June 18, 1940. E. W. DAVIS ET AL 2,204,577

IDENTIFICATION AND RECORDING DEVICE

Original Filed March 6, 1935 2 Sheets-Sheet 1

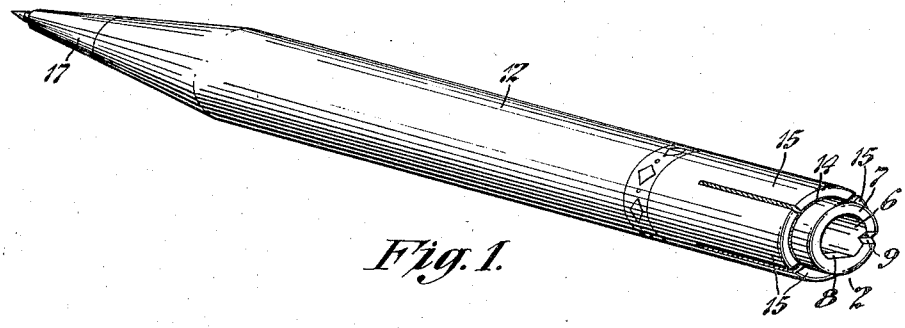



Fig. 1.

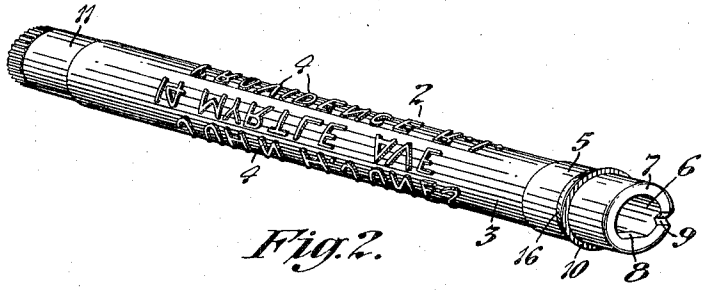



Fig. 2.

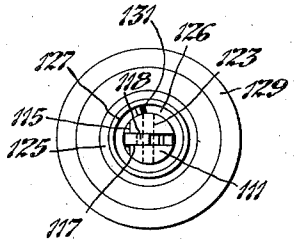



Fig. 6.

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IDENTIFICATION AND RECORDING DEVICE

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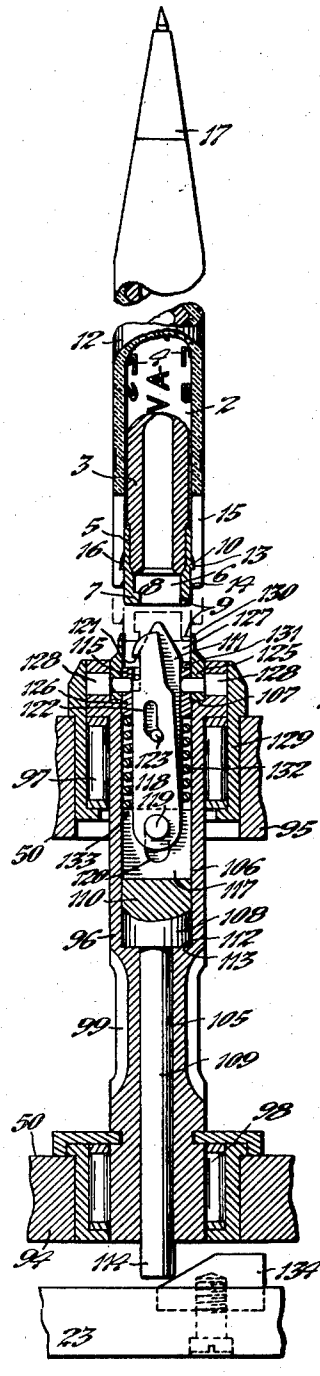


Fig. 3.

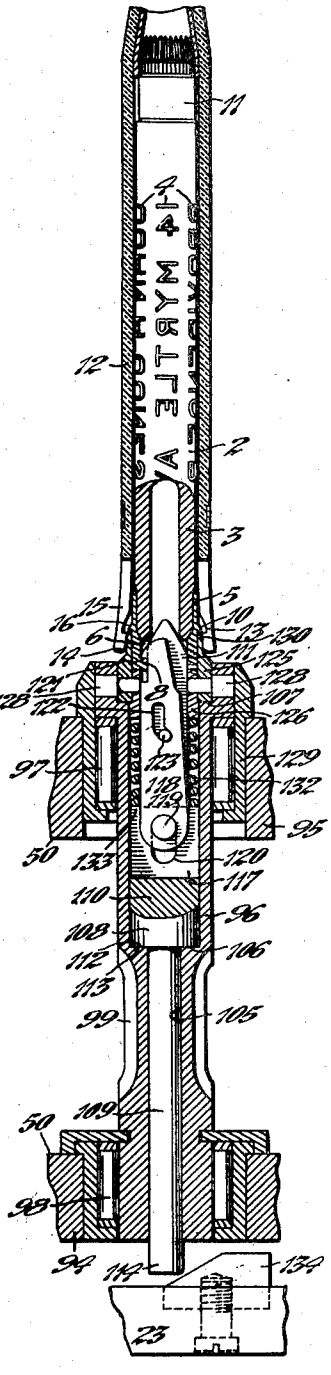


Fig. 4.

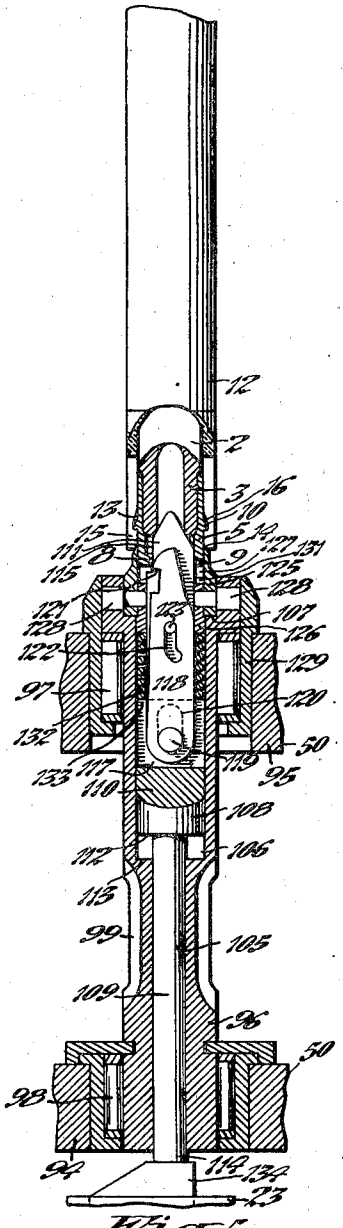


Fig. 5.

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# UNITED STATES PATENT OFFICE

2,204,577

## IDENTIFICATION AND RECORDING DEVICE

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Original application March 6, 1935, Serial No. 9,627. Divided and this application June 27, 1936, Serial No. 87,728

4 Claims. (Cl. 101—375)

This application is a division of our copending application Serial No. 9,627, filed March 6, 1935, and a continuation in part of our copending application Serial No. 568,048, filed October 10, 1931.

The present invention relates to an identification token for use in mercantile establishments to print or record identifying indicia and adapted to be carried by the person or customer to be identified.

One of the objects of the present invention is to provide a token of the type indicated comprising a printing roller sheathed and locked in a protective casing.

Another object of the present invention is to provide an identification token of the type indicated in which the protective casing may be released from locked engagement with the printing roller only by application of the token to a machine in the custody of an authorized person.

Another object of the invention is to provide an identification token of the type indicated with selective locking means for cooperation with interengaging means on those machines only with which it is intended to be used.

Another object of the invention is to provide an identification token of the type indicated which is of simple and compact structure permitting economical manufacture, and adapted to be quickly attached to or detached from the machine with which it is used.

Further objects of the invention are set forth in the following specification which describes a preferred form of construction of the token, by way of example, as illustrated by the accompanying drawings. In the drawings:

Fig. 1 is a perspective view of one form of token embodying the novel features of the present invention;

Fig. 2 is a perspective view of the printing roller of the token removed from its enclosing casing;

Fig. 3 is a view partly in section showing the printing roller of the token sheathed and locked in its protective casing and about to be mounted on a driving spindle;

Fig. 4 is a view similar to Fig. 3 showing the printing roller in locked engagement with the spindle and the protective casing released from locking engagement with the roller;

Fig. 5 is a view similar to Figs. 3 and 4 showing the printing roller with the locking means released and the protective casing locked thereon just prior to removal of the token from the spindle; and

Fig. 6 is an end view of the spindle.

Department stores and other merchandizing establishments having large clienteles generally furnish each charge customer with some sort of token or coin bearing indicia by means of which the customer may be identified to clerks or employees. With such a system in use the token is shown to the salesperson at the time of a purchase and the clerk fills out the charge or sales slip with data furnished by the customer.

Another more advanced method of handling charge accounts in large mercantile establishments is to furnish the customer with a flat metal printing plate having raised characters thereon embodying indicia for identifying the holder and also adapted to print and record the required information on sales or charge slips. Usually, the name and address of the customer against whose account the goods are to be charged, and in some instances the number or distinguishing symbol of the account, are embossed in type or characters on the face of the plate. With this form of token the required information may be recorded by placing the plate in a suitable press or apparatus which imprints its indicia on the charge slip by means of carbon paper or an inked ribbon.

The previously used methods above described have certain disadvantages in that the small coin-like token is easily mislaid or lost and may sometimes fall into the hands of an unauthorized and unscrupulous person. Such coin-shaped tokens are also likely to be confused with currency carried in the purse or pocketbook and therefore are not adapted for convenient and ready use. In the case of printing plates, these must necessarily be of relatively thin metal in order to economize in weight and thus they are apt to be bent or broken. Moreover, such plates have sharp edges and corners which are liable to inflict injury to the hand or to tear the lining of the purse or pocketbook in which they are carried.

The present invention relates generally to an improved construction of identification token which eliminates the disadvantages heretofore experienced. The novel identification token of the present invention is in the form of a small, quick-detachable printing roller, sheathed and locked in a protective casing so that the identifying indicia on the token cannot be observed by an unauthorized person.

The token is applied to the movable carriage of a press and operatively connected therewith by selective means which receive only tokens intended therefor. The carriage is provided with automatically-operated means for releasing the

protective casing from its locked engagement with the printing roller and for thereafter rotatably supporting the roller in locked engagement with a driving element. The carriage is so constructed and arranged as to lock the printing roller to the driving element during a printing operation and to automatically release the roller when moved to an inoperative position, whereby to permit application and removal of the rollers.

Referring to the drawings, the identification token or printing roller 2 is herein shown as comprising a cylindrical body member 3, preferably of metal, having curved type-characters 4 on its periphery arranged in longitudinal rows to provide the desired indicia to be printed. The characters 4 may be provided on the periphery of the roller by embossing, soldering or molding them upon a detachable supporting element or strip adapted to be locked in longitudinal grooves spaced around the periphery of the roller in the manner disclosed in our prior application Serial No. 568,048, filed October 10, 1931, or by any other suitable method.

A driving collar 5 at one end of the roller 2 may be formed integral therewith or made as a separate element and fixed thereto as disclosed in our prior application. The driving collar 5 is recessed as at 6 to form a generally annular end-wall 7 having an interior flat ledge or seat 8 and a marginal notch 9 in the end for selective locking engagement with an operating element of the machine, as will later appear. Adjacent its outer end the collar 5 is provided with an annular flange or rib 10 which extends radially from its periphery. At its opposite end the roller is provided with a bearing collar 11 of suitable construction to be engaged by a supporting bearing.

The printing roller 2 is sheathed and locked in a cylindrical casing 12 to protect the type faces and conceal the indicia on its periphery whereby to prevent fraudulent use by an unauthorized holder. The printing roller 2 is inserted through the open end of the casing 12 and locked in place therein by the engagement of the flange 10 with an interior locking groove 13 in the casing. To facilitate the insertion of the roller 2 the inner rim of the open end of the casing 12 is rounded or beveled at 14 and provided with a plurality of spaced longitudinal slits to form yielding fingers 15. The annular flange 10 on the roller 2 is correspondingly beveled on one side at 16 to adapt it to slide under the rounded or beveled edge 14 of the casing, at which time the fingers 15 yield to spring outwardly away from the flange. As the flange 10 is engaged with the groove 13 the fingers 15 spring back into close contact with the collar 5. The groove 13 and flange 10 preferably encompass the driving collar 5, thus making it necessary to expand all of the spring-fingers 15 simultaneously to free the flange 10 and permit withdrawal of the roller 2 from the casing 12. The casing 12 may be constructed of any suitable impervious material and is preferably of cylindrical shape to render it distinguishable from keys and other objects with which it may be contained in a hand bag or purse. The cylindrical shape of the casing 12 is also advantageous in eliminating sharp edges, corners or projections which would tend to abrade the lining material of the receptacle in which it is normally carried. In the present illustrated embodiment the casing 12 forms a holder for an automatic pencil attachment 17 positioned at one end thereof so that the token may serve to perform a plurality of functions. Although the casing is intended to be opaque to prevent fraudulent use of the token, it is to be understood that it could as well be transparent to identify the bearer without removal of the printing roller therefrom if that type of token is desired.

The printing roller 2 may be used in any suitable machine either hand- or power-operated or may be applied to use in addressing machines or the like. A novel machine of the type illustrated and described in the parent application Serial No. 9,627, filed March 6, 1935, is particularly suitable for use in mercantile establishments in that it is small, compact and adapted for convenient manual operation to print or record indicia on sales slips or for addressing tags, envelopes and other media. As the present divisional application is directed to the identification token, per se, only the driving spindle 96 and parts on the carriage 50 of the machine which directly cooperate with the token are herein illustrated and described.

As illustrated in Figs. 3, 4 and 5 the spindle 96 is journaled in antifriction roller bearings 97 and 98 held in bores in the septum 95 and end-wall 94 of the carriage 50, respectively. Intermediate the bearings 97 and 98 the spindle has gear-teeth 99 formed thereon which are adapted to mesh with the teeth of a suitable rack, not herein shown, to rotate the spindle when the carriage 50 is moved with respect to a base 23 on which it is mounted.

The printing roller 2 is adapted to be clutched in driving engagement with the end of the spindle 96 by means carried thereby. To this end the spindle 96 is axially bored throughout its length, as at 105, with two stepped counterbores 106 and 107. An axial plunger 108 is mounted in the spindle 96, being formed with a reduced portion or shank 109 in the bore 105, an enlarged collar 110 in the counterbore 106, and a reduced centering head 111 in the counterbore 107 projecting outwardly beyond the forward end of the spindle. The collar 110 forms a shoulder 112 adapted to engage the shoulder 113 between the bore 105 and counterbore 106, and the shank or rod 109 is of such length that its end 114 extends beyond the rearward end of the spindle 96. The end of the centering head 111 is of generally conical shape adapted to enter the recess 6 in the driving collar 5 on the printing roller 2 and is formed with a flat side 115 for cooperation with the internal flat ledge or seat 8 of the collar. The head 111 is slotted diametrically at 117 to receive a latching lever 118 pivotally mounted on a pin 119 having its ends held in the walls of the spindle 96. The pin 119 extends through longitudinal slots 120 in the side portions of the head 111 so that the head may be slid longitudinally relatively of the spindle. The lever 118 has a tapered or rounded outer end to correspond with the conical end of the head 111 and a detent-shoulder 121 adapted to be projected outwardly from the cut-away or flatted side 115 of the head. Intermediate its ends the lever 118 has a cam-slot 122 engaged by a pin 123 which extends across the slot 117 with its ends held in opposite sides of the head 11.

Within the larger counterbore 107 at the forward end of the spindle 96 there is positioned an annular collar 125 having an internal diameter substantially equal to the outside diameter of the collar 5 on the end of the printing roller 2. Within the collar 125 is a sleeve 126 enclosing the centering head 111 on the plunger 108 and of

such length as to leave an annular recess 127 at the end of the spindle 96 for receiving the circular wall 7 of the collar 5 on the printing roller 2. The collar 125 and the sleeve 126 are fixed to the driving spindle 96 for rotation therewith, by means of radial pins 128 held in position by the projecting end of the fixed sleeve 129 of the bearing 97 which surrounds the end of the spindle. The edge 130 of the collar 125 is beveled or tapered on its periphery to engage under the inner beveled edge 14 of the spring-fingers 15 at the end of the casing 12. The end of the sleeve 126 is provided with a projection or key 131 of a contour corresponding to the contour of the notch 9 on the end of the driving collar 5 of the printing roller 2.

A helical spring 132 is held under compression between the end of the sleeve 126 fixed to the spindle 96 and a shoulder 133 on the plunger 108. The spring 132 normally urges the plunger head 111 inwardly to move the pin 123 carried thereby toward the offset end of the cam-slot 122 so that the free end of the latching lever 118 is projected outwardly from the flat side of the head as shown in Fig. 3. In this normal position of the centering head 111 the detent-shoulder 121 on the latching lever 118 is adapted to engage the seat 8 within the driving collar 5 of the printing roller 2 to clutch it to the spindle. However, when the plunger 108 is moved longitudinally of the spindle 96 toward the outer end thereof the pin 123 in the cam-slot 122 will rock the lever 118 about the pivot-pin 119 to withdraw the detent-shoulder 121 from engagement with the driving collar 5. When withdrawn the latching lever 118 lies within the slot 117 in an inoperative position, as shown in Fig. 5. The flat side 115 of the centering head 111 and the projection 131 on the sleeve 126 provide for selective locking engagement of authorized printing rollers with the operating mechanism of the particular machine for which they are intended. With the notched recess 9 and internal ledge or seat 8 alined respectively with the flat side 115 of the centering head 111 and the projection 131 on the sleeve 126, the printing roller 2 can be moved axially to a position shown in Fig. 4. In this position the seat 8 on the printing roller 2 is in a position to be engaged by the tapered end of the latching lever 118 when the latter is projected outwardly from the centering head 111. On the other hand, if the notch 9 is not in register with the projection 131 the printing roller 2 cannot be moved into the recess 127 to a position where the latching lever 118 will engage the seat or ledge 8. It will be understood that the machines used by different establishments will have the projection 131 on the sleeve 126 differently positioned with respect to the flat side 115 of the centering head 111 and the authorized printing rollers carried by the persons to be identified will have their edges notched to correspond with the projections on the machine or plurality of machines with which they are to be used.

The printing roller 2 may be automatically released by the engagement of the end 114 of the plunger 108 with suitable means on the machine, such as an upstanding lug 134 on the base 23 thereof as shown in Figs. 3 and 4. The lug 134 has a flat top and beveled side, being positioned on the rim of the base 23 to adapt it to be engaged by the end portion 114 of the plunger 108 when the carriage 50 is in the position indicated in Fig. 5. In all other positions of the carriage the end 114 of the plunger clears the lug 134. Normally, the end 114 of the plunger 108 is moved outwardly from the spindle 96 by the spring 132 and with the free end of the latching lever 118 projected outwardly from the side of the centering head 111, see Figs. 3 and 4. The method of operation of the complete apparatus is as next explained.

As before noted, the roller 2 is used as an identification token and recording device, the department store or other commercial establishment furnishing each charge customer with one bearing suitable indicia such as the customer's name and address and other particulars, if desired. As shown in Fig. 1, the token or printing roller 2 is sheathed in the protective casing 12, being locked therein by the engagement of its radial flange 10 with the internal locking groove 13 in the casing, see Fig. 3. When the same roller is to be used with a plurality of machines in different establishments the end which projects from the casing 12 is provided with a plurality of notches adapted to cooperate with the projection 131, which may be differently positioned on the spindles of machines used in different establishments. Upon making a purchase to be charged to his account the customer presents the token or roller 2 for the purpose of identification and the clerk or sales person applies it to the machine to record the sale in the manner as next explained.

To apply the printing roller 2 to the machine the carriage 50 is first moved to engage the end 114 of the plunger 108 with the lug 134 on the base 23 of the machine. The longitudinal sliding movement of the plunger 108 causes the detent end of the latching lever 118 to move into the slot 117 in the centering head 111 by the action of the pin 123 sliding in the cam-slot 122. The token 2 may then be applied to the spindle 96 by directing the recess 6 in the driving collar 5 over the end of the centering head 111 and rotating the token until the ledge or seat 8 registers with the flat side 115 of the head, at which time the driving collar 5 will enter the annular recess 127 in the spindle. The carriage is then moved to carry the end 114 of the plunger 108 away from the lug 134 so that the spring 132 may slide the plunger to project the end of the latching lever 118 outwardly, whereby to engage its detent-shoulder 121 with the internal seat 8 on the driving collar 5.

During the longitudinal movement of the collar 5 into the recess 127 the beveled edge 130 of the collar 125 engages under the beveled edges 14 of the yielding fingers 15 to spring them away from the flange 10 to release the casing 12 from the roller 2. The casing 12 may then be withdrawn from the roller 2. If the driving collar 5 is not properly notched it cannot be moved into the annular recess 127 to a position where the end of the latching lever 118 will engage the seat 8; and consequently the collar 125 cannot release the casing 12 from engagement with the printing roller 2. Each machine is therefore selective to receive only printing rollers intended for use therewith. When the proper printing roller 2 is applied to the machine it will be locked to the spindle 96 at one end; it being understood that other means are provided for rotatably supporting the opposite end of the roller. The carriage 50 with the printing roller 2 locked thereto is then moved through an operative stroke to cause a record to be printed on any suitable blank, the roller being rotated during the printing operation by the engagement of the gear-teeth 99

on the spindle 96 with a rack on the machine, not herein shown.

At the completion of the printing operation the carriage 50 is moved to the position shown in Fig. 5. In this position of the carriage, as above explained, the latching lever 118 is withdrawn from engagement with the internal seat 8 on the printing roller 2 by the engagement of the end 114 of the plunger 108 with the lug 134. This engagement slides the plunger 108 axially of the spindle 96 so that the pin 123 carried by the head 111 of the plunger is moved in the cam-slot 122 to the position shown in Fig. 5 to release the latching lever 118 from the collar 5 on the printing roller 2. The protective casing 12 may then be slipped over the roller 2 until the flange 10 at the end of the latter is engaged in the groove 13 within the casing. The printing roller 2 is thus locked in the casing 12 and may then be removed from the machine to again fulfill its purpose as an identification token. At this juncture the machine is in condition to receive another printing roller which may be applied thereto in the manner as before explained.

The token may be carried in a hand bag, pocket or other receptacle with its casing protecting the type on the printing roller from mutilation, while also preventing the ink from soiling the hands or staining the lining of the receptacle in which it is placed. Moreover, the protective casing 12 prevents unauthorized use of the token, as its indicia is held secret, and thus eliminates the danger of its being used to defraud.

While the present device has been herein described and illustrated as embodied in a preferred form of construction, it is to be understood that various modifications may be made therein and in the manner of its use without departing from the spirit or scope of the invention. Therefore, without limiting ourselves in this respect, we claim:

1. A printing roller comprising a cylindrical body member having type faces on its periphery, and a hollow collar at one end of the body member having an internal flat seat and a notch at its end arranged in a particular angular relationship for providing a driving connection and to adapt the roller for selective use only with particular machines of a group.

2. A printing roller comprising a cylindrical body member having type faces on its periphery, and a hollow driving collar at one end having an internal flat seat, a notch at its end, and a radial flange on its outer periphery.

3. A device adapted to be carried on the person and applied to a machine to identify the person and make a record comprising a casing of resilient material having an open end, said casing being slitted rearwardly from the open end to form a plurality of spring-fingers, locking shoulders adjacent the ends of the spring-fingers, a recording element receivable in the casing through its open end to adapt said element to be enclosed and entirely concealed in the casing, and a locking shoulder on the recording element engageable by the locking shoulders on the spring-fingers to retain the element in the casing.

4. A device adapted to be carried on the person and applied to a machine to identify the person and make a record comprising a casing, a hollow printing roller in the casing, cooperating locking means on the roller and the interior of the casing, an inwardly directed locking ledge in the hollow printing roller adapted for engagement with a driving spindle, and a recess in the end of the roller angularly disposed with respect to the locking ledge to adapt the printing roller for connection with the spindles of particular machines.

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