Feb. 22, 1938. G. W. HENRY, JR 2,109,389

REPRICER

Filed Feb. 21, 1936 2 Sheets-Sheet 1

Fig. 1.

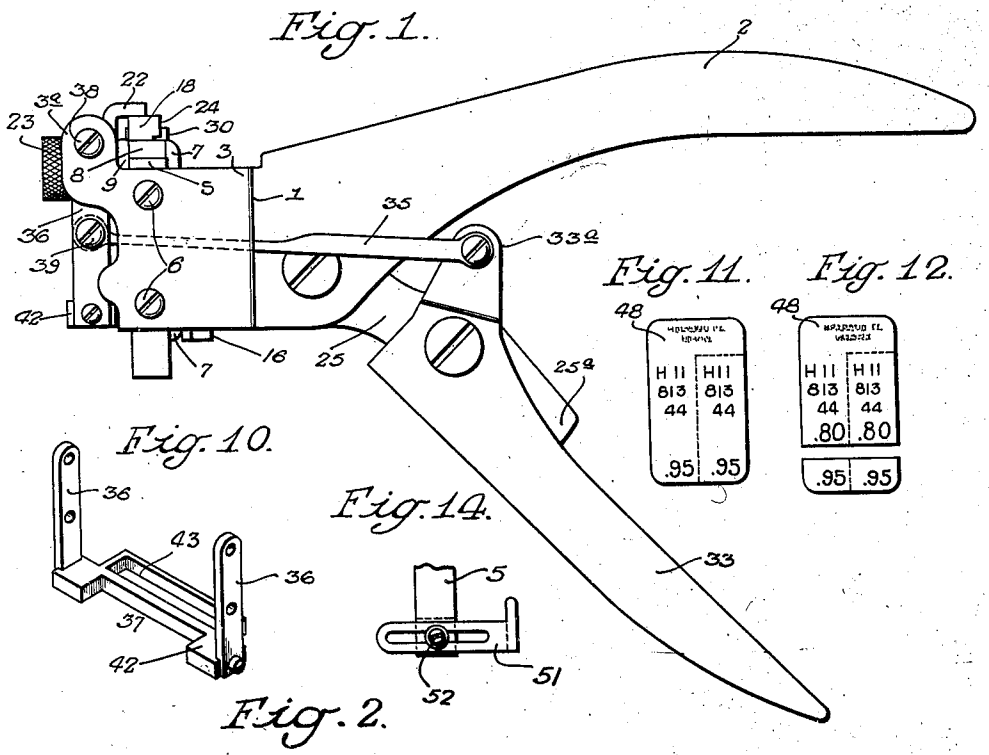


Fig. 11.

Fig. 12.

Fig. 10.

Fig. 14.

Fig. 2.

Fig. 13.

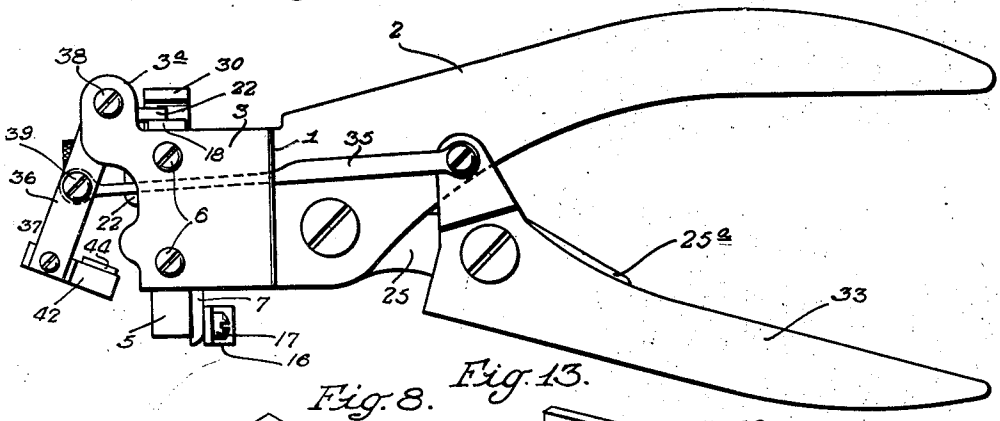


Fig. 8.

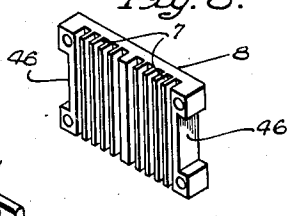
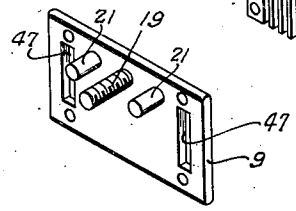


Fig. 9.



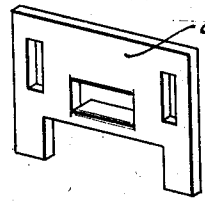


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Fig. 3.

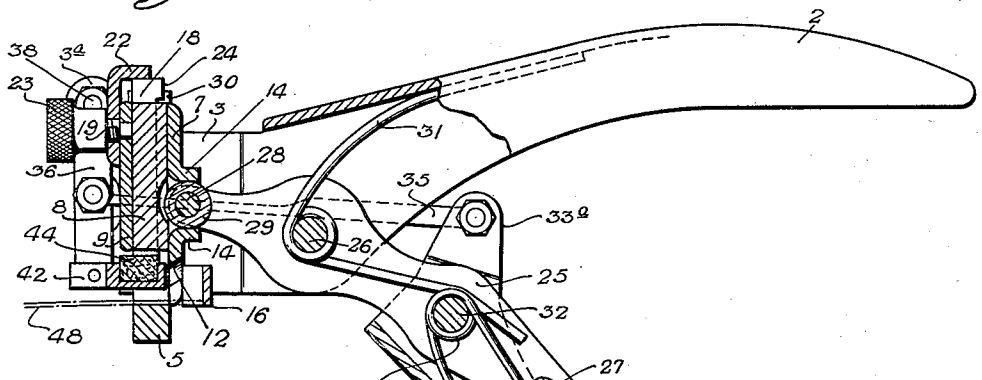


Fig. 4

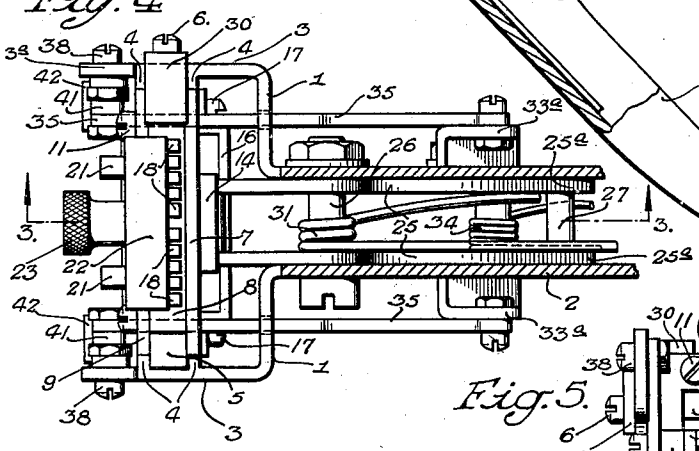


Fig. 5.

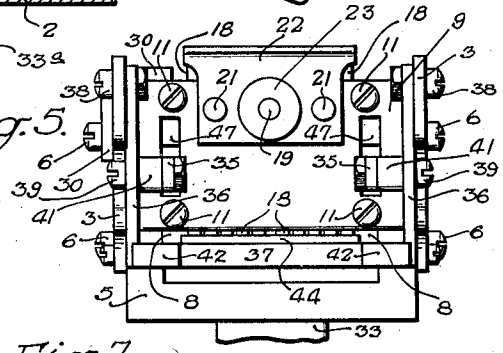


Fig. 6.

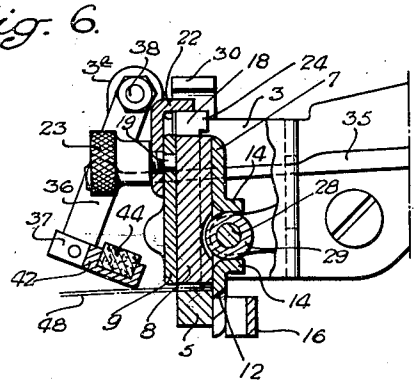
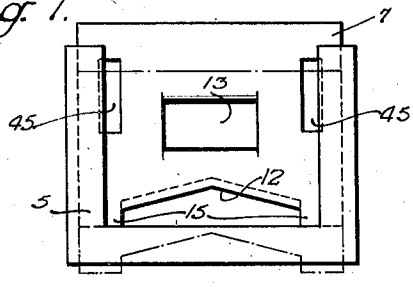


Fig. 7.



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Patented Feb. 22, 1938

2,109,389

UNITED STATES PATENT OFFICE

2,109,389

REPRICER

George W. Henry, Jr., Philadelphia, Pa., assignor to Soabar Company, Philadelphia, Pa., a corporation of Pennsylvania

Application February 21, 1936, Serial No. 65,157

6 Claims. (Cl. 101—297)

This invention relates to repricing devices of a character used to change the price markings on price tags, the specific function of the device being to sever the lower portion of the tag containing the price indication and to simultaneously print at the bottom of the remaining portion of the tag the new price indication.

The object of the invention is to provide a device of this character that shall be characterized by compactness and simplicity of form and manipulation, the invention also contemplating the provision of a device that shall be capable of printing duplicate markings on a single tag as and for the purpose hereinafter set forth.

The invention further resides in the mechanical details of construction hereinafter set forth and illustrated in the attached drawings, in which:

Figure 1 is a side view of the device showing the parts in the normal or inoperative position;

Fig. 2 is a corresponding view showing the parts in the relative positions assumed at the end of a working stroke;

Fig. 3 is a view corresponding to Fig. 1 but partially sectioned in the longitudinal direction on the line 3—3, Fig. 4, to illustrate the details of the mechanism;

Fig. 4 is a sectional plan view showing the working parts of the mechanism;

Fig. 5 is a front view of the mechanism as shown in Figs. 1, 3 and 4;

Fig. 6 is a fragmentary longitudinal sectional view of the device with the working parts thereof in the relative positions in which they are shown in Fig. 2;

Fig. 7 is a fragmentary view illustrating the cutting blade in the normal retracted position and indicating in broken lines the position of the blade at the forward end of its stroke;

Figs. 8, 9 and 10 are, respectively, detached views in perspective of elements of the mechanism;

Fig. 11 is a view showing a price tag of conventional form;

Fig. 12 is a view of the tag following operation thereon by the device forming the subject of the invention; and

Figs. 13 and 14 are respectively a view in perspective and fragmentary elevational view showing modifications within the scope of the invention.

With reference to the drawings, the device comprises a body member 1 having an extension 2, constituting a handle element, and offset side plates 3, 3. The inner face of each of the side plates 3 is provided with a pair of ribs 4, 4 forming a channel in which is established a U-shaped member 5, which is secured rigidly to the side plates by means of screws 6. As illustrated, the bottom of this U-shaped member 5 extends below the lower edges of the plates.

Slidably mounted between the plates 3, 3 on guides constituted by the legs of the member 5 is a type carrier and cutter assembly, this assembly comprising three principal parts consisting, respectively, of a cutter blade 7, a type supporting member 8 and a type-retaining plate 9, these elements being secured together in face-to-face relation by means of screws 11. The member 8, which lies between the blade 7 and the plate 9, is of lesser width than the last-named elements and fits between the legs of the member 5, as shown in Fig. 4. The side edge portions of the blade 7 and the plate 9 engage the opposite sides of the legs of the member, also as shown in Fig. 4, and thereby slidably retain the assembly in position.

The blade 7, as shown in Figs. 6 and 7, comprises a cutting edge 12 inset from the bottom of the blade, said edge being of angular formation, as illustrated, to thereby in operation afford a progressive shearing effect, as hereinafter set forth. The blade also comprises a rectangular opening 13, the upper and lower edges of which are defined, as shown in Fig. 6, by rearwardly extending flanges 14, 14. The normal retracted position of the blade with respect to the member 5 is shown in Figs. 3 and 7, and it will be noted that in this position the portions 15 of the blade which lie at the opposite ends of the cutting edge 12 extend downwardly to a point in or below the plane of the cross bar of the member 5. In operation, this cross bar cooperates with the cutting edge 12 of the blade to afford the required shearing action, it being noted by reference to Fig. 7 that when in the cutting operation the blade 7 has been advanced to the extreme advance position, as shown in broken lines, the said cutting edge lies entirely below the upper or inner edge of the cross bar. Secured to the back side of the blade and to the portions 15 thereof previously referred to is a strap 16 which is secured to the blade by means of screws 17, this strap being offset rearwardly from the rear face of the blade and constituting a stop or gauge determining the depth of the cut or the amount of the price tag that is cut away, as hereinafter set forth.

The member 8, which as previously described is secured to the opposite face of the blade 7, is shown in the detached perspective view of Fig. 8. This member 8 has formed in its forward face a series of slots 17 adapted for reception of type elements 18 which in normal position project at both the top and bottom of the member 8. These type elements 18 are held in the slots by means of the plate 9 which is secured to the slotted face of the member 8. The plate 9, as shown in Fig. 9, has projecting from its outer face a threaded stud 19, and on each side of this stud a pin 21. The stud 19 and pins 21 are adapted for reception of a type-retaining clip 22 which is retained in position on the plate 9 by means of a nut 23

and which extends rearwardly at the top over the type elements 18 and thereby functions to hold these elements in their holder 8. The elements 18, as illustrated, have at their upper ends an offset portion 24 forming a shoulder which by engagement with the upper surface of the retainer 8 prevents movement of the type in the holder in an opposite direction. For replacement of the type elements 18, it is only necessary to release the retaining element 22 by release of the nut 23, the type elements being then withdrawn from the upper ends of the slots 17. It will be noted by reference to Fig. 6 that when the type and cutting blade assembly has been advanced from the normally retracted to the fully advanced position, the lower ends of the type elements 18 which constitute the printing faces of these elements are brought down into engagement with the transverse bar of the member 5. This transverse bar, therefore, constitutes not only an element of the shearing device but also the printing platen upon which that portion of the tag which is to be printed rests during the printing operation.

The type and cutter blade assembly is actuated through the medium of a lever 25 pivotally mounted upon a bolt 26 extending between the sides of the lever 2, see Figs. 3 and 4. The lever 25 consists of two parallel arms 25*a*, 25*a* which are connected at their rear ends by a pin 27 and at their forward ends by a pin 28. This latter pin constitutes a journal for a roller 29 which fits between the flanges 14, 14 of the blade 7. The arrangement is such that oscillation of the lever 25 about its pivot on the bolt 26 will effect a reciprocation of the type and blade assembly between the retracted and advance positions previously described. A spring 31 supported on the bolt 26 between the arms 25*a* of the lever 25 and having its ends confined between the handle extension 2, and a bolt 32 extending transversely through the lever 25 normally resiliently hold the lever in a position retracting the type and cutter blade assembly, as shown in Fig. 3. This retracted position of the said assembly is determined by a stop element 30 which is secured by one of the bolts 6, see Fig. 4, to the outer face of one of the side plates 3 and which has at its upper end an inturned flange overlying the top of the assembly and limiting its upward movement under the action of the spring 31.

The bolt 33 constitutes a pivotal connection between the lever 25 and a second lever 33, this latter lever constituting the movable handle element of the instrument and the medium through which the instrument is operated. A spring 34 mounted on the bolt 32 is confined between the pin 27 and the lever 33 and tends to retain the two levers in the relative positions in which they are shown in Fig. 3. When the lever 33 has been drawn from this position toward the handle element 2 to a predetermined extent, the body of the lever 33 engages the outer end of the lever 25, after which engagement a continued movement of the lever 33 towards the handle element 2 will actuate the lever 25 around its pivot 26 to advance the type and cutter blade assembly as previously described. It will be noted, however, that during the initial part of this movement of the lever 23 towards the handle element 2, there will be no corresponding movement of the lever 25.

The lever 33 is of channel formation similar to the handle 2, and is so formed as to constitute in effect a bell crank, the inner arm of which constituted by the spaced inner ends 33*a* of the lever is connected through rods 35 with the arms 36 respectively of an oscillating member 37 pivotally supported between the ears 3*a* of the side plates 3, this pivotal connection being effected through the medium of bolts 38. The rods 35 are connected to the mid portions of the arms 36 by means of bolts 39, the ends of the rods 35 being spaced inwardly from the inner faces of the arms 36, see Fig. 5, and being separated from the latter by means of spacer sleeves 41. Attached to the lower ends of the arms 36 of the member 37 is a transverse member 42 having in its upper face a recess 43 for reception of an ink pad 44. The normal position of the member 37 is shown in Fig. 3, it being noted that in this position the pad 44 lies in contact with the printing faces of the type elements 24. When the lever 33 is drawn from its normal extended position shown in Fig. 3 toward the handle element 2, the initial movement of this lever about the bolt 32 effects an outward swinging movement of the member 37 toward the position in which it is shown in Fig. 6. This initial movement of the member 37 is sufficient to clear the pad 44 from the printing face of the type elements 24, so that when the lever 33 meets the outer end of the lever 25 and thereby initiates the movement of the latter lever advancing the type and cutter blade assembly, the latter assembly is free to advance into the operative position. Following the initial movement of the member 37, the outward oscillation of the member 37 is continued through the movement of the lever 33 with the lever 25 until the parts come to rest in their advance position, as shown in Fig. 6.

It will be noted that the cutting blade 7 is provided with elongated slots 45, 45 which are aligned with recesses 46, 46 in the side edges of the type carrier 8 and with slots 47, 47 in the plate 9. These slots provide passage for the rods 35 and clearance between the rods and the elements of the type and cutter blade assembly when the latter are advanced and retracted, as previously set forth.

In the operation of the device, a tag such as shown in Fig. 11, the price mark of which is to be changed is inserted in the device after the manner shown in Fig. 3, in which the tag, shown in broken lines, is indicated by the reference numeral 48. As illustrated, the tag rests upon the cross bar of the member 5, which, as previously set forth, constitutes the printing platen, and the inner end of the tag bears against the stop bar 16, which thereby acts to locate the tag accurately in the instrument. In this position, the tag lies between the portions 15, 15 of the cutting blade 7 and directly beneath the cutting edge 12. The handle lever 33 is then drawn towards the handle element 2, with the result that the ink pad 44 is withdrawn from under the type elements, and these elements together with the cutting blade 7 are then advanced from their retracted position toward the tag. In this advance movement, the printing faces of the type elements 24 are moved down into engagement with the tag 48 in a position above or inwardly of the original price markings on the tag, thereby imprinting a new price mark. At the same time, the cutting edge 12 of the blade 7 functioning as previously described in cooperation with the member 5 severs the end of the tag which carries the prior price markings. The tag 48, following the completion of this simultaneous printing and cutting operation, is illustrated in Fig. 9. It will be noted that the type carrier 8 is in the present instance provided

with two distinct series of the slots 17, in which are mounted duplicate sets of type corresponding to the double price marking upon the tag. The device, therefore, is adapted for repricing tags of the double-marked type shown. It is equally well adapted, however, to the repricing of tags of the single-marked type.

It may be desired in some instances to reprice the tags without removing the prior price indication or indications. For this purpose I may replace the cutter blade by a member 49, see Fig. 13, lacking the cutting edge 12 of the blade 7 previously described. In this case, also, the strap 16 is replaced by a corresponding stop element 51, see Fig. 14, which is mounted at the sides of the member 5 by screws 52. These screws pass through slots 53 in the arms of the element 51 so that provision is made for adjusting the stop element to determine the position on the tag at which the imprint is to be made. This same adjustment stop element may be used with the previously described embodiment if desired.

I claim:

1. In a device of the character described, the combination with a support structure comprising a platen, of a type carrier mounted in said structure for reciprocation with respect to said platen, an inking member mounted in said structure for movement transversely to the path of said type carrier and arranged to engage the type face when said carrier is in a retracted position with respect to the platen, a lever for advancing the carrier toward the platen, and a second lever for first displacing the inking member from the path of the carrier and subsequently actuating the first lever to advance the carrier toward the platen.

2. In a device of the character described, the combination with a support structure comprising a platen, of a type carrier mounted in said structure for reciprocation with respect to said platen, an inking member mounted in said structure for movement transversely to the path of said type carrier and arranged to engage the type face when said carrier is in a retracted position with respect to the platen, and means for successively displacing the inking member from the path of the carrier and advancing the carrier toward the platen, said means comprising a pivoted lever operatively connected to said carrier, a second lever having an actuating connection with the lever first named and operatively connected to said inking member, and means providing a lost motion between said levers.

3. In a device of the character described, the combination with a support structure comprising a platen, of a type carrier slidably mounted in said structure for reciprocation with respect to said platen, said carrier comprising a plate having a plurality of adjacent parallel slots for reception of the type elements, and clamping means for detachably retaining said elements in the slots, a reciprocatory shear blade slidably mounted in said structure adjacent the platen, inking means for said type including an applicator element movable transversely to the path of said carrier, and mechanism including a common actuator for reciprocating the said carrier and blade and for synchronously operating said inking means.

4. In a device of the character described, the combination with a support structure, of a type carrier mounted for reciprocatory movement in said structure, a relatively fixed platen mounted in said structure in the path of said carrier, an inking member mounted in said structure for movement in a path transverse to the path of said type carrier and arranged to engage the type face when said carrier is in a retracted position with respect to the platen, an articulated lever pivotally mounted in said structure and comprising relatively movable parts respectively connected to the said carrier and the inking member, said lever being operative by movement under pressure in one direction to successively move said inking member to a position remote to the path of said carrier and to subsequently advance the carrier toward the platen, and resilient means for normally retaining the said carrier in the said retracted position and the said inking member in the type face-engaging position.

5. In a device of the character described, the combination with a support structure, of a type carrier mounted for reciprocation in said structure, a relatively fixed platen mounted in said structure in the path of said carrier, a shear blade mounted at one side of said carrier and arranged to cooperate with said platen in a shearing operation when the carrier is advanced toward the platen, an inking member mounted in said structure at the opposite side of said carrier for movement transversely to the path of said carrier and arranged to engage the type face when said carrier is in a retracted position with respect to the platen, an articulated lever movably mounted in said structure and comprising relatively movable parts operatively connected respectively with the carrier and with the inking member, said lever being adapted under pressure exerted thereon in one direction to successively retract the inking member from the path of the carrier and to advance the carrier toward the platen, and resilient means normally retaining the carrier in the said retracted position and the inking member in the operative position with respect to said type.

6. In a device of the character described, the combination with a support structure, of a type carrier mounted for reciprocation in said structure, a relatively fixed platen mounted in said structure in the path of said carrier, an inking member mounted in said structure for movement transversely to the path of said type carrier and arranged to engage the type face when said carrier is in a retracted position with respect to the platen, a lever pivoted in said structure for actuating the carrier, a handle element for said lever pivotally secured to the latter and having lost motion with respect to said lever, means for operatively connecting said handle element with the inking member, and resilient means for normally retaining the carrier in the said retracted position and the inking member in engagement with the type face, said lever and handle being relatively arranged so that the initial movement of the handle with respect to the lever in one direction effects a retraction of the inking member from the path of said carrier and the subsequent actuation of the lever through the medium of said handle advances the carrier toward the platen.

GEORGE W. HENRY, JR.