to position the plate, in which position the lug engages the front end of the full width portion of flange 31 at 31^b. If an attempt be made to insert the plate in inverted position, i. e., with the printing face up, the lug will engage the front end of the other flange 31 and prevent the plate from being pushed into position. If an attempt be made to insert the plate in reversed position

(whether the plate be also inverted or not) the lug will prevent the insertion of the plate beyond the point 31b. The lug in this instance is rounded in contour so as not to present any sharp corners.

The impression upon the sales record is in this instance made by a percussive movement of the impression head which insures a sharp and clear cut impression not only on the original record sheet but on all copies thereof. The present embodiment is also designed so that the pressure delivered to the record, i. e., the pressure of the printing plate upon the record is practically instantaneous, thus eliminating any opportunity for impairing the sharpness of the impression as might occur if the pressure were prolonged.

The aforesaid operation of the impression head is effected in this instance, by giving it a high velocity by means of compression springs 36 located inside the housing 23. These springs operate through the medium of plungers 37 having stop collars 38 adjacent their lower ends against which the springs press and which serve to limit the downward travel of the plungers by engagement with the bottom of the housing 23. The upper ends of the plungers carry and are connected together by, a dome shaped cover member 39 which encloses spring 27 and its plunger. The springs are energized by an operating handle 40 having spaced arms 41 passing on opposite sides of the housing 23 and pivoted thereto by the screw pin 42. The extremity of the handle 40 is placed an appropriate distance from the supporting handle 17 to permit the two handles to be readily grasped by one hand not only for manipulation but for support of the device (see Fig. 1). The handles 17 and 14 are yieldingly separated by a torsion spring 43 located between them and limited in its separating action by the pin 44 projecting from the housing 23 and engaging an arm 41. The handle is operatively connected with the springs 36 by devices in the form of pawls 45 pivoted to the extremities of the arms 41 and engaging flat surfaces on the pin 25. Thus, downward depression of the handle 40 relative to the handle 17 raises the plunger 24 which, carrying with it the impression head, compresses the springs 36 whose upper ends bear against the top of the housing 23. The pawls 45 swing with the handle 40 about its pivot pin 42 and are designed to clear the pin 25 when the springs 36 have been sufficiently compressed, whereupon the springs are released to impart their energy to the impression head (see Fig. 10). This transfer of energy is accomplished by the time the stop collars 38 engage the bottom 39 of the housing, at which point the printing plate and its holder are still a substantial distance above the platen. Nevertheless the kinetic energy thus imparted to the impression head carries it downwardly at a high velocity, compressing spring 27 (which is a relatively weak spring), to deliver a percussive blow to the record sheets upon the platen.

This sharp legible impression made by the percussive action of the impression head results not only from the force with which the printing plate is caused to strike the record but from the character of the force. Because of the rapidity of the blow, the inertia of the various record sheets and interleaved carbon sheets against even slight movement with the printing plate and the air cushion between the sheets, is substantial and serves to hold the portions of the sheets not actually embraced within the outlines of the type, out of any substantial contact with the inking or inked surfaces,—thereby limiting the inked impression exactly to the outline of the type and resulting in a sharp impression with no offset. The rapidity of the imprinting operation also contributes to the sharpness of outline of the printed characters because no opportunity is afforded for slight relative shifting of the elements involved in the operation to produce the blurred outlines which characterize an impression made by a slow or prolonged pressure. Another characteristic of the percussive blow by which the impression is made, is that there is no possibility of manual interference with the operation of the elements in making the impression.

Successive blows are, of course, uniform, and the impression head is free to react under the forces developed on impact which cause it instantly to raise the printing plate from the record. This reactive movement is rendered effective by the circumstance that the plungers 37 do not travel with the impression head to the point of impression, thus limiting the force of the impression simply to the kinetic energy of the impression head itself. Subsequent contact of the printing plate with the record is prevented by the action of the light spring 27 which, on the rebound of the impression head, carries and holds it a substantial distance above the record. In this position the records may readily be removed or inserted without danger of contact with the hereinafter described inking means. This upward movement is arrested by engagement of the holder with plungers 37. (See Fig. 11.)

Uniformity and clarity of a given impression also depends on adequate inertia (i. e., weight) of the platen and the supporting structure beneath it, rather than on the rigidity of the entire structure. Obviously, however, the platen and the supporting structure directly beneath it should not be unduly flexible. In adding weight to or beneath the platen care must be taken not to concentrate such a portion of weight at this point as to unbalance the device and make it inconvenient to handle.

The character and force of the percussion may be substantially varied by the design of the impression head, particularly its weight and distance of travel. Further variation may be effected by the degree of initial compression in the springs 36. By the latter means the velocity of the impression head may be varied, the force of the blow depending both upon the mass and velocity of the moving parts.

The pawls 45, pivoted as they are at 46 to the extremities of the respective arms 41, permit the automatic resetting of the device. Springs 47 carried by the arms 41 and connected to the rearwardly projecting arms 48 of the pawls, allow the return of handle 40 without binding of the pawls against the pin 25. As or shortly before the handle 40 reaches the point of engagement with the pin stop 44 the ends of the pawls 45 will have cleared the pins 25 and their springs 47 will cause them to snap under the pins to reset the device. The arms 41 are offset outwardly opposite to the springs 47 to provide a housing for and to conceal the springs. (See Fig. 1.)

In the present case the supporting handle, structure 23 and platen support are integral and pressed in complementary halves, from sheet steel. The halves are secured together by transversely extending screws, thus providing a hollow light weight device but with adequate strength and durability.

The imprinting medium or ink supply means is represented herein by removable carbon paper sheet 49 removably held in a frame 50. The frame 50 comprises two registering sections 51 and 52 made of sheet metal and provided with registering, complementary beads 53 which serve to grip the margins of the carbon sheet when the sections are pressed together, as they are when the frame is positioned on the impression head.

The frame sections 51 and 52 are advantageously separably connected by hinges 54 formed by the interfitting curled extremities 55 and 56 of the section sides (see Fig. 8), those of the lower section being outermost. The free or opposite ends of the sections are releasably held together by a fastening in the form of a clasp which in this case is integral with the section itself and snaps over the end of the other section, which is folded over as at 58 to provide a rounded end of double thickness. The clasp may be released by springing it back sufficiently to slide over the rounded end 58. When the sections are thus swung apart the carbon sheets may be removed and renewed.

To provide clearance at the front end corresponding to the recessed portion 34 of the impression head, the front end of one of the frame sections, the lower frame section 52 in this case, is offset as at 59 to pass around the end of the impression head and lie above and adjacent its recessed end 34. (See Fig. 9). No front end portion is required for frame section 51 since its sides are held within the curled extremity 55 of the other section, and in the present case such end portion has been omitted.

The frame holding means comprises longitudinal grooves 60 provided by the cooperation of the flanges of the members 32 and the flanges 61 of similar channel members similarly secured to the impression head in position to space the flanges 61 from those of members 32. These flanges being formed of sheet metal are sufficiently resilient to press the sections of the frame together as aforesaid and the height of the grooves 60 are adjusted to this end.

As illustrated in Figs. 2 and 3, the carbon sheet is normally held out of contact with any token which may be in the impression head to permit the convenient insertion and removal of the token and to protect the carbon sheet from injury. Only the lower face of the carbon sheet carries ink. The upper surface (next the token) is uninked and serves to protect the token from contact with the ink, permitting its return to the customer unsoiled. The holder frame opening is of such size that the sides thereof extend beyond the platen edge and do not contact with the platen upon operation.

The carbon paper is advantageously of a quality which will give a minimum of twenty-five impressions without removal and on the average will serve for about fifty impressions. The fact that the characters on the customer carried tokens are different and differently arranged accounts for the long life of a single sheet of carbon paper, since no two tokens will strike the carbon identically in the same place. However, even if repeated impressions be made from a single token, tests have shown that a minimum of twenty-five impressions may be made from a single carbon. Therefore, when different tokens are used the carbon sheet may be very safely used for many more impressions without change. It is contemplated that a supply of frames containing fresh carbon sheets will always be kept at hand for each printing device.

Carried as it is with the impression head itself, the blow of the printing plate in making the impression is not so much against the carbon strip as against the record sheet. This contributed to a sharp impression on the upper record sheet.

While adequate momentum of the impression head to produce a proper impression might be secured by increasing the energy stored in the actuating springs (instead of adjusting the mass of the impression head), there are practical limitations to this where the device is to be manipulated by girls or women, as is the case, for example, in depart-

ment stores. Increase in spring energy may be secured either by employing stronger springs or by increasing the closing travel of the handles 15 and 35 (i. e., their separation), but the gripping strength and the hand span of the sales girl place rather close limits on both of these means for increasing momentum. The minimum rather than the average hand strength and hand size must be considered.

For the same reasons it is important that the total weight of the device be small,—twenty-five ounces in the present embodiment. A light weight, easily held and operated device is highly desirable to secure cooperation of the sales girl to effect the economies inherent in a consistent use of the device. Obviously the problem of securing lightness requires that the mass of the impression head be not increased to secure momentum which can be secured by increased travel or strength of the actuating springs within the limits of easy manipulation by the sales girl.

In completing a transaction, such as a retail sale, in a system wherein the customer carried token is employed, the clerk first inserts the token in the holder, the light weight of the device readily permits this to be done while holding the device in one hand and inserting the token with the other. Whereupon the sheets upon which the impression is to be made are inserted over the platen, the balance of the record book lying, for example, below the platen support (see Fig. 1). The top sales sheet may be easily registered with the token by reference to the position of some part of the platen or impression head relative to a visible portion of the sales sheet. However, exact registration is seldom necessary and, approximate registration requires little or no attention upon the part of the clerk. The operation being completed, the token may be immediately withdrawn and returned to the customer.

While the installation of the above described system whether for retail merchandising or for recording other transactions does not preclude the making of purchases and recording of sales or other transactions (in the same sales books) without the use of the individual printing plate or token, the advantages both to the individual and to the organization employing the system resulting from the habitual use of the plate or token, are so great that the individuals will inevitably fully cooperate with the organization to effect the general and systematic use of the plates or tokens. From the standpoint of a retail customer, for example, whose effective cooperation requires the carrying and use of such a token whenever purchases are made, the speed of completing a given transaction at once impresses the customer. Furthermore, errors, delays and failures in delivery are avoided as well as erronious debits on the customer's charge account due to illegible or erroneous data on the sales record (when entered in longhand). Since the token is always returned to the customer in unsoiled condition, the latter is not reluctant to carry and use it regularly.

From the standpoint of the organization such as a department store, the speed in completing a given sales transaction obviously is highly advantageous because a given sales person can complete a greater number of sales transactions; and the mental fatigue of securing and writing names and addresses of customers, is wholly eliminated. The outstanding advantage to the department store is, however, the avoidance of loss through illegible or erroneous data on the sales record. Loss from this source is wholly avoided by the use of such tokens. The illustrative device requires no permanent support and need occupy no valuable counter space, but can readily be moved about as convenience requires.

A single token is capable of use in making purchases at a number of establishments. In such cases each establishment may emboss on the token an individual, private symbol (represented by the character 62) which may serve to indicate the credit rating of the customer. Another establishment when extending credit to a customer already supplied elsewhere with a token, may add its individual credit symbol (represented by the character 63). Such symbol on the token may serve, if the management of a store so desire, to indicate to the sales person (who is familiar with the significance of the store's private symbols) the fact that certain credit has been extended to the customer to whom the token has been issued. Moreover, an establishment may place on the token a description (by means of appropriate symbols or code) of the customer to whom credit authorization is extended. On the other hand, a given establishment may not extend such significance to its symbols and may, on occasion, require proof of the purchaser's identity, etc., in the usual manner required or that the sale be approved by an official, regardless of the possession by the customer of a token.

Obviously the invention is not limited to the details of the exemplification thereof herein illustrated and described, since such details may be variously modified. Moreover, it is not indispensable that all features of the inventions be used conjointly, since various features may be advantageously employed (without others) in different practices and combinations.

Having described one embodiment of my invention, I claim:

1. A device of the character described comprising a movable impression head, means for associating a printing plate with said head including a grooved holder, one

of said grooves being offset adjacent one end, and the side of said plate intended to fit in said groove being provided with a portion correspondingly offset, whereby the plate cannot be inserted improperly into position, and means to move said impression head to imprint the plate on the record.

2. A printing device adapted to be supported and manipulated by a single hand comprising in combination, a platen, a movable impression head normally spaced therefrom a distance to receive conveniently a plurality of record sheets and interleaved carbon sheets, a holder carried by said impression head for removably holding a printing plate, a pair of relatively movable handles connected with said platen and impression head by means of which the latter is actuated to make an impression, means for limiting the separation of said handles so that at their maximum separation they may be conveniently grasped by a single hand and brought together to supply the energy for actuating said impression head.

3. In apparatus of the character described the combination comprising an impression head, and a frame carrying carbon paper associated therewith, said frame consisting of registering sections between which the carbon paper is inserted.

4. In apparatus of the character described the combination comprising an impression head, and a frame carrying carbon paper associated therewith, said frame consisting of registering sections between which the carbon paper is inserted, and said frame having means for gripping said carbon paper.

5. In apparatus of the character described the combination comprising an impression device, grooved holding means for associating an inking medium with said device, a frame carrying carbon paper slidably held in the grooves in said means, said frame consisting of two registering sections between which the carbon sheet is inserted, said grooves serving to hold the sections together to grip the carbon sheet.

6. In apparatus of the character described the combination comprising an impression device, grooved holding means for associating an inking medium with said device, a frame carrying carbon paper slidably held in the grooves in said means, said frame consisting of two registering sections provided with paper gripping means and between which the carbon sheet is inserted, said grooves serving to hold the sections together to grip the carbon sheet.

7. In apparatus of the character described the combination comprising an impression device, grooved holding means for associating an inking medium with said device, a frame carrying carbon paper slidably held in the grooves in said means, said frame consisting of two registering sections provided with complementary projections and indentations to grip the carbon sheet between them, said sections being held together by said grooves in gripping engagement with said carbon sheet.

8. A carbon paper carrying device for apparatus of the character described comprising a frame of thin sheet metal formed in two registering sections and provided with complementary registering beads adapted to grip a carbon sheet inserted between said sections.

9. In apparatus of the character described the combination comprising an impression head, a holder having resilient grooves associated therewith, a frame of thin sheet metal formed in two registering sections and provided with complementary registering beads adapted to grip a carbon sheet inserted between said sections, said frame being removably inserted in said grooves, said grooves being designed to press said sections together to grip the carbon sheet between them.

10. In apparatus of the character described the combination comprising an impression head, a frame carrying carbon paper, and means associated with said head for carrying a printing plate and said frame in superposed relation, said head being cut away at its extremity to expose the end of the printing plate and the end of said frame being offset correspondingly to permit said plate to be grasped for insertion or removal.

11. In apparatus for recording business transactions the combination comprising, a customer carried printing token consisting of a plate of ductile metal and having rounded corners, the margin of said plate being folded over and upon the face of the plate from which the printing characters project to provide reinforcing, impression means having spaced guiding grooves for slidably receiving the longitudinal folded over edges of said token to hold the latter in position on said impression means, the latter having a stop to limit the insertion of said token so that a portion of the end thereof projects beyond said impression means, said token being provided in such projecting position with a hole by means of which it may be pulled out of said impression head.

12. A device of the character described comprising in combination a platen surface for supporting a record sheet to be imprinted upon, a movable impression head having grooves for removably holding a printing plate, said means and said plate being relatively constructed and arranged to prevent the sliding of said plate improperly into position, and means to move said impression head to imprint the plate on the record.

13. In apparatus of the character described, a customer carried token comprising in combination, a flat plate of ductile metal having embossed thereon in printing

characters, the name and address of the customer and having rounded corners, the margin of said plate being folded over and upon the face of the plate from which the printing characters project to provide reinforcing and a flush surface at the back of said printing plate, one end of said token being rounded and provided with a recess therein by means of which the token may be grasped to insert and remove it from said apparatus.

14. A printing device for printing upon record sheets comprising in combination, a platen adapted to receive a plurality of record sheets and interleaved carbon sheets, a supporting handle projecting therefrom, an impression head movably supported opposite said platen and having means for removably holding a printing plate, guides for guiding said head in its movement toward and away from said platen, an operating handle associated with said supporting handle and arranged closely adjacent thereto so that the two handles may be grasped together in a single hand, resilient means adapted to be energized by the operating handle for moving said impression head, a trip automatically actuated upon further movement of said operating handle for releasing said resilient means to cause the latter to impart a rapid movement to said impression head independently of the operating handle to deliver a percussive blow to the record sheets upon said platen to imprint said printing plate thereon, and a spring for automatically raising the impression head above the platen immediately after impression.

15. A printing device for printing upon record sheet comprising in combination, a platen adapted to receive a plurality of record sheets and interleaved carbon sheets, a supporting handle projecting therefrom, an impression head movably supported opposite said platen and having means for removably holding a printing plate, an operating handle associated with said supporting handle and arranged closely adjacent thereto so that the two handles may be grasped together in a single hand and said operating handle actuated by gripping both handles together, resilient means adapted to be energized by the operating handle for moving said impression head, and means for releasing said resilient means to cause the latter to impart a rapid movement to said impression head independently of the operating handle to deliver a percussive blow to the record sheets upon said platen to imprint said printing plate thereon.

16. A device of the character described comprising in combination, a platen adapted to support a record sheet, a supporting handle projecting therefrom, an impression head movably supported opposite said platen and having means for removably holding a printing plate normally spaced from said platen a distance to permit the insertion of a record sheet, an operating handle associated with said supporting handle and arranged relative thereto so that the two handles may be grasped together in a single hand, actuating means controlled by said operating handle and including a compression spring for giving said impression head a rapid movement toward said platen so as to strike the record sheet upon the latter with a percussive blow so as to imprint the printing plate thereon, and a spring lighter than said compression spring for returning the impression head to normal position.

17. A device of the character described comprising in combination, a platen adapted to receive a record sheet, a supporting handle projecting therefrom, an impression head movably supported opposite said platen and having means for removably holding a printing plate normally spaced from said platen, an operating handle associated with said supporting handle and arranged relative thereto so that the two handles may be grasped together in a single hand, a compression spring operatively engaging said platen for moving said impression head toward said platen, said compression spring not being connected to said impression head to leave the latter free to move beyond its normal position to deliver a percussive blow to said platen thereby to imprint said printing plate upon the record sheet, and a lighter spring for returning said impression head to normal position.

In testimony whereof I have signed my name to this specification.

JOHN E. JOHNSON.