

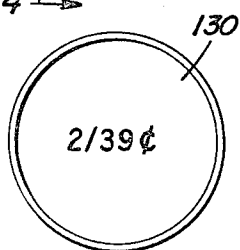
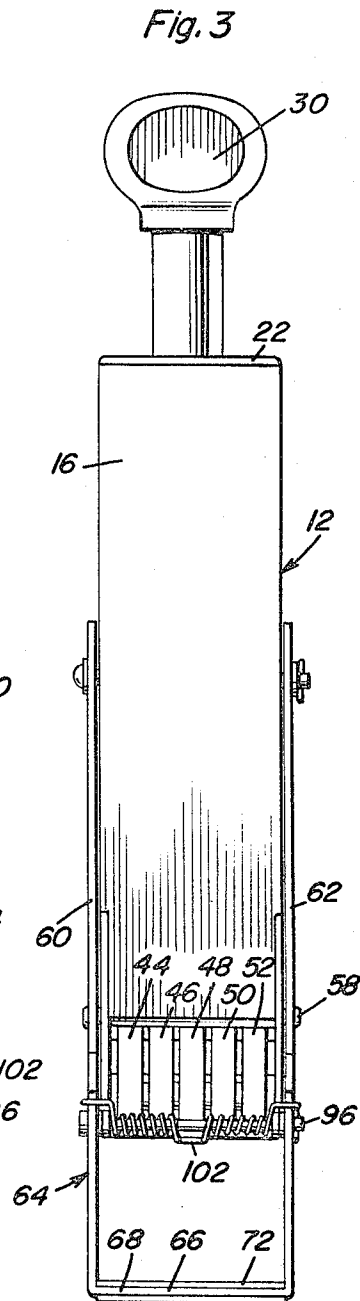
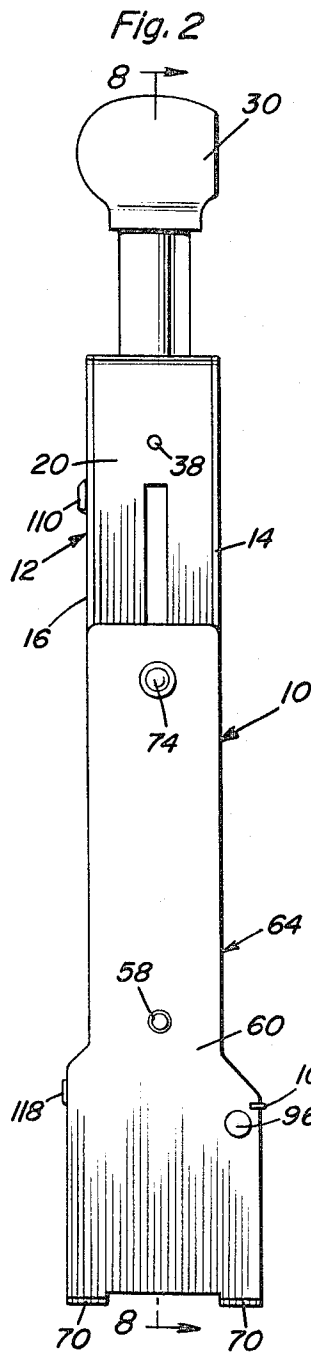
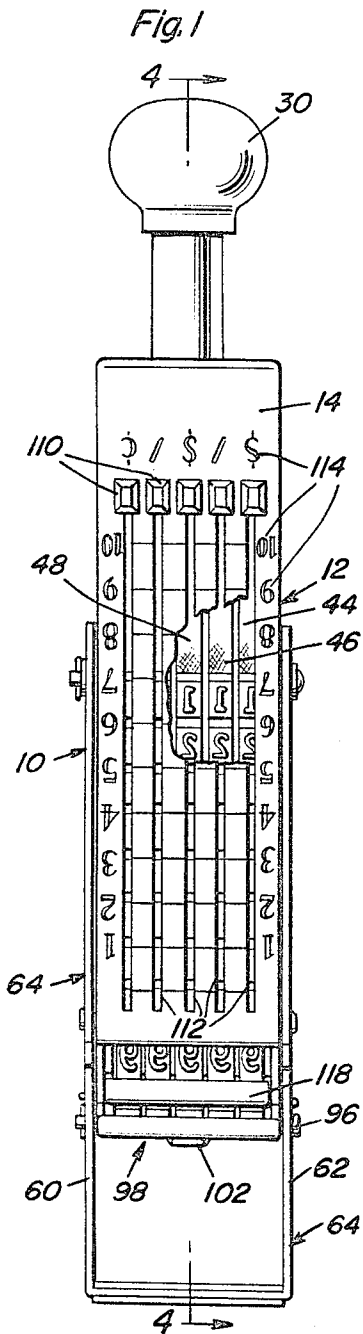
April 30, 1968

B. E. EDWARDS ET AL
SELF-INKING PRICE MARKER

3,380,378

Filed Aug. 18, 1966

3 Sheets-Sheet 1



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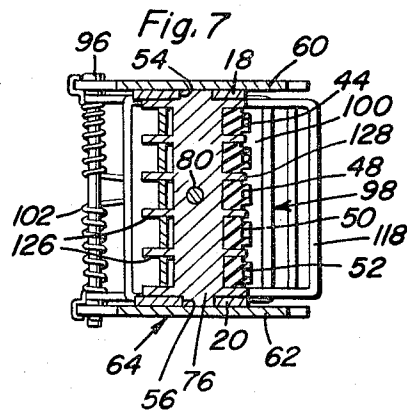
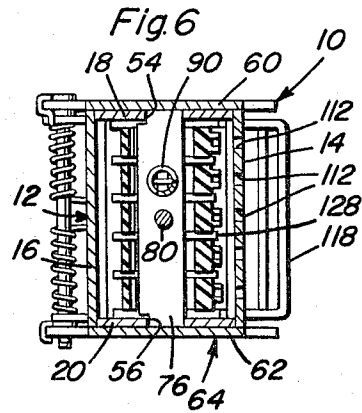
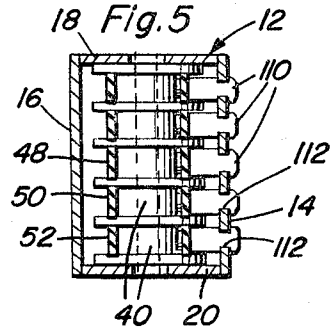
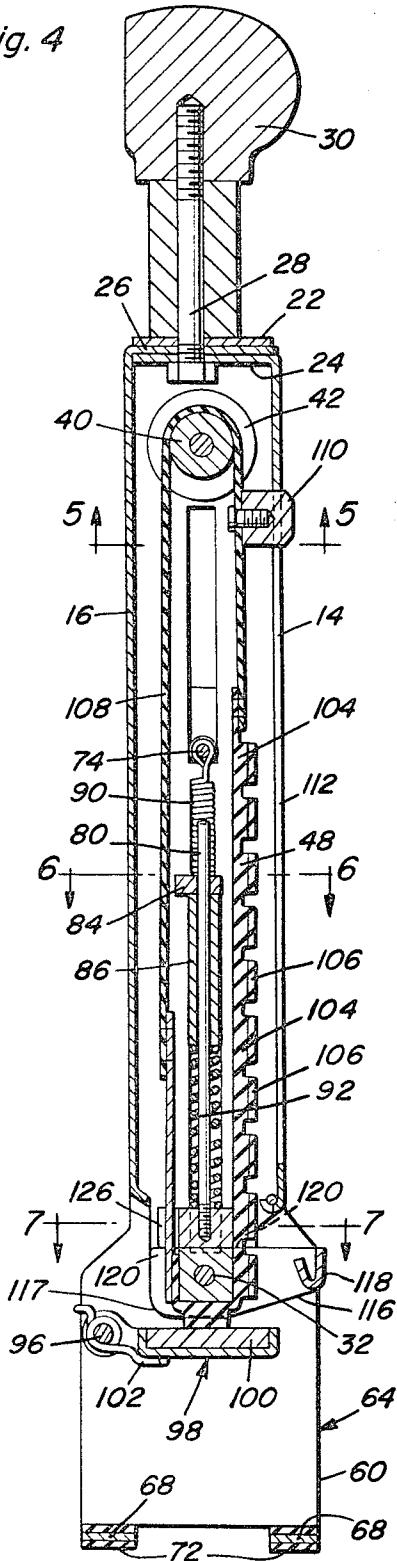
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Fig. 4



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Fig. 8

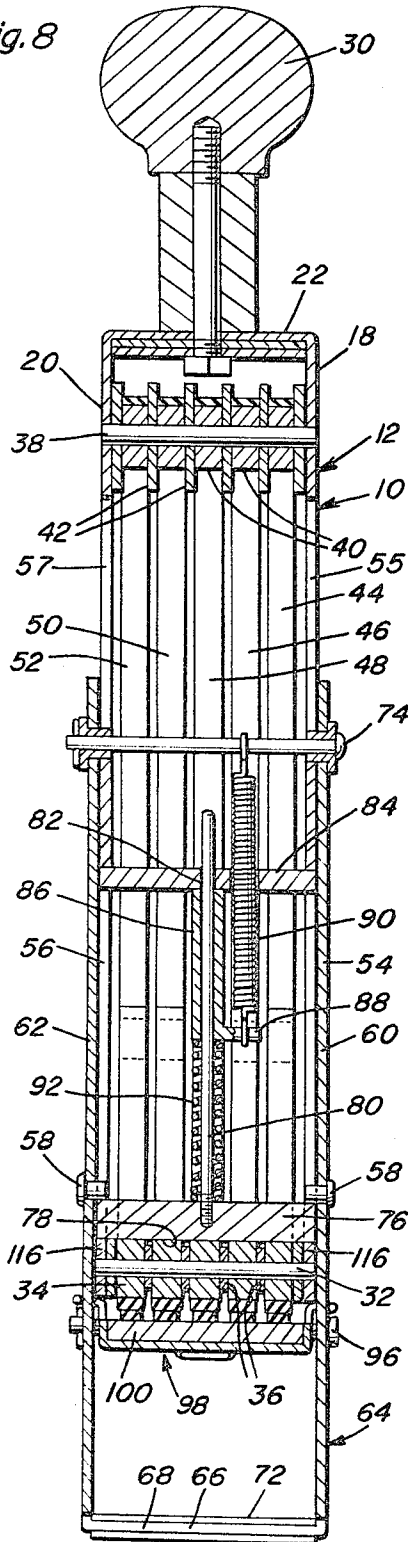
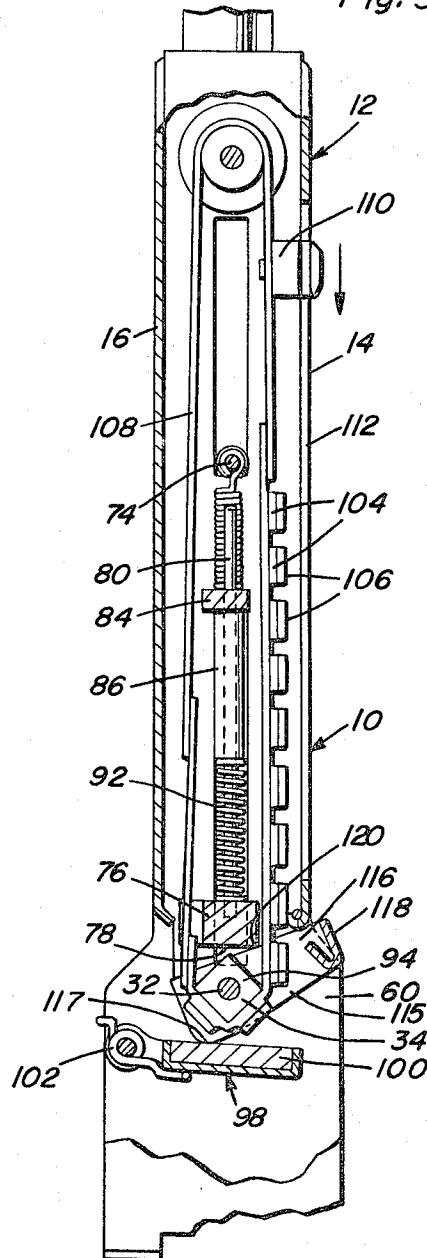


Fig. 9



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SELF-INKING PRICE MARKER

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14 Claims. (Cl. 101-111)

ABSTRACT OF THE DISCLOSURE

A frame from which transversely spaced sets of axially aligned rollers are journaled with endless flexible printing bands having printing indicia spaced therealong entrained about corresponding rollers of the sets of rollers, the rollers of one set of rollers including flat sides, the printing bands including means coacting with the flat-sided roller means keying the bands to the roller means for non-slip longitudinal movement therewith upon rotation of the flat-sided roller means, and abutment means supported from the frame for movement generally radially of the flat-sided roller means between a first position engaging corresponding flat sides of the flat-sided roller means so as to prevent rotation of the latter and a second position spaced sufficiently radially outwardly of the flat-sided roller means so as to allow free rotation of the flat-sided roller means without contact of the latter with the abutment means.

This invention relates to a novel and useful self-inking price marker and more specifically to a price marker including a plurality of variably positionable members having printing indicia thereon and which are movable into positions with selected indicia thereof in position for simultaneous printing. In addition, the price marker includes means by which the adjustably positionable members may be individually and selectively positioned, from a location remote from the printing position or station and which is operative to indicate or identify the indicia on the adjustably positionable members which are disposed in the printing position.

The means by which the adjustably positionable members may be selectively positioned is disposed in a readily accessible area of the price marker and the marker includes means releasably retaining the adjustably positionable members in adjusted positions. Further, the means for retaining the adjustably positionable members in selected printing positions also includes means by which the adjustably positionable members are automatically precisely correctly positioned upon actuation of the retaining means for retaining the adjustably positionable members in printing position in the event the operator of the marker only generally correctly positions the adjustably positionable members from said remote location.

Still further, the retaining means by which the adjustably positionable members are retained in precise printing positions includes an actuator portion for rendering the retaining means inoperative. The actuator portion is actuable only in a manner that prevents usage of the marker until such time as the actuator portion is positioned to again retain the adjustable positionable members in precise printing position.

It is a further feature of the price marker that it is constructed in a manner whereby the various housing portions thereof may be readily assembled and disassembled should it be desired or become necessary to perform maintenance on internal portions of the price marker.

The main object of this invention is to provide a price marker including a plurality of adjustably positionable members each provided with a plurality of printing indicia selectively movable into printing position and which

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may be readily and accurately shifted into printing position as desired from a location remote from the printing position and without having to view the printing indicia at the printing position.

5 A further object of this invention is to provide a price marker including means by which the various adjustably positionable members having individually selectable printing indicia thereon may be automatically keyed into and retained in precise proper printing position subsequent to
10 general adjustment of the various adjustably positionable members.

A still further object of this invention is to provide a price marker in accordance with the preceding objects and including means by which the various housing sections thereof may be readily assembled and disassembled
15 should it become necessary or be desired to perform maintenance on the internal portions of the price marker.

A final object of this invention to be specifically enumerated herein is to provide a price marker in accordance
20 with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long lasting and relatively trouble-free in operation.

25 These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:
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FIGURE 1 is a front elevational view of the price marker of the instant invention with portions of the housing thereof being broken away to illustrate the positions of the longitudinally positionable bands of the marker having price marking indicia formed thereon;
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FIGURE 2 is a side elevational view of the embodiment illustrated in FIGURE 1 as seen from the right side thereof;

FIGURE 3 is a rear elevational view of the embodiment illustrated in FIGURES 1 and 2;
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FIGURE 4 is an enlarged sectional view taken substantially upon a plane indicated by the section line 4-4 of FIGURE 1;

FIGURE 5 is a horizontal sectional view taken substantially upon the plane indicated by the section line 5-5
45 of FIGURE 4;

FIGURE 6 is a horizontal sectional view taken substantially upon the plane indicated by section line 6-6 of FIGURE 4;

FIGURE 7 is a horizontal sectional view taken substantially upon the plane indicated by the section line 7-7
50 of FIGURE 4;

FIGURE 8 is an enlarged vertical sectional view taken substantially upon the plane indicated by the section line 8-8 of FIGURE 2;

FIGURE 9 is an enlarged fragmentary side elevational view of the price marker as seen from the left side from FIGURE 1 and with portions thereof being broken away and illustrated in vertical section; and
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FIGURE 10 is a plan view of an article which has been price marked by the price marker of the instant invention.

Referring now more specifically to the drawings the numeral 10 generally designates the price marker of the instant invention. The marker 10 includes a housing generally referred to by the reference numeral 12 provided with a front wall 14, a rear wall 16, and a pair of opposite side walls 18 and 20. In addition, the housing 12 includes a top wall 22 which extends between the interconnects side walls 18 and 20. The upper ends of the front and rear walls include laterally directed top wall
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portions 24 and 26, respectively, which extend toward and are disposed in overlapped engagement with each other beneath the top wall 22. A fastener 28 is secured through the laterally directed portions 24 and 26 and the top wall 22 and supports a knob 30 at its upper end by which the marker 10 may be supported.

A first support shaft 32 is secured between the lower ends of the side walls 18 and 20 and has a plurality of flat-sided supports or rollers 34 journaled thereon with a spacing washer 36 disposed between each pair of adjacent supports 34. In addition, a second support shaft 38 is secured between the upper ends of the side walls 18 and 20 and has a plurality of round supports or rollers 40 journaled thereon. Each pair of adjacent rollers 40 has a spacer element 42 mounted on the shaft 38 disposed therebetween and a plurality of elongated flexible printing bands 44, 46, 48, 50 and 52 are entrained about corresponding pairs of supports 34 and 40.

The side walls 18 and 20 include lower vertical slots 54 and 56, respectively, as well as upper vertical slots 55 and 57 and a pair of inwardly projecting pins 58 carried by the outer legs 60 and 62 of a generally U-shaped frame referred to in general by the reference numeral 64 have their confronting inner ends slidably received in the lower portions of the slots 54 and 56. The lower end of the frame 64 includes a bight portion 66 extending between the lower ends of the legs 60 and 62 and which has a central opening 68 formed therein in registry with the lower ends of the printing bands. The opening 68 formed in the bight portion 66 divides the latter into a pair of generally parallel arm members 70 extending between the lower ends of the legs 60 and 62 and between which the lower ends of the printing bands 44, 46, 48, 50 and 52 are receivable. The arm members 70 are covered with any suitable resilient coating such as a transparent coating 72.

A fastener 74 is secured between the upper ends of the legs 60 and 62 and is slidably received in the lower ends of the slots 55 and 57. A pressure bar 76 including a planar face 78 includes generally rectangular end portions slidably disposed in the lower ends of the slots 54 and 56 and includes a guide shaft 80 which projects upwardly therefrom and is slidably received through a bore 82 formed in a transverse brace 84 having its opposite ends seated in the upper ends of the slots 54 and 56. An abutment sleeve 86 is disposed about a portion of the guide shaft 80 disposed immediately beneath the transverse brace 84 and includes a laterally projecting arm 88 on its lower end portion to which the lower end of an expansion spring 90 is secured, the upper end of the expansion spring 90 being secured to the fastener 74. In addition a strong compression spring 92 is disposed about the guide shaft 80 between the abutment sleeve 86 and the pressure bar 76 yieldingly urging the latter downward with its planar surface 78 into surface to surface abutting engagement with corresponding flats 94 of the square or flat-sided supports 34.

A pivot pin 96 is secured between the lower ends of the legs 60 and 62 and pivotally supports therefrom an inking pad assembly generally referred to by the reference numeral 98 including an ink absorbent member 100. A spring 102 is operatively connected between the legs 60 and 62 and the assembly ink pad 98 and yieldingly urges the latter in a counter-clockwise direction as viewed in FIGURES 4 and 9 of the drawings, the ink pad assembly 98 being cammable in a clockwise direction to a generally vertically disposed out-of-the-way position upon downward movement of the housing 12 relative to the frame 64 each time the marker 10 is used.

Each of the elongated flexible printing bands 44, 46, 48, 50 and 52 includes a plurality of longitudinally spaced and longitudinally extending stiffened portions 104 having printing indicia 106 formed thereon. Although the printing indicia 106 on each of the bands may be different, they are each indicated by the same reference numeral for sake of simplicity. Each of the stiffened portions or

areas 104 is of a length corresponding to the peripheral extent of the flats 94 on the square supports 34 and therefore the portions of the printing bands including the stiffened areas 104 coact with the flats on the supports 34 to key the printing bands to the supports 34 for non-slip longitudinal movement of the bands upon rotation of the square supports 34.

Certain portions of each of the bands are not provided with stiffened areas 104 or indicia 106 and define slightly elastic sections 108 of the bands, whereby each of the bands is properly tensioned without providing some means for variably adjusting the spacing between the shafts 34 and 38 or providing some sort of separate band tensioning means.

Further, each of the bands 44, 46, 48, 50 and 52 includes a finger engageable member 110 which is secured to the section 108 thereof in a portion of the section 108 generally paralleling and disposed adjacent the front wall 14. The front wall 14 includes a plurality of vertical slots 112 through which the finger engageable members 110 project and also indicia 114 on the outer surface thereof with which the finger engageable members 110 are registerable. The indicia 114 are of course properly positioned along the front wall 14 to identify the indicia 106 of the corresponding band which is disposed in the printing position for engagement by the ink pad assembly 98, see FIGURE 4. In this manner, a person using the marker 10 may shift the finger engageable members 108 into registry with the proper indicia 114 so as to properly position the desired indicia 106 in the printing position and for engagement with the ink pad assembly 98. Of course, if the pressure bar 76 is disposed in the positions thereof illustrated in FIGURES 4 and 8 of the drawings, the square supports 34 are locked in the position illustrated against rotation relative to the shaft 32 and therefore the bands 44, 46, 48, 50 and 52 may not be longitudinally positioned by shifting the finger engageable members 110. However, a U-shaped bail 115 including a pair of generally parallel legs 116 interconnected by means of a bight portion 118 is pivotally supported from the opposite ends of the shaft 32 with the latter being rotatably received through the free ends of the legs 116. The legs 116 include cam portions 120 engageable with the opposite ends of the pressure bar 76 and operable to urge the latter away from engagement with the square supports 34 upon pivotal movement of the bail 115 from the position thereof illustrated in FIGURE 4 of the drawings to the position thereof illustrated in FIGURE 9 of the drawings. In addition, the bail 115 includes cam surfaces 117 engageable with the ink pad assembly 98 during swinging movement of the bail 115 from the position illustrated in FIGURE 4 to the position illustrated in FIGURE 9 and operable to pivot the ink pad assembly 98 slightly out of engagement with the lower ends of the bands 44, 46, 48, 50 and 52. Also, the cam surfaces 117 further serve to cam the ink pad assembly 98 to its out-of-the-way position each time the marker 10 is used. Still further, it will be noted that when the bight portion 118 is held by thumb pressure in the position as illustrated in FIGURE 9 of the drawings the marker is not likely to be used for stamping operations. However, as soon as the user of the marker releases the bight portion 118 to again grip the marker in a manner preparatory to stamping operations, the bail 115 will be automatically returned to the position thereof illustrated in FIGURE 4 by the biasing force of the spring-urged bar 76 on the cam portions 120, see FIGURE 9.

The U-shaped frame 64 is constructed of stiff but resilient material whereby after the fastener 74 has been removed the free ends of the legs 60 and 62 may be spread apart so as to withdraw the confronting ends of the pins 58 from within the slots 54 and 56 thereby enabling the frame 64 to be readily separated from the housing 12. Further, when a person is shifting the finger engageable members 110 into registry with the desired indicia 114, as long as the finger engageable members

110 are at least closely correctly positioned in alignment with the desired indicia 114, swinging movement of the bail from the position thereof as illustrated in FIGURE 9 of the drawings to the position thereof illustrated in FIGURE 4 of the drawings so as to allow the pressure bar 76 to move downwardly into engagement with the square rollers 34 will cause the surface 78 of the pressure bar 76 to cam the square supports 34 into precisely aligned positions with the corresponding indicia 106 of the bands perfectly aligned relative to each other and with the lowermost indicia 106 correctly positioned in the printing position.

From a comparison of FIGURES 3, 4 and 9 of the drawings it may be seen that the face of the pressure bar 76 facing toward the rear wall 16 includes a plurality of downwardly projecting partitions 126 which are disposed between the lower ends of the bands 44, 46, 48, 50 and 52 in order that the latter may be maintained properly centered on the supports 34. In addition, and as can also be seen from FIGURES 6 and 7 of the drawings, the face of the pressure bar 76 facing toward the front wall 14 is provided with a plurality of partitions 128 corresponding to the partitions 126 and which also serve to maintain the lower end portions of the bands 44, 46, 48, 50 and 52 properly aligned on their corresponding supports 34.

From FIGURE 10 of the drawings it may be seen that an article 130 to be price marked has been so marked by setting the leftmost finger engageable member 110 illustrated in FIGURE 1 of the drawings at its upper extremity of travel designating the cent sign, that the next two finger engaging members have been set at positions registering with the numerals 9 and 3, respectively, and that the next two finger engageable members 110 have been set at the uppermost limit of travel designating the slash mark (/) and in alignment with the numeral 2, respectively, whereby the price of the article 130 has been properly stamped as being 2/39¢.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be restored to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A marker comprising a frame, an elongated flexible printing band having printing indicia spaced therearound, first and second roller means journaled from said frame and about which said band is entrained, said first roller means including circumferentially spaced flats with which said printing characters are registerable, said band including means coacting with said first roller means keying said band to said first roller means for non-slip longitudinal movement therewith upon rotation of said first roller means, and abutment means mounted on said frame for movement generally radially of said first roller means between a first position engaging an adjacent flat of and locking said first roller means against rotation and a second position spaced sufficiently radially outwardly of said roller means so as not to be engaged by the latter during its rotation relative to said frame, and means operatively associated with said frame and said abutment means operative to shift said abutment means from said first position to said second position thereby freeing said roller means for free rotation.

2. The combination of claim 1 wherein said abutment means includes means coactingly operative with one of said flats, in response to movement of said abutment means to said first position, to rotate said first roller means to a position with one of the flats with which said band is registered in a predetermined printing position thereby insuring that the printing indicia registered with said one flat is correctly positioned in printing position.

3. The combination of claim 1 wherein said first roller means comprises a plurality of axially aligned independ-

ently rotatable rollers each provided with circumferentially spaced flats, said marker including a plurality of said bands independently entrained about said rollers and said second roller means and keyed to said rollers, said abutment means being operatively engaged with each of said rollers to properly position the associated printing indicia in printing position upon movement of said abutment means toward said first position.

4. The combination of claim 1 including a finger engageable member slidably supported from said frame for linear reciprocation in a path generally paralleling one reach of said band and operatively connected to the latter for effecting movement of the portion of said reach to which said finger engageable member is connected along said reach in response to movement of said finger engageable member relative to said frame.

5. The combination of claim 1 wherein said abutment means includes means coactingly operative with one of said flats, in response to movement of said abutment means to said first position, to rotate said first roller means to a position with one of the flats with which said band is registered in a predetermined printing position thereby insuring that the printing indicia registered with said one flat is correctly positioned in printing position, said means coactingly operative with one of said flats including a flat surface defined by said abutment means and engageable with corresponding flats of said rollers to urge said corresponding flats into substantially coplanar relation upon movement of said abutment means into said first position.

6. The combination of claim 1 wherein said first roller means comprises a plurality of axially aligned independently rotatable rollers each provided with circumferentially spaced flats, said marker including a plurality of said bands independently entrained about said rollers and said second roller means and keyed to said rollers, said abutment means being operatively engageable with each of said rollers to properly position the associated printing position upon movement of said abutment means toward said first position, a plurality of finger engageable members slidably supported from said frame for linear reciprocation in paths generally paralleling corresponding reaches of said bands and operatively connected to corresponding bands for effecting movement of the portions of said bands to which said finger engageable members are connected along said reaches in response to movement of said finger engageable members relative to said frame.

7. The combination of claim 6 wherein said frame includes indicia with which said finger engageable members are registerable to identify the printing indicia in printing position.

8. The combination of claim 6 wherein said frame includes indicia with which said finger engageable members are registerable to identify the printing indicia in printing position, means operatively connected between said frame and said abutment means biasing the latter toward said first position.

9. The combination of claim 8 wherein said means operatively associated with said frame and abutment means includes means operative to urge said abutment means toward to said second position against said biasing means and to releasably retain said abutment members in said second position.

10. The combination of claim 9 including an inking pad supported from said frame for movement between an out-of-the-way position and an operative position engaged with the indicia disposed in printing position, the last-mentioned means including means, when said last-mentioned means is actuated to releasably retain said abutment member against movement toward said first position, operable to shift said inking pad from said operative position thereof toward said inoperative position thereof with said inking pad disposed out of contact with said bands.

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11. The combination of claim 1 including an inking pad supported from said frame for movement between an out-of-the-way position and an operative position engaged with the indicia disposed in printing position, the last-mentioned means including means, when said last-mentioned means is actuated to releasably retain said abutment member against movement toward said first position, operable to shift said inking pad from said operative position thereof toward said inoperative position thereof with said inking pad disposed out of contact with said band.

12. The combination of claim 1 wherein said abutment means includes an abutment member supported from said frame for shifting along a path extending between said roller means and defining an abutment surface engageable with the flat of said first roller means facing said second roller means.

13. The combination of claim 12 wherein said abutment member is disposed between the opposing reaches

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of said band entrained over said roller means, said means operatively associated with said frame and said abutment means including a manually engageable portion disposed exteriorly of the confines of said band.

14. The combination of claim 3 wherein said abutment means includes a single abutment member supported from said frame for shifting along a path extending between said roller means and defining an abutment surface engageable with the flats of said first roller means facing said second roller means.

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